Communications Regulatory Authority
State of Qatar
هيئة تنظيم الاتصالات
دولة قطر

Setting Wholesale Charges for the years 2018-2020

Closing Date is October 31, 2017

Version for all

Confidential information has been removed

Confidential to Ooredoo
Confidential to Qnbn
Confidential to Vodafone

CRARAC 2017/09/27-NC
September 27, 2017

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1 Background and Summary

1. On May 21, 2015, the CRA approved the Wholesale Charges applicable to the Products included in the Reference Interconnection Offers (“RIO”) of Ooredoo Q.S.C. (“Ooredoo”) and Vodafone Qatar Q.S.C. (“Vodafone”), in the Reference Transmission Offer (“RTO”) of Ooredoo and in the Reference Infrastructure Access Offer for Ducts of Ooredoo (“RIAO” ref. CRA Order 2015/05/21F).
2. On March 28, 2017, the CRA sent to Ooredoo, Qnbn and Vodafone (“Service Providers” or “SPs”) a Data Request for costing the Wholesale Products in subject, along with a simplified version of the cost model used by the CRA to perform forecasts and calculations. On April 25, 2017, the CRA held an Industry Meeting to provide the SPs with clarifications on the Data Request.
3. Most of the SPs did not provide the data within the timeline set by the CRA (May 25, 2017). Hence, on June 12, 2017, the CRA sent a letter to the SPs moving the deadline for the issuing of the First Consultation Document to September 15, 2017 (ref. CRA’s letter CRA/RAC-E/062/2017).
4. The CRA estimates that the regulated Wholesale Charges result in total domestic wholesale revenues of around QAR 140 million per year[1].

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Figure 1 National Wholesale Revenues – CRA’s estimate based on SPs’ data [SP data, CRA calculation]

5. As shown in the Figure above:
   - 5.1 Mobile Termination revenues account for more than 80% of the total National Wholesale Revenues;
   - 5.2 Wholesale payments between Ooredoo and Vodafone are almost balanced; and
   - 5.3 The regulated Wholesale Services represent around 1.4% of total industry revenues (around QAR 10 billion).
6. Therefore, changes in Wholesale Charges are not expected to affect the overall industry’s income, profitability and its investment capacity significantly.

[1] For the Interconnection Traffic Services, revenues have been calculated as volume 2017 forecasted by Ooredoo and Vodafone times the current wholesale charges; for Interconnection Links, Transmission Links and Ducts data have been sourced from Ooredoo’s RAS 2015

2 Instructions for responding to this Consultation

2.1 Consultation Procedures

7. In keeping with open and transparent regulatory processes, the CRA herewith consults on the Setting of Wholesale Charges.
8. SPs are invited to provide their views and comments on the consultation questions.
9. To the extent possible, submissions must be supported by relevant evidence.
10. If a Service Provider is in disagreement with the CRA's findings, the Service Provider is requested to provide:
    - 10.1 The reasons for disagreement with the CRA's findings;
    - 10.2 Its alternative suggestion in a clear and concise manner;
    - 10.3 Wholesale Charges proposed according to its alternative methodology;
    - 10.4 The calculations, models or estimations which lead to such Wholesale Charges, in an editable format which allows the CRA to review and validate the formulas (such as Microsoft Excel); and
    - 10.5 The assumptions, relevant justifications and references of all data sources behind any alternative calculations.
11. Any submissions received in response to this Consultation Document ("CD") will be carefully considered by the CRA. Nothing included in this CD is final or binding. However, the CRA is under no obligation to adopt or implement any comments or proposals submitted.
12. Comments should be submitted by email to raconsultation@cra.gov.qa, copying fmassone@cra.gov.qa before the date stated on the front cover. The subject reference in the email should be stated as Consultation on "Setting Wholesale Charges".
13. It is not necessary to provide a hard copy in addition to the soft copy sent by email.
14. Deadline for SPs to submit their comment is indicated on the cover page.

2.2 Publication of comments

15. In the interests of transparency and public accountability, the CRA intends to publish the submissions to this consultation on its website at www.cra.qa.
16. All submissions will be processed and treated as non-confidential unless confidential treatment of all or parts of a response has been requested.
17. In order to claim confidentiality for information in submissions that stakeholders regard as business secrets or otherwise confidential, stakeholders must provide a non-confidential version of such documents in which the information considered confidential is blacked out. This "blackened out" portion/s should be contained in square brackets. From the non-confidential version, it has to be clear where information has been deleted. To understand where redactions have been made, stakeholders must add indications such as "business secret", "confidential" or "confidential information".
18. A comprehensive justification must be provided for each and every part of the submission required to be treated as confidential. Furthermore, confidentiality cannot be claimed for the entire or whole sections of the document as it is normally possible to protect confidential information with limited redactions.
19. While the CRA will endeavor to respect the wishes of respondents, in all instances the decision to publish responses in full, in part or not at all remains at the sole discretion of the CRA.
20. By making submissions to the CRA in this consultation, respondents will be deemed to have waived all copyrights that may apply to intellectual property contained therein.

21. For more clarification concerning this consultation, please contact Francesco Massone (fmassone@cra.gov.qa).

3 Legal Basis

22. The following legal provisions, which are not exhaustive, provide the legal basis for the CRA to set the Wholesale Charges:

3.1 Emiri Decision No. (42) of 2014 Establishing the Communications Regulatory Authority

23. Article 4 of the Emiri Decision makes the CRA responsible for regulating the communications information technology and the post sector, as well as access to digital media, with the aim of providing advanced and reliable telecommunication services across the State.
24. Article 4(1) empowers the CRA to set Regulatory frameworks for the communications, information technology, the post sector, and access to digital media, in line with the general policies of the sector and to enable optimum performance.
25. Article 4(2) charges the CRA with actions finalized to encourage competition and prohibit or minimize anti-competitive practices, prevent misuse by any person or entity of its market dominance position, and take all necessary measures to achieve this.
26. Article 4(4) requires the CRA to protect the rights and interests of the public and Service Providers in the market, promote transparency and provide advanced, innovative and quality services at affordable prices to meet the needs of the public.
27. Article 4(6) make the CRA responsible for ensuring interconnection and access for all users by setting conditions for effective interconnection and access.
28. Article 15(2) empowers the CRA to develop appropriate Charge regulations, giving priority to the telecommunications market, or telecommunications services according to market requirements, and determine fees for retail and wholesale services.

3.2 Telecommunication Law 2006 (“Law”)

29. Article 25 provides that the CRA shall determine the rights and obligations of a Dominant Service Provider which include any requirements relating to the contents and publication of an interconnection reference offer and access agreements.
30. Article 28 states that Dominant Service Providers must submit to the CRA the offers for the Charges, prices and charges of the telecommunications services in the markets where they have been designated as dominant Service Providers and obtain the prior approval for them.
31. Article 29 provides that the Charge for telecommunications services provided by dominant Service Providers must be based on the cost of efficient service provision and the Charge must not contain any excessive charges which result from the dominant position that the Service Provider enjoys. This Article also states that the CRA may issue decisions along with justifications to amend the Charges where it finds that they are not in line with the cost of the service provision, provided that such decision must prescribe the new Charge amount.

3.3 Executive By-Law for the Telecommunications Law 2009 (“By-Law”)

32. Article 6 empowers the CRA to issue legal instruments including Orders for the implementation of the provisions of the By-Law and the Law.
33. Article 50(1) provides that the CRA may require that interconnection or access charges of any Dominant Service Provider be subject to Article (29) of the Law and Articles 56, 57, 58 and 59 of this By-Law.
34. Article 54 of the By-Law prescribes that the CRA shall have the authority to review all

Service Provider Charges, including wholesale and retail Charges, and to determine any requirements regarding Charges, their approval and publication, and the CRA may issue regulations or orders to regulate the Charges of Service Providers.

35. Article 56 requires that Charges that are subject to filing with and approval by the CRA shall enter into force only after they have been approved by a decision from the CRA.

36. In accord with Article 59 the CRA may require a Dominant Service Provider to prepare or participate in the development of a cost study of its telecommunications services if it determines that a cost study would be necessary in implementing any scheme of Charge or price regulation. Also, the CRA may require any Dominant Service Provider to prepare or participate in the development of a cost study for the purpose of determining the costs of providing different types of telecommunications services or the business activities of the Service Provider and the CRA shall decide on the cost categories, form, approach, procedures and timing of the cost study. The Service Provider shall comply with all requirements identified by the CRA; and shall file with the CRA the study. The CRA shall consult with the Service Provider required to file a cost study and any other interested parties before it makes an order requiring the study. The CRA may require a Dominant Service Provider to adopt identified cost accounting practices to facilitate cost studies or to achieve any other regulatory purpose under the Law or the By-Law, including the separation of accounts among different categories of business activities or services or as directed by the CRA.

37. Article 60 empowers the CRA to develop methods of price control and to consult Service Providers or any other interested parties. The CRA may issue orders or notices prescribing guidelines for the development of proposals for methods of price control; or setting out directions for the further development of any proposal that has been filed with the CRA or any method of price control that is under development by the CRA. The CRA may also approve of a proposal or method of price control for implementation by one or more Service Providers. Following development and approval of any method of price control, the CRA may also issue regulations, rules, orders or notices required for its implementation.

3.4 Order on Wholesale Charges applicable to Wholesale Services for years 2015, 2016 and 2017 (CRA 2015/05/21F, dated May 21, 2015)

38. This Order and the annexed document “Wholesale Charges and their relationship with Retail Charges - Economic Analysis and Response” (CRA 2015/05/21G-NC) set the Wholesale Charges for years 2015, 2016, 2017.

39. Costing and pricing principles defined in this Order are deemed valid for setting the Wholesale Charges for years 2018 onwards, if still applicable.

3.5 Wholesale Reference Offers approved by the CRA and privately agreed contracts

40. The Wholesale Charges are set for the Wholesale Products as defined in the:
    - 40.1 Reference Interconnection Offer (“RIO”) of Ooredoo and Vodafone approved by the CRA on October 31, 2016 (CRA 2016/10/13);
    - 40.2 Reference Transmission Offer (“RTO”) of Ooredoo approved by the CRA on October 31, 2016 (CRA 2016/10/13);
    - 40.3 Reference Infrastructure Access Offer for Duct of Ooredoo (“RIAO”) approved by the CRA on June 22, 2016 (CRA 2016/06/22).
    - 40.4 Interconnection Agreement (“IA”) between Ooredoo and Vodafone Qatar signed on March 15, 2009;
    - 40.5 Transmission Services Agreement (“TA”) between Ooredoo and Vodafone Qatar signed on September 2, 2009;

40.6 Infrastructure Access Agreement ("IAA") between Ooredoo and Qnbn signed on April 25, 2012.

3.6 Retail Tariff Instruction

41. Where applicable, the rules of the Retail Instruction ("RTI", ref. CRA 2015/05/07) are implemented to assess the relationship between the Wholesale and Retail Charges.

3.7 Cost of Capital

42. The Cost of Capital is set at 10.75% with the Decision and Order - Definition of the Weighted Average Cost of Capital (WACC), dated August 5, 2013 (ref. ICTRA 2013/08/05-A).

43. This parameter is currently under review (ref. Consultation on "Determination of the Cost of Capital applicable to Service Providers declared as having a Dominant Position - Cost of Capital 2017", CRARAC 2017/05/08, dated May 8, 2017). This updated Cost of Capital will be taken into account to set the Wholesale Charges for the year 2018 onwards.

44. In the meantime, the Wholesale Charges proposed in this document and consulted on are based on the current Cost of Capital (10.75%).

4 Guiding Principles to set Wholesale Charges

45. In a perfectly competitive market, prices should be naturally driven towards costs when meeting the demand. In the telecommunications sector, a few dominant operators usually hold the market share and infrastructures, due to the capital-intensive nature of the business which tends to give birth to natural monopolies. It is also often observed that competitive pressures alone are not sufficient to ensure that new entrant operators have access to interconnection services at a fair price that allows them to compete with the incumbent's operations.

46. Consequently, the regulation of Wholesale Charges is usually necessary in order to promote competition or to approximate it in the telecommunications sector.

47. At the same time, regulated charges should allow the operators to make a reasonable amount of profit and preserve their incentive to invest in new infrastructure. A common regulatory approach to achieve this balance and approach the ideal case of a competitive market is to orientate the Wholesale Charges towards costs, including a reasonable margin, typically in form of a Weighted Average Cost of Capital ("WACC").

48. This ensures that incumbent operators see a satisfactory return on investment, allowing them to pursue their activity and investments in the network, and that new entrants benefit from fair prices allowing them to be competitive in the market. For example, the European Parliament and the Council of the European Union published in 1997 a Directive[2] on interconnection, stating that public telecommunications network in the EU have the obligation to provide interconnection on a non-discriminatory basis and at a price following the principles of transparency and cost orientation.

49. Based on the above, and on the legal bases described in previous section, following guiding principles have been observed for the Wholesale Charges options outlined in the remainder of this document:

    49.1 Cost based

    49.2 Non-discrimination

    49.3 Replicability

50. The following sections describe these principles in further detail. The CRA observes that setting Wholesale Charges purely based on cst could lead to discriminatory charges (ref. Section Non-Discrimination4.2) or to price/margin squeeze issues (ref. Section 4.3). In such cases the CRA needs to take a decision on the value to be set.

51. In taking its decisions, the CRA must comply with the applicable Legal Basis. Specifically, a very important reference is Article 19 of the Law, which requires the CRA, "*promoting appropriate, effective and low cost interconnection between telecommunications networks and promoting access to facilities of other Service Providers to ensure interoperability of telecommunications services that originate or terminate in the State and promoting the growth of competitive telecommunications services markets*".

52. Other criteria taken into account by the CRA to set the Wholesale Charges consistent with the applicable Legal Basis are discussed in Section 5.

4.1 Cost based

53. Law's Article 29 provides that the Charge for telecommunications services provided by dominant Service Providers must be based on the cost of efficient service provision. Therefore, the CRA will use operators' costs as reference for Wholesale Charges

[2] Directive 97/33/EC of the European Parliament and of the Council of 30 June 1997 on interconnection in Telecommunications with regard to ensuring universal service and interoperability through application of the principles of Open Network Provision (ONP)

Setting, applying adjustments when considered relevant.

54. In order to determine these cost-orientated Wholesale Charges for two-way interconnection (such as voice termination), a number of regulators are relying on pure LRIC (Long-Run Incremental Cost) methodology, as a proxy of marginal costs. This is specifically common within the European Union ("EU"), as a result of European Commission's 2009 Recommendation[3] which suggested the use of pure LRIC standard. Outside EU, using methodologies that ensure recovery of common and joint costs through both retail and wholesale services is the common practice.

55. In the case of one-way interconnection (such as duct rental, leased lines, etc.), most regulators ensure that those services contribute to the recovery of common and joint costs.

56. In order to ensure such common and joint cost recovery profile a number of methodologies can be used such as Fully Distributed Costs (FDC) or LRIC+.

57. In "Setting the Wholesale Charges for the years 2015, 2016 and 2017", the CRA used a top-down model based on Historical Cost Accounting with Fully Distributed Costs (HCA/FDC), applying a forward looking approach (i.e. projecting the HCA/FDC cost for two years)[4]. This ensures a full recovery of cost. The CRA notes that with a pure LRIC approach, as e.g. done in the EU, the cost for termination be significantly lower.

58. When starting the proceeding on "Setting the Wholesale Charges for the years 2018+", the CRA consulted the SPs on this approach (ref. CRA letter dated January 25, 2017, CRA/RAC-E/010/2017 and Industry Meeting held on February 19, 2017).

59. The SPs stated their preference for a top-down model based on Historical Cost Accounting with Fully Distributed Costs (HCA/FDC), applying a forward looking approach (i.e. projecting the HCA/FDC cost for the next years). The CRA confirmed this to the SPs with letter dated March 7, 2017 (ref. CRA/RAC-E/023/2017).

60. The following sections describe the methodology applied for the calculation of services' provision cost for both recurring and one-time charges.

4.1.1 Recurring Wholesale Charges

61. Charges have to ensure that SPs recover both efficient Network and Wholesale Costs.

62. The CRA notes that the Law, in its Article 29 reads:
"The Charge for telecommunications services provided by dominant Service Providers must be based on the cost of efficient service provision and the Charge must not contain any excessive charges which result from the dominant position that the Service Provider enjoys".
The CRA notes that pure HCA/FDC costs have been used, without applying further efficiency adjustments. Applying such efficiency adjustments would most likely further decrease cost.

4.1.1.1 Calculation of Network Costs

63. The CRA's cost forecast is based on HCA/FDC cost and volume delivered by the SPs.

64. For Ooredoo, total costs have been projected based on RAS 2010-2015, as follows:
    64.1 Services' Network Cost from RAS 2010-2015 have been forecasted for three (3) years (i.e. to estimate the cost for FYs 2016, 2017 and 2018), based on the following assumptions:
        (a) The preferred approach is to base cost projections on CAGR 2010 –

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[3] Commission Recommendation of 7.5.2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU

[4] Refer to Consultation on "Setting Wholesale Charges and relations with Retail Charges", issued on November 6, 2014 (ref. CRA 2014/11/06C), to Order on "Charges applicable to Wholesale Service for Years 2015, 2016 and 2017", issued on May 21, 2015 (ref. CRA 2015/05/21F) and to "Wholesale Charges and their relationship with Retail Charges, Economic Analysis and Response" issued on May 21, 2015 (ref. CRA 2015/05/21G-NC)

2015[5].

(b) In some instances, the CRA noticed a considerable flattening of cost curves in past years. In these cases, the CRA used the (lower trend) from RAS 2014 and RAS 2015. The CRA deems this prudent approach as reasonable, as it avoids cost under-recovery and is indeed based on flattening cost curves;

(c) Where historical costs have no clear trend, the Network Costs are left stable.

64.2 For a second consultation round, the CRA might take into account RAS 2016 data, if available.

65. For the volume, the CRA has generally used the forecasted volume submitted by the SPs. The few exceptions are noted in Section 6.

66. To estimate the Network Unit Cost for the FY 2019 and 2020, prudent cost trends have been then used. These cost trends were typically much lower than the CAGR suggests and are disclosed in Section 0.

4.1.1.2 Calculation of the Wholesale Costs

67. When setting Wholesale Charges for FYs 2015 - 2017, the CRA had no confidence in the Wholesale Cost included in the RAS of Ooredoo. Hence, the CRA used a mark-up of 10% "on top" of Network Costs to include this item in the Wholesale Charges.

68. This 10% mark-up was based on a benchmark performed by the CRA[6].

69. The CRA notes that:

69.1 The Wholesale Cost reported in Ooredoo's RAS 2015 is still not reliable, as already communicated to Ooredoo (ref. Order on Closure of the RAS 2015). Specifically, the CRA is concerned with the drivers used by Ooredoo, which determine a mark-up at product level ranging from ✂, which has a negative value at the lower and represents a overall range of more than ✂. On average, the mark-up as reported in RAS 2015 is ✂, which is seen as very high compared to the international practice, as shown in Table 1;

69.2 The CRA has updated the benchmark on Wholesale Mark-Ups, where possible. The following table shows the information collected by the CRA.

Body	Model	Value	Comments	Source
Anacom	Mobile Termination - Lric Model	from 17% (2006) to 3% (2012 and following years)	Specific Interconnection cost	https://www.anacom.pt/render.jsp?contentid=112596
Agcom	Interconnection, LLU and Bitstream	Ceiling: 4%	For Wholesale Cost	http://www.agcom.it/documents/10179/1442961/Allegato+1-9-2014+1409563139757/ce643b76-25dc-4b5f-abaa-a7d51cfb1b4c?version=1.1 http://www.agcom.it/documents/10179/540177/Delibera+747-13-CONS/85ee38d8-8977-4fd6-858f-d58e72d58268?version=1.0 http://www.agcom.it/documents/10179/540177/Delibera+746-13-CONS/73490598-b808-4c75-899a-d2764176d613?version=1.0
WIK	Mobile Termination Cost Model for Australia	10%	Mark-up for common organizational level cost	https://www.accc.gov.au/system/files/Vodafone%20Submission%20-%20Annex%20A%20Analysys%20Report.pdf
OPTA	Analysys Masons Benchmark	9%	Mark-up for common organizational level cost	https://www.accc.gov.au/system/files/Vodafone%20Submission%20-%20Annex%20A%20Analysys%20Report.pdf
OFCOM	Analysys Masons Benchmark	4%	Mark-up for common organizational level cost	https://www.accc.gov.au/system/files/Vodafone%20Submission%20-%20Annex%20A%20Analysys%20Report.pdf
PTS	Analysys Masons Benchmark	16%	Mark-up for common organizational level cost	https://www.accc.gov.au/system/files/Vodafone%20Submission%20-%20Annex%20A%20Analysys%20Report.pdf

Table 1 Benchmark on Wholesale Mark-Ups [CRA]

69.3 Additionally, the CRA notes, that

(a) The model developed by the European Commission for the assessment of the cost of providing wholesale roaming services in the EU considers a

5 For some products, data is only available for the period 2013 – 2015. For example, this is the case for the Interconnection Links, Transmission Links In such circumstance, the CAGR 2013 – 2015 has been used to project the cost

6 Ref. Annex IV of the consultation document "Setting Wholesale Charges and their relationship to Retail Charges", dated November 6, 2014 (ref. CRA 2014/11/06C)

mark-up of 10%[7].

(b) From confidential sources, the CRA has also insights from other top-down systems developed for both Fixed and Mobile Operators confirming that the mark-up (10%) would be within the expected range.

69.4 Based on both the lack of confidence in the RAS data and the above benchmark, the CRA continues to use a mark-up of 10% on top of the Network Costs to include this item in the Wholesale Charges.

4.1.2 One-Time Fees

70. Network Cost

70.1 The approach described for the calculation of Wholesale Recurring Charges is applicable.

70.2 Operating Network Cost attributed to Ooredoo's Retail Arms for comparable activities are preferred and should be used. This would ensure the respect of the non-discrimination principle.

70.3 Alternatively, "bottom-up" models based on time and material are acceptable if properly justified.

71. For Wholesale Cost please refer to section 4.1.1.2 Calculation of the Wholesale Costs above.

4.1.3 Consultation Question

Question 1	Do stakeholders agree with the CRA's view and methodology for cost estimation?

4.2 Non-Discrimination[8]

72. In similar situations, a DSP must apply the same terms and conditions that it:

72.1 Provides to itself or any of its affiliates (i.e. between wholesale and retail arm). This means effectively that a DSP shall not ask the other SPs to pay for Wholesale Charges Fees not paid for by the DSP's Retail Customers; and

72.2 Provides to any of its wholesale customers (between wholesale customers)

73. In accordance with this principle, the CRA – where possible - has verified that the Network Cost transferred to the DSP's retail arm are consistent with the Network Cost included in the Wholesale Charges.

74. To this end, the CRA is using a Proportionality Test ("PT"), based on the following methodology.

4.2.1 Proportionality Test methodology

75. The PT helps to ensure absence of non-discrimination.

76. The PT has the scope to ensure that Wholesale Charges of products sold to Access Seekers are non-discriminatory in relation to the Network Cost of functionally similar products provided internally (to the retail arm of the SP).

77. The CRA notes, that this basic test is typically performed by the DSP before submitting cost figures to the CRA, since the non-discrimination is a requirement usually imposed on DSPs worldwide.

78. It is also obvious from a general fairness principle that an Access Seeker should not incur (significantly) higher cost than the (vertically integrated) Access Provider is

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[7] This can be observed in the page 241, point "On Interconnection Staff Costs" of the document Assessment of the cost of providing wholesale roaming services in the EU –Final report

[8] Article 24 of the Telecommunication Law and Article 49 of the By-Law

charging itself.

79. The implementation of the PT was deeply discussed in the proceeding for setting the Wholesale Charges 2015 – 2017.

80. The CRA is aware that differences between the Network Cost of wholesale and retail services are generally not accepted in many jurisdictions at all unless they are properly justified (e.g. different hourly distribution, ABC information showing higher dedication of manpower for wholesale services, etc.). Therefore, strictly speaking, any difference should be materially justified.
Nevertheless, the CRA is aware that the Network Cost of an e.g. MTR might be different from an on-net call due to different routings and Network Elements involved. Therefore, the CRA deems a maximum of 20% as reasonable to assess the relation.

81. For example, to perform the PT, the CRA compares twice the Wholesale Charges of the Mobile Termination Rate with the Network Cost of an end-to-end on-net mobile call.

82. The following table shows an illustrative example of the PT as implemented by the CRA.

						Reasonable Difference	20%
Corresponding Retail Product		(Internal) Network Product		(External) Wholesale Product		Proportionality Test	
Name	Unit	Name	Cost	Name	Cost	Max Cost (inlcluding) RD	Pass
F:F (on-net)	QAR/min	Origination + Termination	0.50	2 FTR	1.00	0.60	NO
M:M (on- net)	QAR/min	Origination + Termination (including Video Calls)	1.00	2 MTR (including Video Calls)	0.50	1.20	YES
SMS (on- net)	QAR/SMS	Origination + Termination	0.20	2 SMSR	0.10	0.24	YES
MMS (on- net)	QAR/SMS	Origination + Termination	0.30	2 MMSR	0.15	0.36	YES

Table 2 Illustrative example of the Proportionality Test as implemented by the Authority [CRA]

83. The CRA therefore suggests to confirm that this basic Proportionality Test has to be passed.

4.2.2 Consultation Question

Question 2	Do stakeholders agree with the CRA's view and implementation of the PT test, i.e. having a threshold of 20%?

4.3 Replicability

84. Law's Article 43 (9b) determines that reducing the margin of profit available to a competitor that requires wholesale telecommunications services from a DSP (commonly known as "Margin Squeeze" or "Price Squeeze") shall be considered as abuse of dominance.

85. In addition:

85.1 Article 4.2.3 of the RTI dated May 7, 2015 (ref. CRA 2015/05/07) requires the absence of a Price Margin Squeeze ("PMS").

85.2 Section "3.5.2 Margin squeeze" of The Competition Policy, Explanatory Document, issued on October 21, 2015, also includes guidelines on how to verify the absence of Margin Squeeze.

86. The CRA has developed a specific test to verify the absence of margin squeeze issues, i.e. the OLO can replicate DSPs' Retail Offers renting the Wholesale Products[9], as described in following section.

[9] The average Retail Mark Up as per RAS 2015 is used in this exercise.

4.3.1 Price / Margin Squeeze Test methodology

87. DSPs must demonstrate the absence of a Price/Margin-Squeeze (“PMS”) for their services. This should be based on the Wholesale Charges of existing wholesale products or, where relevant, the charge of proposed wholesale products.

88. The Price Margin Squeeze test checks whether competing SPs can replicate the retail service with wholesale inputs. The CRA will consider the best available information in deciding the appropriate levels of prices.

89. For the purpose of this consultation, the CRA confirms the PMS test as defined in the Order and attached Economic Analysis for setting the Wholesale Charges 2015 – 2017.

90. The following table shows the generic form of the PMS Test.

Price margin Squeeze

Retail Product		Retail Charge	CRA Propoposed wholesale charge	Outpayment	Retail MU	CRF	Granularity	cost for provisioning	pass
					40%	fixed and mobile			
Product X	QAR/min	10.00	8.00	-	3.20	0.80	-3.60	8.40	yes
Product Y	QAR/min	15.00	13.00	2.00	6.00	1.50	-6.75	15.75	no

Table 3 Price margin Squeeze – generic example [CRA]

91. For the avoidance of doubt, this test could also be used for assessing ex-post competition cases.

4.3.2 Consultation Question

Question 3	Do stakeholders agree with the CRA’s view and implementation of the PMS test?

5 Mechanisms available for setting wholesale charges

92. The following sections describe how the CRA has set the Wholesale Charges, providing further detail regarding the applicable timeframe, overall methodological approach, use of benchmarks, application of glide paths and potential alternative approaches.

5.1 Applicable timeframe

93. The predictability of the Wholesale Charges over a certain period is valuable for both Regulators and Service Providers as this helps:
    93.1 The DSPs to forecast their wholesale revenue;
    93.2 The SPs to forecast their costs, facilitating the development of the business plans; and
    93.3 The CRA to perform its own controls based on the Wholesale Charges (for example, the Proportionality Test or the Price Margin Squeeze Test).
94. Hence, as per previous decision on Wholesale Charges, the CRA suggests confirming the multi-year period as method of Charges control. With this method, the Service Providers know in advance exactly the Wholesale Charges that will be in force during the period of control.
95. The CRA formed its position well acknowledging that this method may lead to wholesale Charges not exactly reflecting future costs because of inaccurateness in forecasting the wholesale Charges or because of events not predictable at the time of the forecast.
96. However, to mitigate this risk, the CRA:
    96.1 Has applied prudent factors, which are rather overestimating forecasted costs;
    96.2 Proposes a short period of control (three years);
97. Hence, the CRA is of the view that Wholesale Charges shall cover the calendar years 2018, 2019 and 2020.

5.1.1 Consultation Question

Question 4	Do stakeholders agree with the timeframe defined by the CRA?

5.2 Overall methodological approach

98. As anticipated previously in this document, the CRA has, apart from currently applicable wholesale charges, three main references for setting new wholesale charges, namely:
    98.1 Ooredoo's and/or Vodafone's cost information, to calculate cost oriented wholesale charges;
    98.2 Proportionality Test results, and
    98.3 Price Margin Squeeze Test results.
99. In case the tests are passed, costs can be translated directly in Wholesale Charges. If cost oriented wholesale charges do not pass the tests, they need to be adjusted to pass the tests, so that they can be translated in Wholesale Charges.

5.2.1 Consultation Question

Question 5	Do stakeholders agree with the overall methodological approach defined in this section?

5.3 Use of benchmarks

100. Benchmarks are commonly used for defining wholesale charges in those cases in which the regulator has little or no information.

101. The CRA has been mostly able to produce reasonable cost estimates from Ooredoo's RAS. In these cases, the CRA is not foreseeing the option of defining wholesale rates directly based on benchmark information.

102. In cases for which no costing information is available or the information is considered inaccurate or unrepresentative, the CRA intends to rely on benchmark information to define wholesale charges.

103. In any case, the CRA believes benchmarks can be useful to understand where Qatari operators' costs stand against other countries.

5.3.1 Consultation Question

Question 6	Do stakeholders agree with proposed use of benchmarks?

5.4 Application of glide paths

104. The glide path is a mechanism of successive adjustments over time from the current rates to a target value[10].

105. The glide path is a very popular and useful mechanism, especially used if the charges have to be reduced to reach a cost-oriented level. This avoids a one-off shock if the current charges were significantly different from the cost-oriented charges. In addition, it promotes a greater predictability of charges thus reducing the regulatory risk.

106. This method is easy to implement and does not impose unfair administrative burden on both the CRA and the SPs.

107. Based on the above, the CRA sees the usefulness of applying glide paths in those services with relevant differences between currently applicable charges and new available levels.

108. The planned application of glide paths for those services will be based on equal yearly charge reductions from the currently applicable charges and the charge defined for the last year of the applicable timeframe defined in section 5.1.

5.4.1 Consultation Question

Question 7	Do stakeholders agree with the application of glidepaths and the methodology outlined in this section?

5.5 Existence of alternative approaches

109. Apart from the traditional approaches described in previous sections, the CRA sees the option of alternative solutions for charging wholesale services.

110. Specifically, the CRA observes that some countries are applying the concept "zero rating" or "bill-and-keep" for interconnection payments. This solution is viable when the traffic exchanged among SPs is balanced, or when the costs associated to charging interconnection (e.g. billing costs) outbalance the charges that can be applied. We observe that the interconnection traffic (fixed and mobile) in Qatar is balanced among operators. Zero Rating would reduce the administrative cost incurred by both the SPs and the CRA for managing the interconnection. A mechanism to charge unbalanced traffic exceeding – for example, 10% of the total traffic – could also be deemed

10 European Regulatory Group, ERG (06) 33, p. 73

appropriate.

5.5.1 Consultation Questions

Question 8	Do stakeholders agree with the use of zero rating for interconnection rates? If yes, for which services do stakeholders believe zero rating should be implemented?

Question 9	Do stakeholders see other alternative approaches? This might be e.g. port charges for IC products or up-front lump sum payments. If yes, for which services do stakeholders believe such alternative approaches should be implemented?

6 Wholesale Charges

6.1 Conveyance Services

111. Conveyance Services include:
   111.1 Fixed Call Termination Service to Geographic Numbers;
   111.2 Mobile Voice and Video Call Termination Service;
   111.3 Call Termination Service to Toll-Free Numbers (reverse charge);
   111.4 Call Termination Services to Numbers for Inbound International calls;
   111.5 Termination Emergency Services;
   111.6 SMS Termination;
   111.7 MMS Termination; and
   111.8 Outgoing international call conveyance.

112. Ooredoo and Vodafone are both DSPs in the Relevant Markets to which these services belong. Hence, the following Wholesale Charges are applicable to both the above SPs.

113. The following sections analyze each service in detail.

114. Unless differently specified, costs include Network Costs and a 10% wholesale mark-up.

6.1.1 Fixed Call Termination Service to Geographic Numbers

6.1.1.1 References available

6.1.1.1.1 Cost references

115. In the case of this service, cost references are only available from Ooredoo.

116. The cost per unit of this service has been calculated as per the general methodology (cf. 4.1.1.1 Calculation of Network Costs and 4.1.1.2 Calculation of the Wholesale Costs). Specific to this service, the CRA;
   116.1 Forecasted the total Network Costs for the years 2016-2018, assuming that the Network Costs will stay stable for the next 3 years;
   116.2 The volume forecast provided by Ooredoo shows a trend inconsistent with historic data and has not been used. Instead, the CRA used the volume forecasted by Vodafone for this service. The CRA notes that Vodafone forecast is conservative compared to CRA's own assessment based on CAGR 2010 – 2015 of this service.
   116.3 The trend to establish the cost per unit for the years 2019 and 2020 was assumed equal to 0%. This is consistent with the approach used to forecast the Network Cost.

117. The following table shows the unit cost according to the above assumptions.

✂

Table 4 Fixed Call Termination Service to Geographic Numbers - costs (incl. 10% Wholesale Markup) [CRA calculation]

118. The CRA notes that the forecasted unit cost for FC 2016 drops considerably ✂ from the wholesale charge set by the CRA for the year 2017 (0.0175 QAR/min).

6.1.1.1.2 Comments by the Service Providers provided in the Data Request[11]

119. Ooredoo is of the view that the total cost for fixed network voice costs would remain stable over the years, but with decreasing overall fixed traffic. Hence, Ooredoo suggests keeping the wholesale charge at 2017 level or to increase it.

120. In the absence of a large stand-alone fixed network, Vodafone was unable to provide representative costs for terminating calls on a fixed network in Qatar. However, Vodafone argued that significantly less cost is incurred to terminate calls on fixed network compared to mobile networks. According to Vodafone, this is confirmed by international benchmarks.

6.1.1.1.3 Proportionality Test

121. The table below shows that the PT is not passed.

Table 5 Fixed Call Termination Service to Geographic Numbers – Proportionality Test [CRA calculation]

122. This means that the Network Cost for the retail product is lower than the equivalent wholesale product. The CRA acknowledges that the fact that the interconnection agreement determines the interconnection through the mobile network may imply usage of different network elements (e.g. mobile network MGWs). However, it is believed that this casuistry cannot justify so relevant differences between retail and wholesale products (i.e. Network Costs in 2016 associated to two termination charges are 452% above those allocated to the on-net call).

123. The CRA notes that worldwide Fixed and Mobile Networks are converging. Ooredoo is also working on this solution. This convergence will lead to efficiency and cost reductions and – ultimately – will unify the technical provision of Fixed and Mobile Calls. Hence, the results of the PT could be seen as a forward-looking cost of Fixed Calls.

6.1.1.1.4 Price / Margin Squeeze Test

124. The PMS was not performed, as the retail national fixed-to-fixed calls are bundled with the line rental.

6.1.1.1.5 Benchmark

125. The graph below shows a benchmark on the Charges of the Fixed Call Termination Service to Geographic Numbers. For Qatar, the Wholesale Charge 2017 (QA 2017) is displayed, together with the Wholesale Charges proposed for 2018 by the CRA (ref. Option 1 and 2 displayed in Table 7).

[11] The position of the Service Providers has been taken from their responses to the Data Request

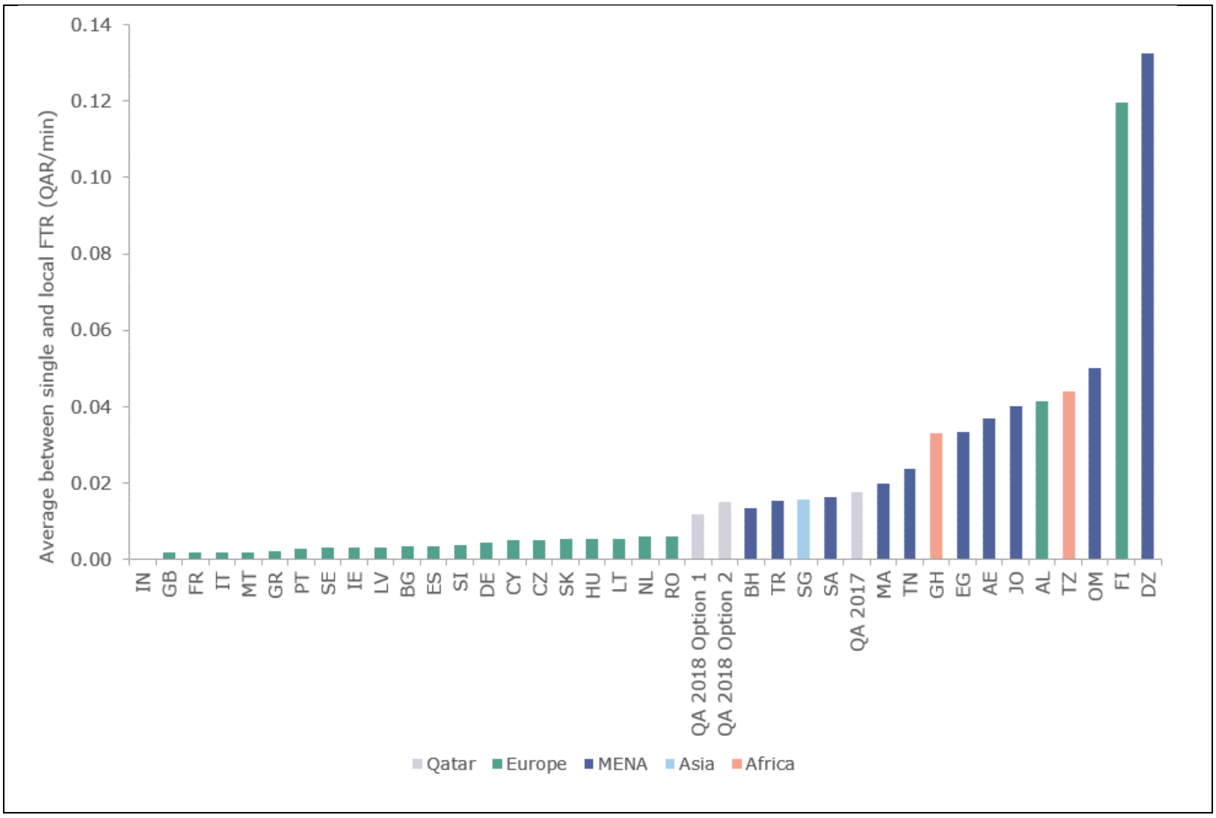


Figure 2 Fixed Call Termination Service to Geographic Numbers - Benchmark [Cullen International, CRA research]

126. The FTR in Qatar is in the lower range of those applied in MENA countries, but above the charges in the benchmarked European countries. Regarding the cost of the fixed termination estimated for 2017 based on the RAS results, it can be observed that it is located above most of European countries but below MENA, Asian and African countries. There is a list of main aspects that justify this situation:

126.1 Low FTRs observed in Europe are due to the fact that most of countries in this region, following the EC's recommendation, have set the applicable voice termination charge following a pure LRIC approach.

126.2 Geographical characteristics of Qatar also play an important role. The country presents a high population density. For instance, Qatar is the fourth country in the list of benchmark countries (excluding European countries) in terms of national population density, as shown in the following exhibit:

Country	Population density in 2016 (people per km^2)
Singapore	7,909
Bahrain	1,848
India	445
Qatar	**221**
Ghana	124
United Arab Emirates	111
Jordan	107
Turkey	103
Egypt	96
Morocco	79
Tunisia	73
Tanzania	63
Algeria	17
Saudi Arabia	15
Oman	14

Table 6 Population densities in selected countries [World Bank]

126.3 Moreover, the population is mainly located in the eastern and central parts of the country, around the capital, while the southern, western and northern parts of the country are mainly inhabited, as also shown in the following exhibit.

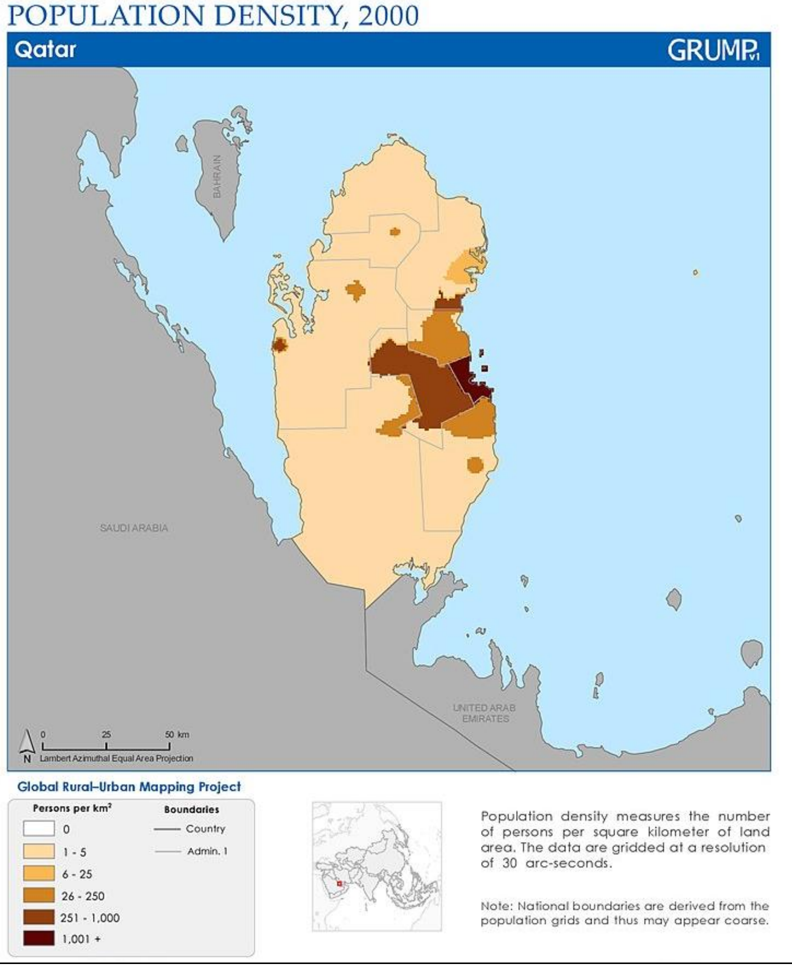


Figure 3 Map of population density in Qatar [SEDAC]

126.4 Consequently, the investment required to provide telecommunications services to a large proportion of the population is limited and the costs per customer reduced. These factors provide a good explanation of the low costs incurred by

Qatari operators for the provision of telecommunication services when compared with other countries.

127. In addition, we have benchmarked the FTR in Qatar with that of the countries where Ooredoo and Vodafone operate.

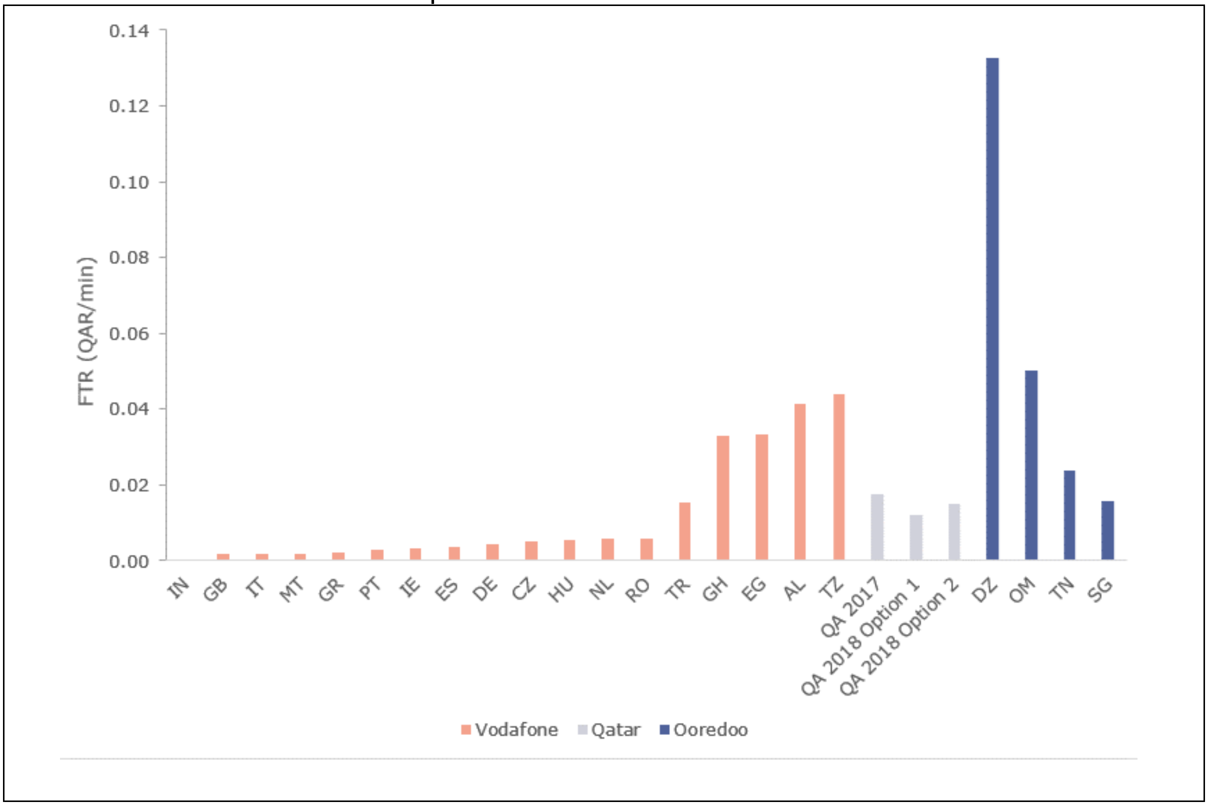


Figure 4 Fixed Call Termination Service to Geographic Numbers – Benchmark for countries where Ooredoo and Vodafone Operate [CRA research]

128. Regarding Ooredoo, the Qatari FTR is comparable with that of Singapore which is a country with population density and geography comparable to Qatar (ref. Table 6 and Figure 3 above).

129. Regarding Vodafone, the Qatari FTR is above the FTR of the European countries where Vodafone operates. This is generally due to the application of the LRIC methodology in the EU. The Qatari FTR is below the charge applied in MENA and African Countries where Vodafone operates given the differences from Qatar in population density and geography comparable (ref. Table 6 and Figure 7 above).

6.1.1.2 Foreseen options

130. To set the Wholesale Charges for this service, the CRA sees the following options:

130.1 **Option 1**: Wholesale Charges, which pass the PT (with Glide Path)

This approach is consistent with CRA's scope to create a fair competitive field, permitting the OLOs to compete with Ooredoo.
This was the solution implemented to set the wholesale charge of this service for the years 2015 – 2017.

130.2 **Option 2**: Wholesale Charges, based on actual cost (with Glide Path)

The usage of the mobile network elements for this fixed service could be seen as inefficient and leading to higher costs in the provision of the service. However, the CRA understands that the two SPs agreed on this technical solution.

130.3 **Option 3**: Fixed and Mobile Blended Wholesale Charges

130.4 **Option 4**: Zero Rating

131. The following table shows the wholesale charges corresponding to the Options above.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale charges, which pass the PT (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0119	0.0063	0.0006
Change to previous year			-32%	-47%	-90%
Option 2 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0150	0.0125	0.0100
Change to previous year			-14%	-17%	-20%
Option 3 – Fixed and Mobile Blended Wholesale Charges (n.b. susceptible of changes according to the level of the MTR)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	not applicable	0.0549	0.0353	0.0158
Change to previous year		not applicable	not applicable	not applicable	not applicable
Option 4 – Zero Rating					
Fixed Call Termination Service to Geographic Numbers	QAR/min	not applicable	0.0000	0.0000	0.0000
Change to previous year		not applicable	not applicable	not applicable	not applicable

Table 7 Fixed Call Termination Service to Geographic Numbers – Wholesale Charges [CRA calculation]

132. The first two options are also shown in the graph below.

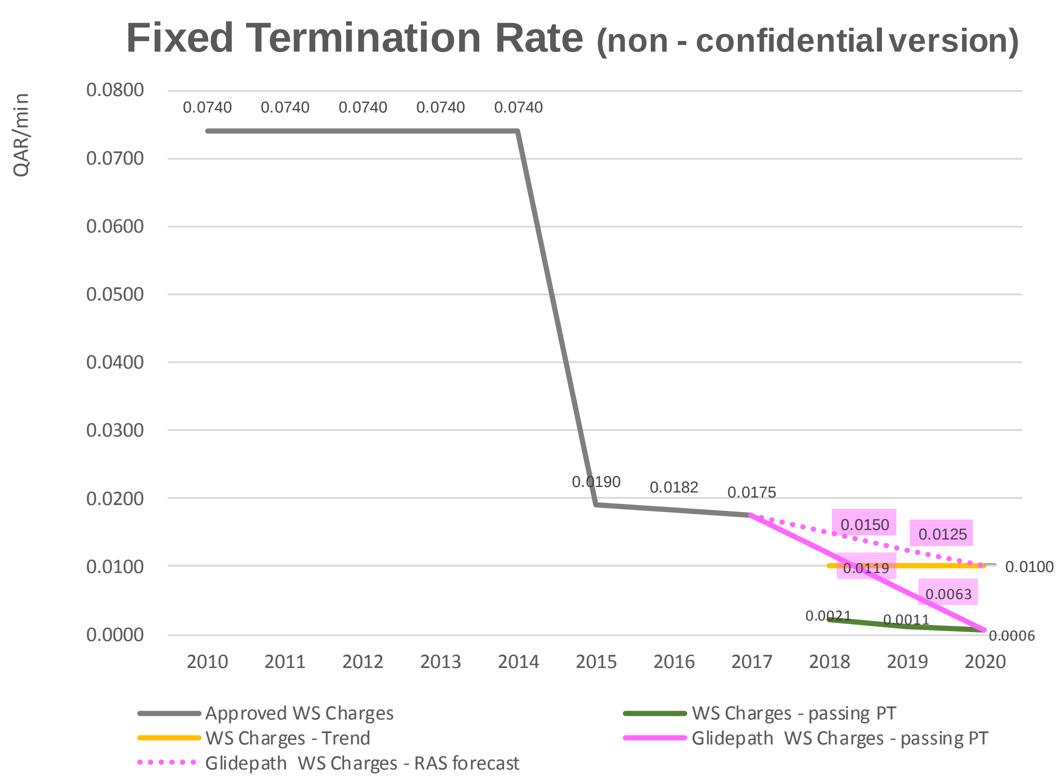


Figure 5 Fixed Call Termination Service to Geographic Numbers – Wholesale Charges (Option 1 and Option 2) [CRA calculation]

6.1.1.3 Consultation Question

Question 10	Do stakeholders agree with the CRA's proposed Wholesale Charge for the Fixed Call Termination Service to Geographic Numbers? Which of the Options proposed by the CRA do you suggest and why?

6.1.2 Mobile Call and Video-Call Termination Service

6.1.2.1 References available

6.1.2.1.1 Cost references

133. Cost references are available for Ooredoo and Vodafone.

Cost reference for Ooredoo

134. The cost per unit of this service has been calculated as per the general methodology (cf. 4.1.1.1 Calculation of Network Costs and 4.1.1.2 Calculation of the Wholesale Costs). Specific to this service, the CRA;

134.1 Forecasted the total Network Costs for the years 2016-2018, assuming that the cost will stay stable for the next 3 years as no clear trend was seen from the RAS data;

134.2 Ooredoo provided a volume forecast, which was used by the CRA. The CRA notes that Ooredoo forecast is lower than what would be expected from the CAGR 2010 – 2015.

134.3 The trend to establish the cost per unit for the years 2019 and 2020 was assumed equal to -19% per year. This is consistent with the average trend of the cost per unit over the period 2010 - 2018.

135. The following table shows the cost per unit calculated according to the above assumptions.

[redacted]

Table 8 Mobile Call and Video-Call Termination Service - costs (incl. 10% Wholesale Markup) [CRA calculation]

Cost reference for Vodafone

136. Vodafone provided a range for the MTR for 2018 between [redacted] QAR/min to [redacted] QAR/min. The following table shows the cost submitted by Vodafone for MB to minute conversion rate comparable to Ooredoo[12].

[redacted]

Table 9 Mobile Call and Video-Call Termination Service - cost [Vodafone]

137. Vodafone's estimates could not be considered as reliable.

We note the enormous range submitted by Vodafone between [redacted] QAR/min to [redacted] QAR/min, which represents a factor of 27. Vodafone did not provide any justification of what the "correct" value is, but is rather presenting a range of drivers.

The total cost attributed by Vodafone to the mobile termination are higher than those attributed by Ooredoo in the RAS. This is not consistent with our expectations that Vodafone should have a lower cost basis compared to Ooredoo. This was previously confirmed by VF's submissions, where VF provided Network Cost below or comparable to Ooredoo. Until Vodafone can transparently justify its charges, the CRA will rely on Ooredoo's costs, based on audited RAS.

[12] NB: Vodafone submitted various cost, based on various conversion factors for MB to minutes. In order to maintain a comparability with Ooredoo, we used the scenario with the same conversion factor MB to minutes, as used in the Audited RAS of Ooredoo.
Ref. Excel file "1705 Data Request and Cost model for the SPs VFQ CONFIDENTIAL INFO", tab "Cost Estimates", submitted by Vodafone on May 30, 2017.

Comments by the Service Providers

138. Ooredoo is of the view that total cost of the mobile network will not change too much in the next years. Ooredoo expects traffic volume to grow albeit at lower rate than seen in the past. Hence, Ooredoo foresees a reduction of the mobile termination cost per unit but asks the CRA to drop the MTR gradually.

139. Vodafone highlights the growth of the data services and the challenge to determine the appropriate allocation of cost between voice and data. According to Vodafone's simulation, the mobile termination charge for the Year 2018 could range from ✂ QAR/min to ✂ QAR/min.

Vodafone calls for a cautionary approach by the CRA also given inherent market uncertainty, flat underlying mobile revenues and a new wave of investment in 5G expected in the coming years.

6.1.2.1.2 Proportionality Test

140. The following table shows that the costs pass the PT.

✂

Table 10 Mobile Call and Video-Call Termination Service – Proportionality Test [CRA calculation]

6.1.2.1.3 Price Margin Squeeze Test

141. The following table shows that the costs pass the PMS Test.

✂

Table 11 Mobile Call and Video-Call Termination Service – PMS [CRA calculation]

6.1.2.1.4 Benchmark

142. The table below shows a benchmark on the Charges of the Mobile Termination Service. For Qatar, the Wholesale Charge 2017 (QA 2017) is displayed, together with the Wholesale Charges proposed for 2018 by the CRA (ref. Option 1 displayed in Table 12).

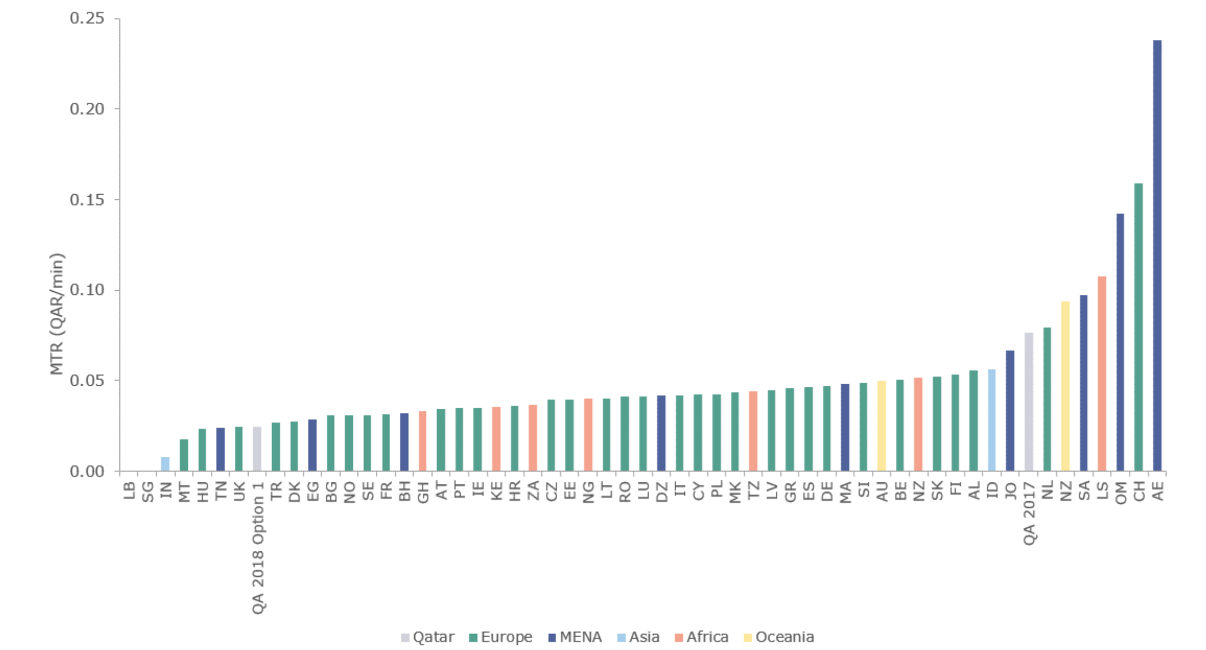


Figure 6 Mobile Call and Video-Call Termination Service – Benchmark [Cullen International, CRA research]

143. The current MTR in Qatar is in the upper range of the charges in the benchmarked countries. The wholesale charge proposed for the 2018 (QA 2018 Option 1) is located in the lower range of the international references found. This situation may be justified due to the following main factors:

143.1 The specific geographical characteristics of Qatar, including both the population density and the concentration of population contribute to a reduction of the operator's cost basis. Further details about it may be found in section 6.1.1.1.5.

143.2 In the case of mobile networks, the geography of the country also plays a relevant role. With its highest point at an altitude of 103 meter, Qatar is a low-lying country which does not have any significant mountain or deep valleys. Mountainous regions typically impede the propagation of the electromagnetic waves used for mobile telecommunication services, requiring a higher number of cells and increasing the costs of provision of services. Due to its flat topographic profile, Qatar does not suffer from these problematics and mobile telecommunication services can thus be provided at a reduced cost compared to countries with harsher topographies.

143.3 High patterns of data consumption are observed in Qatar. In particular, based on available RAS information for the year 2015, a Qatari user consumed on average ✂ GB/month, while lower consumptions were observed in other regions such as Western Europe (1.134 GB/month), Central & Eastern Europe (1.529 GB/month) or Asia-Pacific (588 GB/month), based on information published by CISCO. In this context, since mobile networks are shared by both voice and data services, such high patterns observed in data consumptions present a direct impact in the cost of voice services, therefore reducing their associated costs.

144. In addition, we have benchmarked the MTR in Qatar with that of the countries where Ooredoo and Vodafone operate.

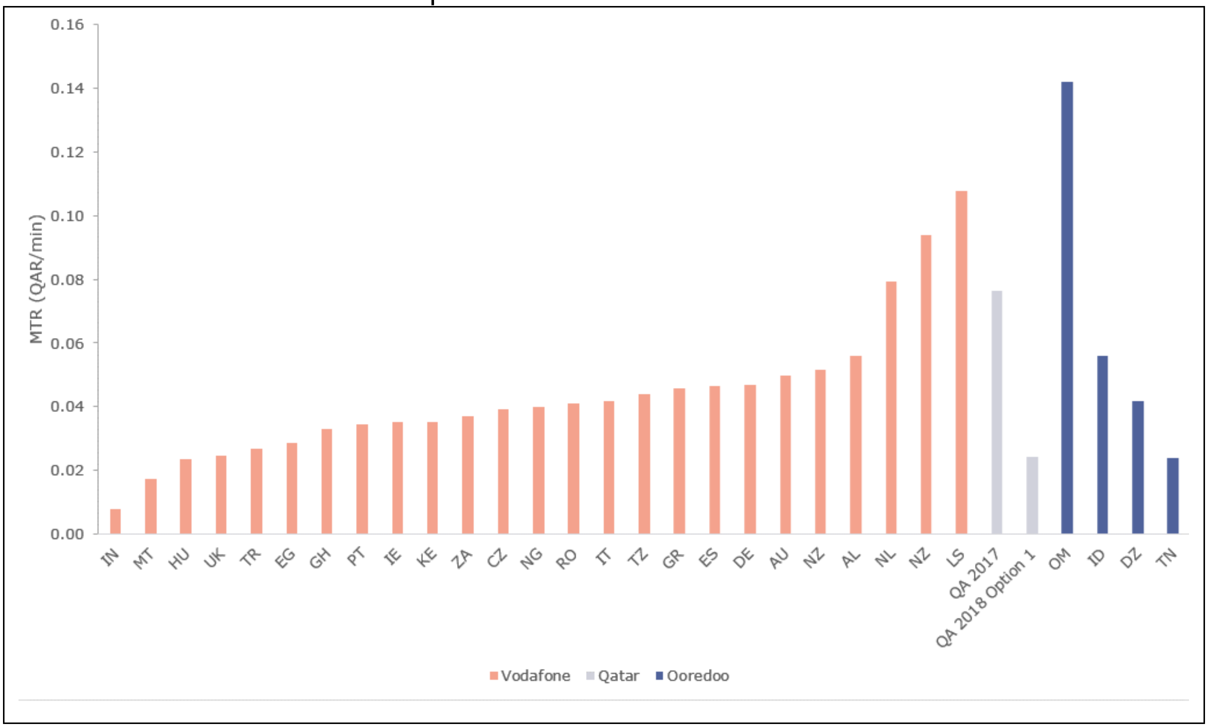


Figure 7 Mobile Call Termination Service – Benchmark - Countries where Ooredoo and Vodafone operate [CRA research]

145. Regarding Ooredoo, the current Qatari MTR (QA 2017) is higher than that of the countries where Ooredoo operates, with the exception of Oman, where population

density and geography explain cost differences in delivering mobile service (ref. Table 6 and Figure 3 above).

146. Regarding Vodafone, the current Qatari MTR (QA 2017) is generally above the MTR of the countries where Vodafone operates. The proposed Qatari MTR (QA 2018 Option 1) is generally lower than that applied where Vodafone operates given the differences from Qatar in population density and geography comparable (ref. Table 6 and Figure 3 above).

6.1.2.2 Foreseen options

147. To set the Wholesale Charges for this service, the CRA sees the following initial options:

147.1 **Option 1**: Wholesale Charges oriented towards projected cost per unit with a Glide Path.

147.2 **Option 2**: Fixed and Mobile Blended Wholesale Charges.

147.3 **Option 3**: Zero Rating.

148. The following table shows the wholesale charges corresponding to the options above.

		Approved Charge	Charges for consultation		
QAR/min		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Mobile Call and Video-Call Termination Service	QAR/min	0.0762	0.0561	0.0360	0.0159
Change to previous year			-26%	-36%	-56%
Option 2 – Fixed and Mobile Blended Wholesale Charges (n.b. susceptible of changes according to the level of the FTR)					
Mobile Call and Video-Call Termination Service	QAR/min	not applicable	0.0549	0.0353	0.0158
Change to previous year		not applicable	not applicable	not applicable	not applicable
Option 3 – Zero Rating					
Mobile Call and Video-Call Termination Service	QAR/min	not applicable	0.0000	0.0000	0.0000
Change to previous year		not applicable	not applicable	not applicable	not applicable

Table 12 Mobile Call and Video-Call Termination Service – Wholesale Charges for consultation [CRA calculation]

149. The first two options are also shown in the graph below.

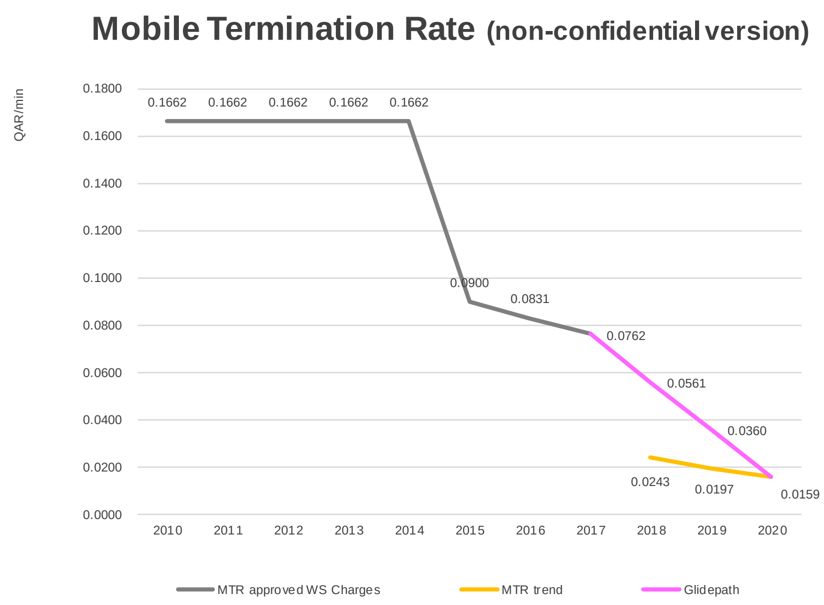


Figure 8 Mobile Call Termination [CRA calculation]

6.1.2.3 Consultation Question

Question 11	Do stakeholders agree with the CRA's proposed Wholesale Charge for the Mobile Call and Video-Call Termination Service? Which of the Option proposed by the CRA do you suggest and why?

6.1.3 Call Termination Service to Toll-Free Numbers (reverse charge) for fixed and mobile calls

6.1.3.1 References available

6.1.3.1.1 Cost references

150. The cost of this service is comparable to those incurred for providing the Call Termination Service. The majority of calls to Toll-Free Numbers originates from the mobile network. This was also confirmed in the proceeding for setting the Wholesale Charges of this service for the years 2015, 2016, 2017 (ref. Economic Analysis, CRA 2015/05/10, section 3.2.5).

151. Ooredoo's RAS does not show additional cost of origination for this service compared to the Mobile Call Termination Service.

6.1.3.1.2 Comments by the Service Providers

152. None.

6.1.3.2 Foreseen options

153. The CRA suggests to set the charges for this service at the same level as the "Mobile Call and Video-Call Termination Service" (cf. 6.1.2)

6.1.3.3 Consultation question

Question 12	Do stakeholders agree with the CRA's proposed approach for setting the "Call Termination Service to Toll-Free Numbers (reverse charge) for fixed

	and mobile"?

6.1.4 Call Termination Services to Numbers for Inbound International calls

6.1.4.1 Foreseen options

154. In its previous decisions, the CRA decided that this charge shall not be regulated (ref. Order CRA 2015/05/21F and annexed Economic Analysis CRA 2015/05/21 and Order CRA 2015/03/08A).

155. The CRA understands that the commercially agreed charges for this termination product are well in excess of the regulated termination products and their costs. This leads to a waterbed effect, i.e. increasing the cost for international calls for the retail customer.

156. We also understand that the commercial rates are set reciprocally, i.e. the change of rates of one operator are followed eventually by the other operator. A logical effect is that customers rather use OTT services for international calls rather than (inflated) retail telecommunication services. Therefore setting regulated rates for the product might be beneficial for the customer and reduce the drain of international calls to OTT providers.

6.1.4.2 Consultation question

Question 13	The CRA is interested in hearing a justification for the SPs on the (non) regulation of Call Termination Services to Numbers for Inbound International calls. This argumentation should include clear figures in terms of volumes, revenues and cost.

6.1.5 Termination Emergency Services

6.1.5.1 Foreseen options

157. The underlying cost are comparable to the FTR.

158. Therefore, the CRA proposes to set the charge for the "Termination Emergency Services" at the same level of the FTR (Ref. Section 6.1.1). The same approach was applied in the previous round of setting the wholesale charges.

6.1.5.2 Consultation question

Question 14	Do stakeholders agree to set the charge for the "Termination Emergency Services" at the same level of the FTR?

6.1.6 SMS Termination

6.1.6.1 References available

6.1.6.1.1 Cost references

159. In the case of this service, cost references are only available from Ooredoo.

160. The cost per unit of this service has been calculated as per the general methodology (cf. 4.1.1.1 Calculation of Network Costs and 4.1.1.2 Calculation of the Wholesale Costs). Specific to this service, the CRA;

    160.1 Forecasted the total Network Costs for the years 2016-2018, assuming that the cost will stay stable for the next 3 years as no clear trend was seen from the RAS data;

    160.2 Ooredoo provided a volume forecast, which was used by the CRA.

    160.3 The trend to establish the cost per unit for the years 2019 and 2020 was assumed equal to 0% per year. This is consistent with the assumptions made to forecast the Network Costs.

161. The following table shows the cost per unit calculated according to the above assumptions.

Table 13 SMS Termination – costs (incl. 10% Wholesale Markup) [CRA calculation]

162. Cost per unit raises, due to the decreasing of the number of SMS.

6.1.6.1.2 Comments by the Service Providers

163. Ooredoo suggested to keep the SMS Termination charge at 2017 level or to consider an increase, given that Qatar SMS termination rate is well below international benchmarks.

6.1.6.1.3 Proportionality Test

164. The following table shows that the costs pass the Proportionality Test.

Table 14 SMS Termination – Proportionality Test [CRA calculation]

6.1.6.1.4 Price Margin Squeeze

165. The following table shows that the costs pass the PMS Test.

Table 15 SMS Termination – PMS [CRA calculation]

6.1.6.2 Foreseen options

166. The following table shows the charges oriented to the above cost, with a Glide Path.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
SMS Termination	QAR/SMS	0.0130	0.0091	0.0052	0.0013
Change to previous year			-30%	-43%	-75%

Table 16 SMS Termination – Wholesale Charges for consultation [CRA calculation]

167. The option is also shown in the graph below.

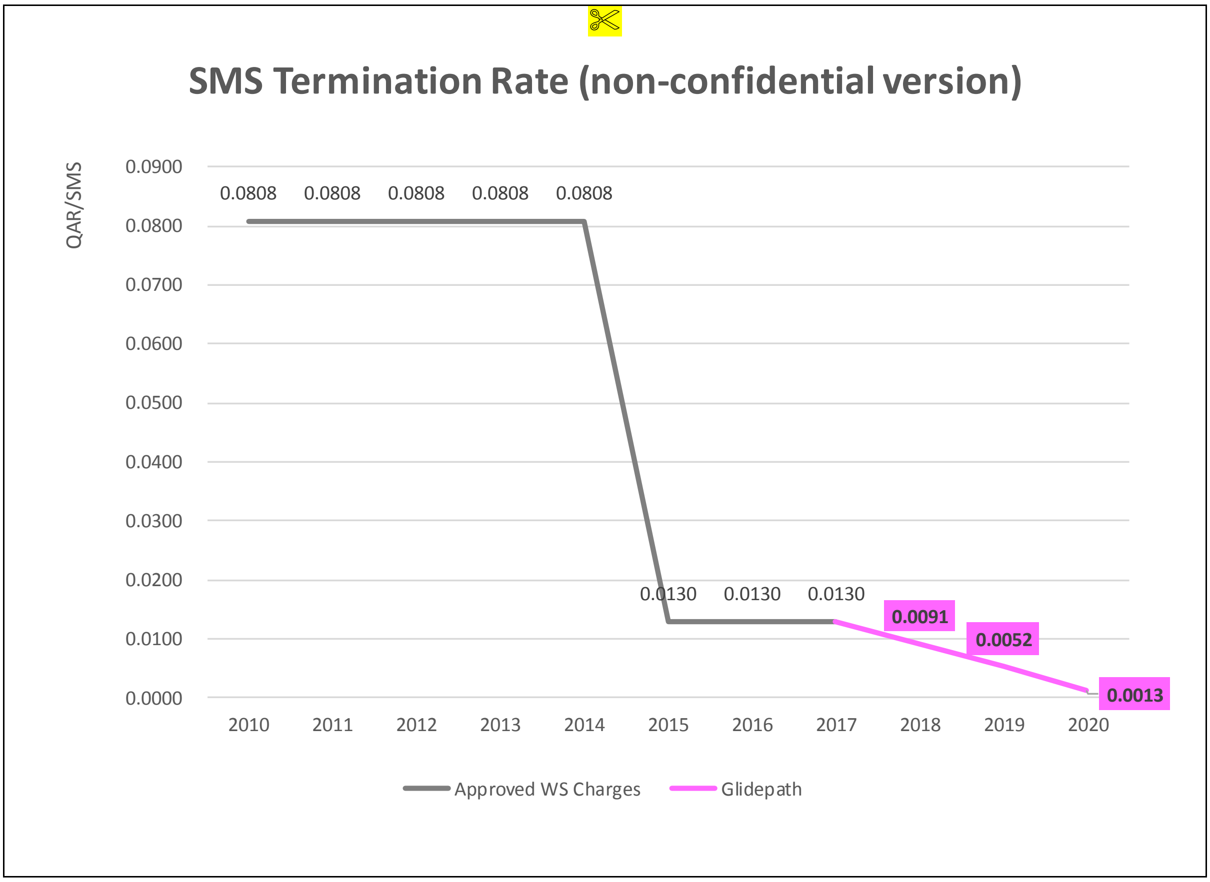


Figure 9 SMS Termination – Wholesale Charges for consultation [CRA calculation]

6.1.6.3 Consultation question

Question 15	Do stakeholders agree with the CRA’s proposed Wholesale Charge for the SMS Termination?

6.1.7 MMS Termination (Picture and Video)

6.1.7.1 References available

6.1.7.1.1 Cost references

168. In the case of this service, cost references are only available from Ooredoo.

169. The cost per unit of this service has been calculated as per the general methodology (cf. 4.1.1.1 Calculation of Network Costs and 4.1.1.2 Calculation of the Wholesale Costs). Specific to this service, the CRA;

169.1 Forecasted the total Network Costs for the years 2016-2018, assuming that the cost will stay stable for the next 3 years as no clear trend was seen from the RAS data;

169.2 Volume were forecasted based on RAS CAGR 2010 – 2015 (-12%), because the forecast provided by Ooredoo shows an inconsistent trend;

169.3 The trend to establish the cost per unit for the years 2019 and 2020 was assumed equal to 0% per year. This is consistent with the assumptions made to forecast the Network Costs.

170. The following table shows the cost per unit calculated according to the above assumptions.

Table 17 MMS Termination (Picture and Video) - costs (incl. 10% Wholesale Markup) [CRA calculation]

171. Cost per unit raises over the forecasted years, due to the decreasing number of MMS.

6.1.7.1.2 Comments by the Service Providers

172. Both Ooredoo and Vodafone suggested that this product is declining and/or immaterial for their business.

173. Further, Ooredoo suggested to keep the 2017 charges.

6.1.7.1.3 Proportionality Test

174. The following table shows that the cost pass the Proportionality Test.

Table 18 MMS Termination (Picture and Video) – Proportionality Test [CRA Calculation]

6.1.7.1.4 Price Margin Squeeze

175. The Wholesale Charges proposed by the CRA pass the PMS Test.

Table 19 MMS Termination – PMS Test [CRA Calculation]

6.1.7.2 Foreseen options

176. The following table shows the charges oriented to the above cost, with a mechanism of Glide Path.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
MMS Termination (Picture and Video)	QAR/MMS	0.4300	0.2936	0.1572	0.0208
Change to previous year			-32%	-46%	-87%

Table 20 MMS Termination – Wholesale Charges for consultation [CRA Calculation]

177. The option is also shown in the graph below.

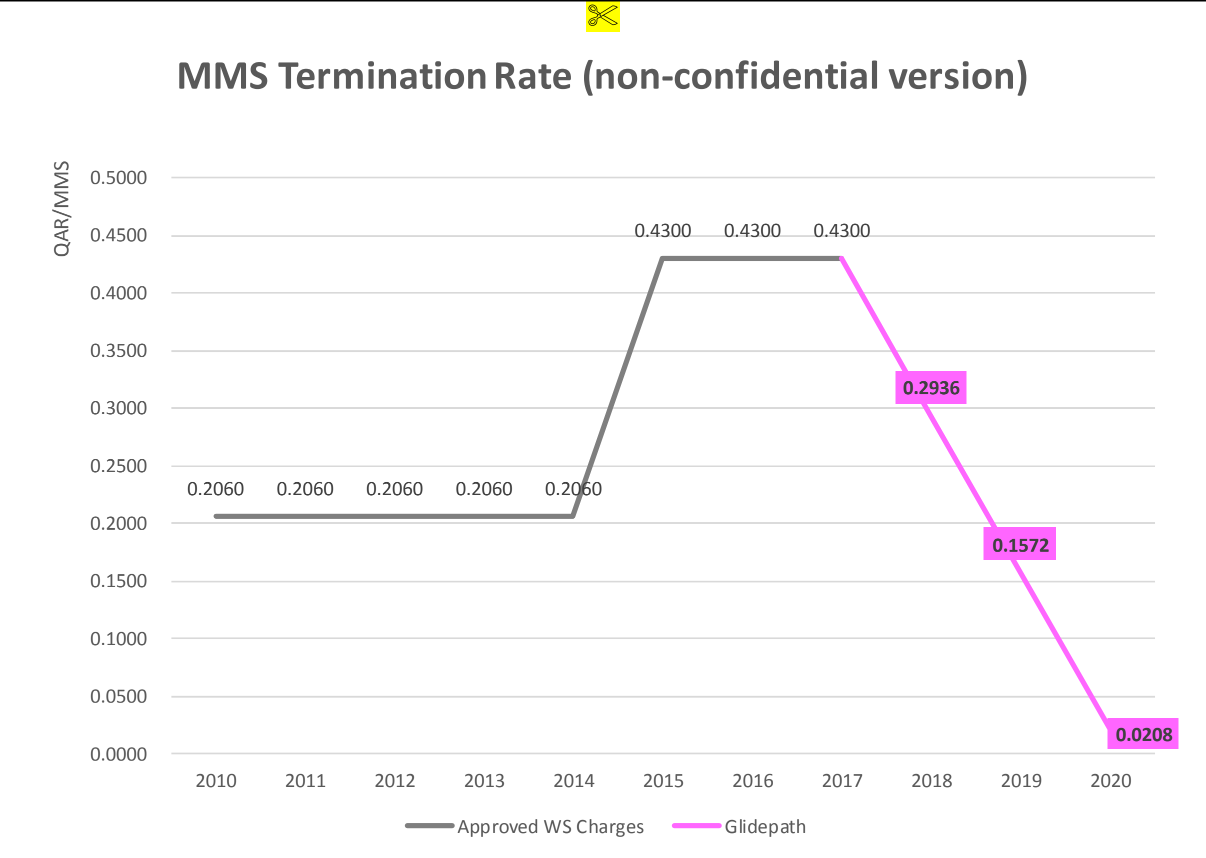


Figure 10 MMS Termination – Wholesale Charges for consultation [CRA calculation]

6.1.7.3 Consultation question

Question 16	Do stakeholders agree with the CRA's proposed Wholesale Charge for the MMS Termination (Picture and Video)?

6.1.8 Outgoing International Call Conveyance

6.1.8.1 Foreseen options

178. The Outgoing International Call Conveyance is not used, since Ooredoo and Vodafone have their own network connections.
179. If this product will be used in future, the CRA expects the Access Provider and the Access Seeker to agree on the various charges as per country destination.
180. In case no agreement can be reached the Access Provider and/or the Access Seeker can bring the case in front of the CRA.

6.1.8.2 Consultation question

Question 17	Do stakeholders agree with the above Option for the Outgoing International Call Conveyance?

6.2 Interconnection Links

181. Ooredoo, as the DSP, is obliged to provide this service.

182. Ooredoo Interconnection Link Service means a service whereby Ooredoo provides fixed transmission capacity (and associated signaling) for the sole purpose of conveying traffic over an Interconnection Path between a location on Ooredoo Network and a location on the OLO's Network via a Point of Interconnection.

183. The charges for this service are:

183.1 Recurring Charges
- (a) E1 (distance independent), i.e. QAR/E1/month; and
- (b) Km (distance dependent), i.e. QAR/km/month.

183.2 Connection Fees
- (a) Connection Fee, i.e. QAR/connection; and
- (b) Disconnection/reconfiguration Fee, i.e. QAR/disconnection or reconfiguration.

6.2.1 References available

6.2.1.1 Cost references

184. In the case of these services, cost references are only available from Ooredoo. The following sections describe in detail how costs are estimated for distance independent and dependent costs.

6.2.1.1.1 Service E1 (capacity - distance independent) – recurring cost

185. The cost per unit of this service has been calculated as per the general methodology (cf. 4.1.1.1 Calculation of Network Costs and 4.1.1.2 Calculation of the Wholesale Costs). Specific to this service, the CRA;

185.1 Forecasted the total Network Costs for the years 2016-2018, assuming that the cost will decrease -24% per year as per the average of the annual growths of the years 2014 and 2015. The RAS 2015 also shows that total Network Cost drops considerably by -78% from RAS 2013 to RAS 2015. Consistently, in RAS 2015 the corresponding cost per unit of the E1 drops -68% compared to RAS 2013. Data submitted by Ooredoo confirms the decrease[13].

185.2 The volume is left stable, as confirmed by Ooredoo's and Vodafone's forecast.

185.3 The trend to establish the forecast cost per unit for the years 2019 and 2020 was prudently assumed equal to -10% per year.

6.2.1.1.2 Service km (distance dependent) – recurring cost

186. In reviewing the RAS 2015, the CRA did not accept the cost of the distance component of the Interconnection Links (DWNR15) because the cost driver used to attribute the cost of the SDH Rings to this product was not reliable.[14]

186.1 If the driver had been built correctly, the cost per unit of the Transmission Links and of the Interconnection Links must have been equivalent.

186.2 This is the case for the cost per unit per E1 (capacity - distance independent) where cost per unit per E1 of the two services are almost the same;

186.3 However, according to the RAS 2015, this does not hold true for distance dependent component. The Network Cost per unit per km of the Transmission

---

[13] Ref. Excel file "4942-Data Request and Cost model for SPs v0 03" delivered by Ooredoo on June 5. 2017

[14] This was communicated to Ooredoo with the Order closing the RAS 2015. The Order will be published on CRA's website.

Links is around ✂ QAR/km/pm while the cost per unit per km of the Interconnection Link is around ✂ QAR/km/pm. The ratio between those values leads to a value of 54.

187. Therefore, the CRA relies on the average cost per unit per km of the wholesale SDH Rings, sourced from the RAS 2015. This network component has been deemed reliable after the review of the RAS 2015.

188. The cost per unit of this service has been calculated as per the general methodology (cf. 4.1.1.1 Calculation of Network Costs and 4.1.1.2 Calculation of the Wholesale Costs). Specific to this service, the CRA;

188.1 Forecasted the total Network Costs for the years 2016-2018, assuming that the cost will decrease -45% per year as per the average of the annual growths of the years 2014 and 2015.

188.2 The volume is left stable, as confirmed by Ooredoo's and Vodafone's forecast.

188.3 The trend to establish the cost per unit for the years 2019 and 2020 was prudently assumed equal to -20% per year.

6.2.1.1.3 Conclusion on recurring costs

189. The table below shows the cost projected for three years, forecasted according to the assumptions summarized above.

✂

Table 21 Interconnection Links - recurring costs [CRA calculation]

6.2.1.1.4 Connection Fees

190. The volume of Interconnection Links sold to Vodafone has not changed in 2015 compared to 2014. Hence, cost reported in RAS 2015 cannot be seen as relevant in relation to cost the connection fees.

191. The CRA is not immediately concerned with the Connection Fees, given that both Vodafone and Ooredoo do not foresee changes in the Interconnection Links in the period 2018 – 2020.

6.2.1.2 Comments by the Service Providers provided in the Data Request[15]

192. Ooredoo notes that – according to RAS 2015 - due to steep decrease in wholesale charge the revenues are almost equal the costs. Hence, Ooredoo calls for letting the current Wholesale Charges unchanged.

6.2.1.3 Proportionality Test results

193. There is no retail product comparable to the Interconnection Links. Hence the PT is not applicable.

194. However the CRA has verified that the cost per unit per E1 and km attributed to the Retail Products of Ooredoo is not discriminatory.

6.2.1.4 Price Margin Squeeze Test results

195. There is no retail product comparable to the Interconnection Links. Hence PMS test is not applicable.

196. However the CRA has verified that the cost per unit per E1 and km attributed to the

[15] The position of the Service Providers has been taken from their responses to the Data Request

Retail Products of Ooredoo is not discriminatory.

6.2.2 Foreseen options

197. On the comments provided by Ooredoo, the CRA is of the view that RAS 2015 (ref. CRA's Order, closure of the RAS 2015) underestimates the margin of this product, following an over-attribution of cost to the SDH Rings. Therefore the RAS is not a reliable source for the cost of the distance component of this service.

198. Hence:

    198.1 Ooredoo comments on the steep decrease of the RAS 2015 margin of this product cannot be verified.

    198.2 The CRA may review the margin of this product as reported in RAS 2016, after Ooredoo has changed the driver to attribute the cost of the SDH Rings.

199. To approximate the cost for the FYs 2019 and 2020 prudent cost trends have been applied to the projected costs (respectively -10% of annual growth for the Service E1 distance independent and -20% of annual growth for the Service distance dependent).

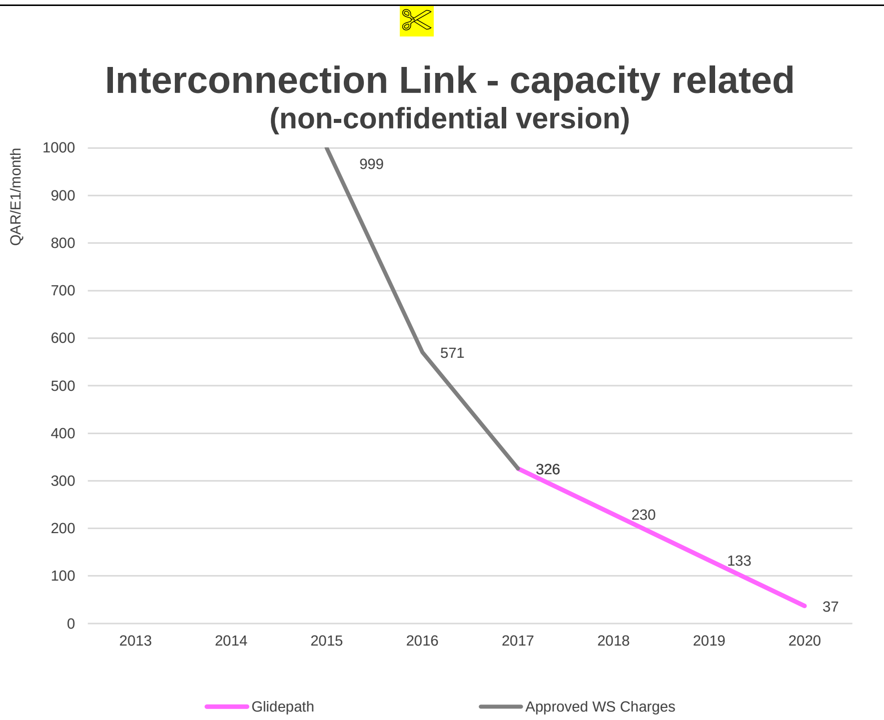
200. The CRA deems this as justified, as (a) the values already reached a relatively low level, (b) we exercise some degree of prudence and (c) the product is marginal.

201. Accordingly, the CRA consults on the following charges.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
E1 (distance independent)	QAR/E1/month	326	230	133	37
Change to previous year			-30%	-42%	-72%
Km (distance dependent)	QAR/E1/km/month	64	54	43	32
Change to previous year			-17%	-20%	-25%
Connection Fee	QAR/link	5,000	5,000	5,000	5,000
Change to previous year			0%	0%	0%
Disconnection/reconfiguration Fee	QAR/link	950	950	950	950
Change to previous year			0%	0%	0%

Table 22 Interconnection Links – Wholesale Charges [CRA calculation]

202. This is also shown in the graphs below.



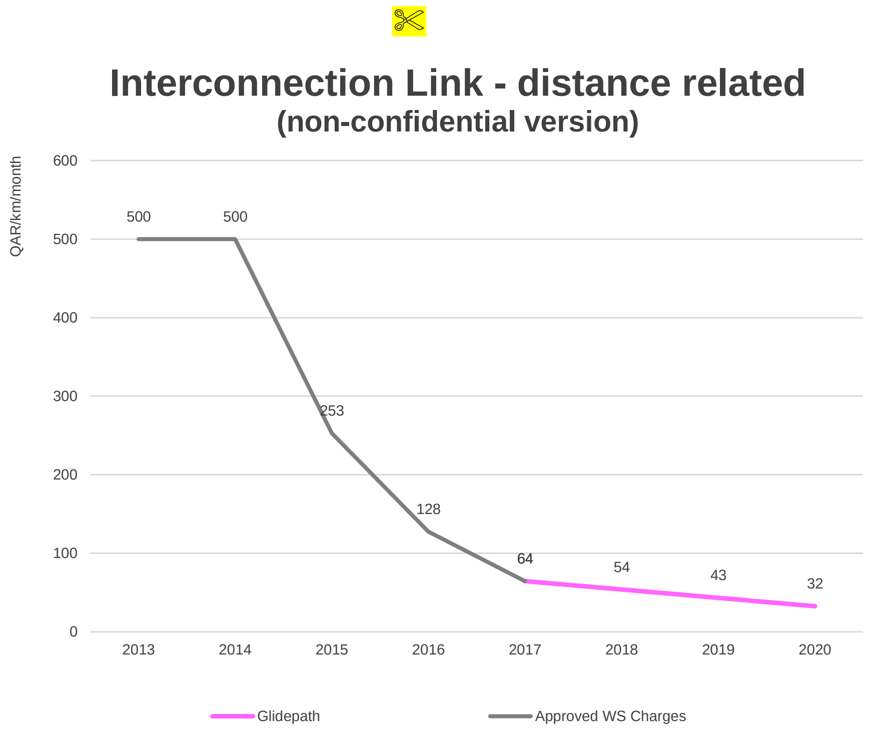


Figure 11 Interconnection Links – Wholesale Charges for consultation [CRA calculation][16]

6.2.3 Consultation Question

Question 18	Do stakeholders agree with the CRA's proposed Wholesale Charge for Interconnection Links?

[16] NB Regarding the Distance components, the charges 2015, 2016 and 2017 were set using a different methodology (i.e. based on RAS 2013 cost, sourced at product level). Hence, they were not below cost as it appears from the graph.

6.3 Transmission Links

203. Ooredoo Transmission Link Service is a service for the carriage of signals from OLO network location to another network location in Qatar.

204. Ooredoo offers the following Transmission Links using SDH technology with the speeds of E1, E3, STM-1, STM-4, STM-16.

205. The charges for this service are:

205.1 Recurring Charges, depending on speed and distance (i.e. QAR/speed/km/month) and

205.2 Connection Charge (i.e. QAR/connection).

6.3.1 Recurring Charges – SDH

6.3.1.1 References available

6.3.1.1.1 Cost references

206. Specific to this service, the CRA notes that Interconnection Links and Transmission Links use the same network components and have the same cost per unit.

Hence, the costs per E1 and per km calculated for the Interconnection are also applicable to the Transmission Links (ref. Section 6.2)

207. Since, the Transmission Links are charged based on capacity and range of distance, the CRA has calculated the cost of this service as follows:

Cost [QAR/month] = Average distance [km] x Cost per km per link [QAR/km/month] + Capacity [kbps] x Cost per kbps

208. The table below shows the cost projected for 2018, forecasted according to the assumptions summarized above.

Figure 12 SDH Transmission Links – costs FC 2018 – RAS values [CRA calculation]

209. The CRA notes, that this is a simple, mechanic, multiplication and lacks the sophistication of a “proper” costing. The amount of leased lines (currently less than 10) is not sufficient for a more sophisticated regulatory pricing.

6.3.1.1.2 Comments by the Service Providers provided in the Data Request

210. No comments have been provided by SPs.

6.3.1.1.3 Proportionality Test results

211. The CRA has verified non-discrimination. The cost per unit per E1 and per km attributed to the wholesale products is the same as attribute to the retail products.

6.3.1.1.4 Price Margin Squeeze Test results

212. The CRA has verified that the proposed charges do not create a Margin Squeeze issue with the Retail Tariff B12-01 National Leased Lines (SDH).

6.3.1.1.5 Benchmark

213. Due to the lack of information to be able to obtain reasonably accurate pricing, the CRA believes that it is appropriate to apply the benchmark methodology used to set

the wholesale charges for 2017 (ref. Order and Economic Analysis for setting the Wholesale Charges 2015 – 2017 for a detailed explanation of this approach). In a nutshell:

213.1 We suggest continuing to use the Benchmark Report[17] as originally proposed by Ooredoo.

213.2 Including all countries and speeds in the original benchmark.

213.3 Use the median in order to avoid distortions by outliers.

213.4 Use a linear regression for modeling the relationship between the projected median charges per kbps (variable y) and the speeds (variable x) to calculate values for speeds not included in the benchmark (i.e. STM 4 and STM 16).

214. The CRA tried to commission an update of the Benchmarking Report from TRPC, but TRPC had ultimately to decline the request.

215. Starting from the result of the above exercise made to set the Charges for the FY 2015, 2016 and 2017, to project the benchmark cost for three years, the CRA has assumed the same cost decrease (-6,6%) observed in the period 2013 – 2015 (ref. Order and Economic Analysis for setting the Wholesale Charges 2015 – 2017).

6.3.1.2 Foreseen options

216. The application of the approach described in section 6.3.1.1.5 (benchmark) gives the following results.

[17] TRPC PTE Limited - February 2013: Regulatory Benchmarks, Wholesale Regulation, Access price - Report 2013

1	**Transmission Link SDH**	**Current wholesale charge (CY 2017) BM based**	**Benchmark**		
2	Nominal Distance	Current Wholesale Charge	2018	2019	2020
3	km	QAR/month	QAR/month	QAR/month	QAR/month
5	**for E1 (no differentation for SLAs)**				
7	00-10	1,418	1,240	1,158	1,081
8	11-20	1,478	1,314	1,226	1,145
9	21-30	1,538	1,387	1,295	1,209
10	31-40	1,598	1,460	1,363	1,273
11	41-50	1,658	1,534	1,432	1,336
12	50 and above	1,868	1,790	1,671	1,560
13	**for E3 (no differentation for SLAs)**				
15	00-10	8,164	7,089	6,617	6,177
16	11-20	8,224	7,162	6,686	6,241
17	21-30	8,284	7,235	6,754	6,305
18	31-40	8,344	7,309	6,823	6,369
19	41-50	8,404	7,382	6,891	6,433
20	50 and above	8,614	7,639	7,131	6,657
21	**for STM1 (no differentation for SLAs)**				
23	00-10	12,438	10,794	10,076	9,406
24	11-20	12,498	10,867	10,145	9,470
25	21-30	12,558	10,941	10,213	9,534
26	31-40	12,618	11,014	10,282	9,598
27	41-50	12,678	11,087	10,350	9,662
28	50 and above	12,888	11,344	10,590	9,886
29	**for STM4 (no differentation for SLAs)**				
31	00-10	20,645	17,910	16,719	15,607
32	11-20	20,705	17,984	16,788	15,671
33	21-30	20,765	18,057	16,856	15,735
34	31-40	20,825	18,130	16,925	15,799
35	41-50	20,885	18,204	16,993	15,863
36	50 and above	21,095	18,460	17,233	16,087
37	**for STM16 (no differentation for SLAs)**				
39	00-10	36,881	31,987	29,860	27,874
40	11-20	36,941	32,060	29,928	27,938
41	21-30	37,001	32,134	29,997	28,002
42	31-40	37,061	32,207	30,065	28,066
43	41-50	37,121	32,280	30,134	28,130
44	50 and above	37,331	32,537	30,373	28,353

Table 23 SDH Transmission Links – Recurring Wholesale Charges [TRPC PTE Limited Benchmark and CRA calculation]

217. We note that the difference on the average between the two calculations (i.e. RAS vs. Benchmark) is less than 10%, indicating that the benchmark reference appears reasonable. The CRA is aware that this a crude comparison, but a more detailed comparison is not reliable since the low number of Transmission Links in use make the unitary results unrepresentative.

218. This also grants consistency over the time and eliminate uncertainty given the issues on the cost of distance component already noted discussing the charges of the Interconnection Links (ref. section 0).

6.3.1.3 Consultation Question

Question 19	Do stakeholders agree with the CRA's proposed Wholesale Charge for recurrent charges of SDH Transmission Links, i.e. to continue to use the Benchmark?

6.3.2 Recurring Charges - Ethernet

219. The CRA would welcome the introduction of Transmission Links based on Ethernet Technology.

220. To this end, a calculation of the potential charges has been performed.

221. The CRA has based its calculation on the same benchmark data used to calculate the cost of the Transmission Links – SDH (ref. Section 6.3.1 Recurring Charges – SDH).

222. This grants consistency between the two products.

6.3.2.1 Foreseen options

223. The table below shows the potential charges for this product calculated with the same methodology implemented for the SDH Transmission Links. We note that the comparable retail Product Ethernet VPN - Tariff B15 - Silver does not have a distance related component.

224. The application of the above approach gives the following results.

	[A]	[B]	[E]		
1	Transmission Link Ethernet		Benchmark (Average distance of 15km) Monthly Rental		
2	speed	speed	2018	2019	2020
3			QAR/month		
4	speed				
5	256 KB	256	722	684	648
6	512 KB	512	891	844	799
7	1 MB	1,000	1,098	1,040	985
8	2 MB	2,000	1,267	1,200	1,136
9	4 MB	4,000	1,717	1,626	1,540
10	8 MB	8,000	2,159	2,045	1,937
11	16 MB	16,000	2,724	2,580	2,443
12	24 MB	24,000	3,124	2,958	2,802
13	32 MB	32,000	3,444	3,262	3,089
14	50 MB	50,000	4,340	4,110	3,893
15	100 MB	100,000	6,891	6,526	6,181
16	200 MB	200,000	7,875	7,458	7,064
17	500 MB	500,000	8,859	8,390	7,946
18	1 G	1,000,000	9,127	8,644	8,186

Table 24 Ethernet Transmission Links– Recurring Wholesale Charges [TRPC PTE Limited Benchmark and CRA calculation]

6.3.2.2 Consultation Question

Question 20	Are stakeholders interested in Transmission Links based on Ethernet Technology? Do you find the potential charges calculated by the CRA acceptable? Please provide cost information to calculate a cost oriented charge for this product.

6.3.3 Connection Fees - SDH and Ethernet

6.3.3.1 References available

6.3.3.1.1 Cost references

225. No cost references are available for these services.

6.3.3.1.2 Comments by the Service Providers provided in the Data Request

226. No comments have been provided by SPs regarding this matter.

6.3.3.1.3 Proportionality Test results

227. Due to the nature of Transmission Links, the low number of wholesale lease lines and

the casuistry of the technical provision of the service, wholesale services and self-provisioning of transmission resources are not possible to be compared. Therefore, no PT can be performed.

6.3.3.1.4 Price Margin Squeeze Test results

228. Similarly to the PT, it is not possible to perform the PMS test, due to the difficulties to compare wholesale and retail Transmission Links services.

6.3.3.2 Foreseen options

229. The CRA proposes to rely on currently applicable wholesale charges, reduced consistently with the cost trend applied for setting the recurring Wholesale Charges.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Connection, disconnection - For all speeds and distance	QAR/connection or disconnection	3,036	2,672	2,511	2,361
Change to previous year			-12%	-6%	-6%

Table 25 Transmission Links – One Time fees Charges for consultation [CRA calculation]

230. We deem the above Fees applicable to the Transmission Links provided with Ethernet Technology as well, since they are very close – on average – to Fees calculated with the Retail Minus approach from the Retail Fees of the Tariff B-012.

6.3.3.3 Consultation Question

Question 21	Do stakeholders agree with the CRA's proposed Wholesale Charge for the Transmission Links connection fees?

6.4 Duct Products

231. Under the Infrastructure Access Agreement (“IAA”), Ooredoo’ offers the following products:

231.1 Duct Access

231.2 Facility Hosting

231.3 Supervision

231.4 Field Feasibility Analysis

231.5 GIS update

231.6 Ad-hoc engineering support

231.7 Access Request

231.8 Successful and Unsuccessful Blockage Clearance

231.9 Transportation charge

231.10 Misc. expenses

232. Under the Reference Infrastructure Access Offer (“RIAO”) approved by the CRA, the “Access Request” as per the IAA has been split in:

232.1 Access Area Request, and

232.2 Route Access Request.

6.4.1 Duct Access

6.4.1.1 References available

6.4.1.1.1 Cost references

233. In the case of this service, cost references are only available from Ooredoo.

234. Ooredoo’s RAS includes a Wholesale Duct Access Product. This product receives the cost of the Duct based on the volume of cable occupied by OLOs (i.e. Qnbn). The remaining cost of the Duct is attributed to the Retail Access Products of Ooredoo.

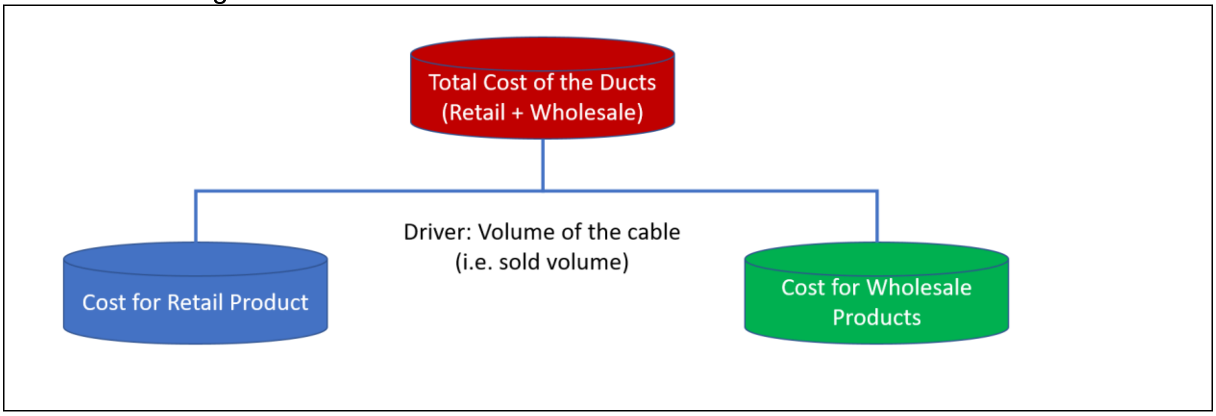


Figure 13 Duct Access – attribution of the cost in the RAS [Ooredoo RAS, CRA]

235. The attribution mechanism ensures non-discrimination, i.e. the cost per unit of the Duct attributed to Ooredoo’s Retail Products is equal to the cost per unit attributed to the Wholesale Product.

236. The cost per unit of this service has been calculated as per the general methodology (cf. 4.1.1.1 Calculation of Network Costs and 4.1.1.2 Calculation of the Wholesale Costs). Specific to this service, the CRA;

236.1 Forecasted the total Network Costs for the years 2016-2018, assuming a cost trend equal to 0%. This is consistent with the RAS data 2010 – 2015, which shows no clear trends.

236.2 The volume is left stable, for the same reasons above.

236.3 The trend to establish the cost per unit for the years 2019 and 2020 was also set a zero, consistent with the assumptions made for forecasting the Network Costs.

237. The table below shows the calculated costs, according to the assumptions summarized above.

✄

Table 26 Duct Access - costs ✄ [CRA calculation]

6.4.1.1.2 Comments by the Service Providers

238. Ooredoo is of the view that the charges for the period 2018 – 2020 shall be set equal to 0.31 QAR/cm2/meter/month, as per RAS 2015. This includes the Network Cost and the wholesale costs as reported in the RAS 2015.

239. Qnbn is of the view that it has actually expended substantive sums of monies improving and upgrading the Ooredoo duct network as a result of demands made by Ooredoo. If anything, Ooredoo should discount charges on the basis of multiple upgrades to its duct network.

240. Vodafone states that it is not in a position to provide practical and meaningful Qatar-specific contribution on duct access, due to the lack of access which prevails despite efforts to engage Ooredoo and CRA's support. In the absence of effective access to Ooredoo's duct, there are in Vodafone view no obvious merits in reviewing current rates. Ooredoo should first comply with the CRA's Order dated 22 June 2016 and enable Vodafone to make use of the service.

6.4.1.1.3 Proportionality Test results

241. As described in section 6.4.1.1.1 (cost references), RAS allocation criteria ensure non-discrimination. Therefore, PT is not required.

6.4.1.1.4 Price Margin Squeeze Test results

242. PMS test has not been performed since duct products are not provided retail.

6.4.1.1.5 Benchmark

243. The CRA bases its benchmark on the below data.

Country	Item		Price (QAR)	Unit
Bahrain	Duct		0.18	per metre per month
France	Transport network		0.09	per sq cm per metre per month
	Distribution network		0.14	per sq cm per metre per month
Ireland	Duct in carriageway	Capital city	11.01	per metre per year
		Elsewhere	6.18	per metre per year
	Duct in foot path	Capital city	8.43	per metre per year
		Elsewhere	4.95	per metre per year
	Duct in grass verge	Capital city	5.15	per metre per year
		Elsewhere	3.68	per metre per year
Portugal	Subduct	Main cities	41.98	per sq cm per km per month
		Elsewhere	32.87	per sq cm per km per month
	Duct	Main cities	38.81	per sq cm per km per month
		Elsewhere	30.10	per sq cm per km per month
Qatar	Duct		0.12	per sq cm per metre per month
Spain	Sole occupation of duct	Subduct 40 mm diameter	0.25	per metre per month
		Duct 63 mm diameter	0.69	per metre per month
	Ducts shared with other cables	Duct 63 mm diameter	0.03	per metre per month
		Duct 110 mm diameter	0.07	per metre per month
United Kingdom	Spine	Single bore	3.22	per metre per year
		2 bores	2.31	per metre per year
		3+ bores	1.99	per metre per year

Table 27 Benchmark for duct access

244. As shown in the table, Duct Access Charges vary according to location, duct size, whether the duct is shared with other cables, and the number of ducts. Also charges can be by length or by area.

245. In order to produce a meaningful benchmark, we have developed two different approaches.

Benchmark based on Charge per Year paid to access the Ducts

246. In this scenario, we calculated the annual cost for 1 km of ducts, assuming:

246.1 The OLO to access The Ducts in the Trunk network;

246.2 The Ducts located in the City centre location in a footpath;

246.3 The OLO to solely occupy a sub duct;

246.4 The OLO to deploy Cable of 2.5 cm diameter

247. The charges for such a duct access are shown below.

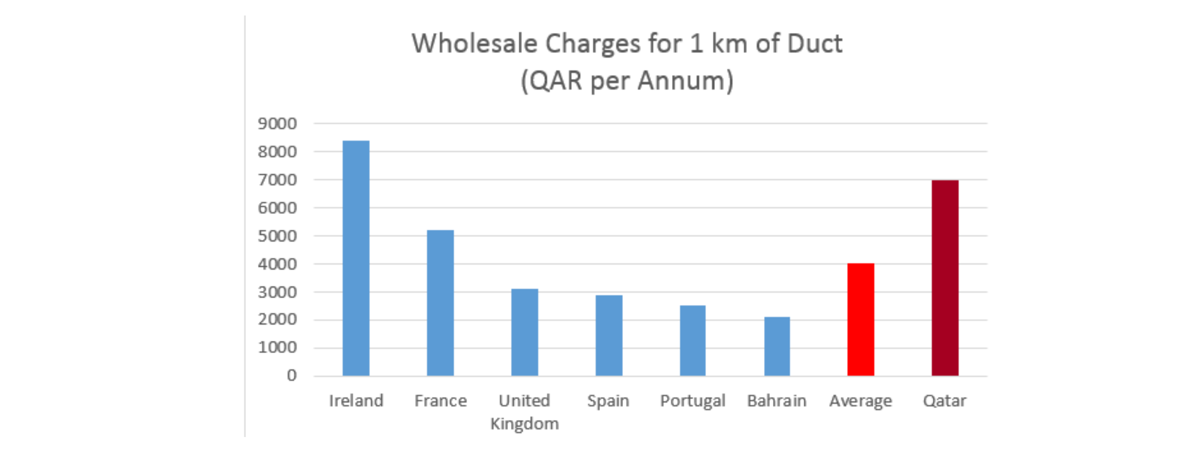


Figure 14 Benchmark – Cost per annum for duct access (QAR per year) [BM and CRA calculation]

248. The overall average annual charge for 1 km of duct access is about 4,100 QAR. The charges proposed in Ireland are substantially higher than elsewhere. If Ireland is excluded, the average charge is about 3,250 QAR per year. In Qatar, the comparable cost is currently around 7’000 QAR, which is more expensive than all the benchmark countries, except Ireland.

Benchmark based on monthly charge per m/cm2

249. The charges for such a duct access are shown below.

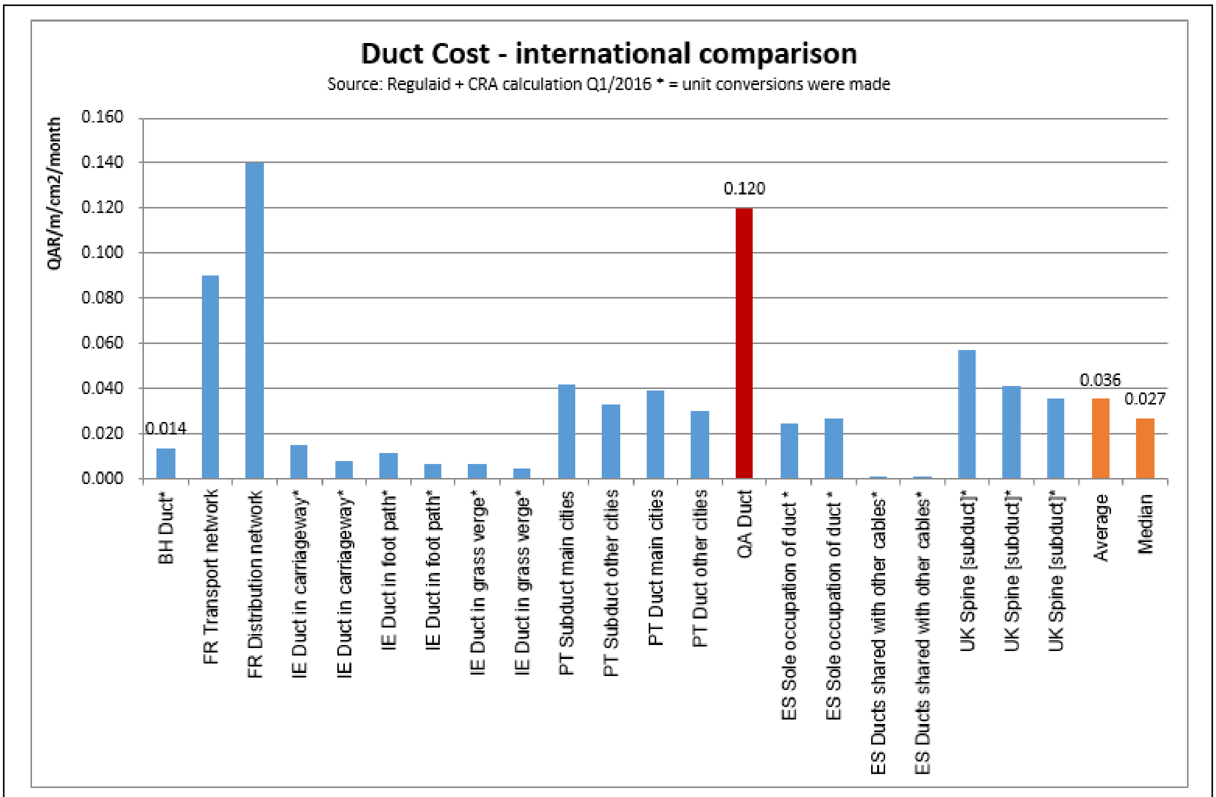


Figure 15 Benchmark – Charges for duct access (QAR/m/cm2/month) [Regulaid and CRA calculation]

250. Also with this approach the Qatari current charge is the highest, with only exception of the Charge established in France to access the Ducts located in the Distribution Network.

251. The Qatari current charge is clearly above the benchmark countries.

6.4.1.2 Alternative approaches identified

252. The CRA would also like to explore alternative methods of charging this product, e.g. a lump-sum payment.

253. In particular, the CRA is interested in evaluating the introduction of medium-long term commitment for the OLOs, including the right/obligation to rent a maximum volume of duct with an upfront payment (lump-sum).

6.4.1.3 Foreseen options

254. Based on the above, the CRA proposes the following charges based on the application of a Glide path:

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Duct Access	QAR/cm2/meter/month	0.1200	0.1174	0.1147	0.1121
Change to previous year			-2%	-2%	-2%

Table 28 Duct Access – Wholesale Charges for consultation [CRA calculation]

255. The above figures are also supported by the proposal submitted by Ooredoo in May 2016 .

256. The proposed option is also shown in the graph below.

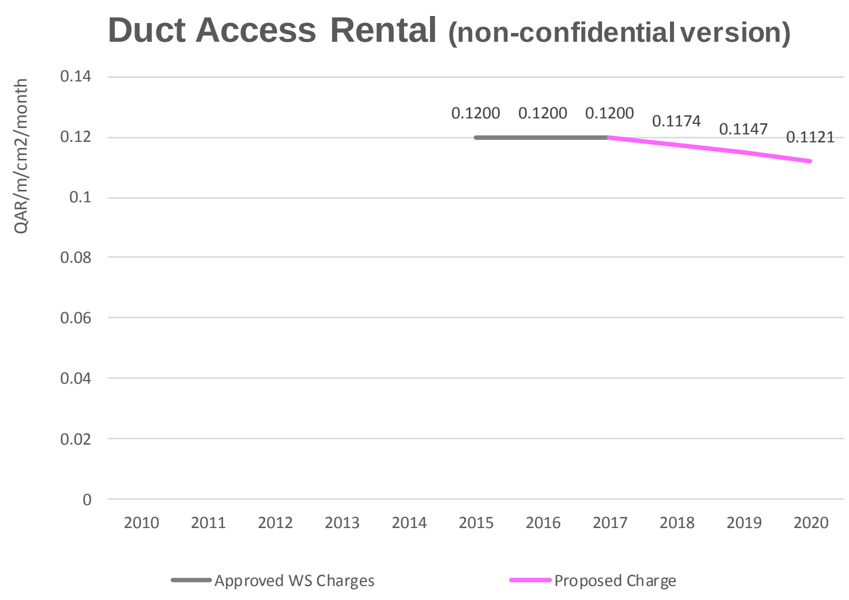


Figure 16 Duct Access Rental – Wholesale Charges for consultation [CRA calculation]

6.4.1.4 Consultation Question

Question 22	Do stakeholders agree with the CRA's proposed Wholesale Charge for the Duct Access product?
Question 23	Stakeholders are invited to provide their view on alternative mechanism for charging Duct Access, with particular reference to the introduction of lump-sums upfront to the commitment for buying a certain maximum amount of volume

6.4.2 Facility Hosting

6.4.2.1 References available

6.4.2.1.1 Cost references

257. In the case of this service, cost references are only available from Ooredoo.

258. The cost per unit of this service has been calculated as per the general methodology (cf. 4.1.1.1 Calculation of Network Costs and 4.1.1.2 Calculation of the Wholesale Costs). Specific to this service, the CRA;

    258.1 Forecasted the total Network Costs for the years 2016-2018, assuming a cost trend equal to 0%. This is consistent with the RAS data 2010 – 2015, which shows low changes and not clear trends.

    258.2 The volume is left stable, for the reasons above.

    258.3 The trend to establish the cost per unit for the years 2019 and 2020 was also set a zero, consistent with the assumptions made for forecasting the Network Costs.

259. The table below shows the cost calculated according to the assumptions summarized above.

✄

Table 29 Facility Hosting - costs ✄ [CRA calculation]

6.4.2.1.2 Comments by the Service Providers

260. Ooredoo has not provided comments.

261. For Qnbn and Vodafone refer to section 6.4.1.1.2.

6.4.2.1.3 Proportionality Test results

262. As described in section 6.4.1.1.1 (cost references), RAS allocation criteria ensure non-discrimination. Therefore, the PT is not required.

6.4.2.1.4 Price Margin Squeeze Test results

263. PMS test has not been performed since this product has not a correspondent retail product.

6.4.2.2 Foreseen options

264. Based on the above, the CRA proposes to apply the following charges:

		Approved Charge	Charges for consultation		
Facility Hosting	**n.b. First 20 liters of facility space per linear kilometer of route distance: no charge**	**2017**	**2018**	**2019**	**2020**
Duct Access	(QAR/Liter)	1.0000	0.7950	0.5901	0.3851
Change to previous year			-20%	-26%	-35%

Table 30 Facility Hosting – Wholesale Charges for consultation [CRA calculation]

265. This is also shown in the graph below.

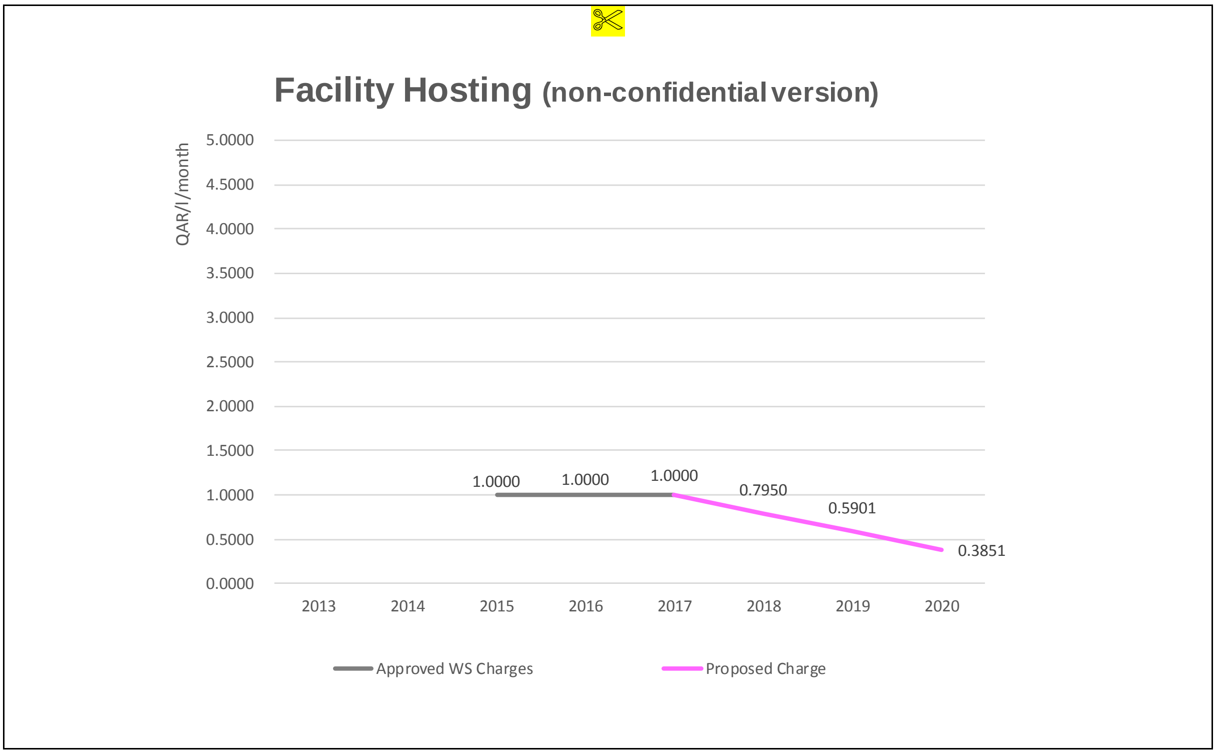


Figure 17 Facility Hosting – Wholesale Charges for consultation [CRA calculation]

6.4.2.3 Consultation Question

Question 24	Do stakeholders agree with the CRA's proposed Wholesale Charge for "Facility Hosting"?

6.4.3 Hourly Cost

266. This section discusses and average Hourly Cost, used e.g. for Supervision, Field Feasibility Analysis, GIS update and Ad-hoc Engineering Support.

6.4.3.1 References available

6.4.3.1.1 Cost references

267. The CRA has not approved the RAS 2015 cost for the Supervision Product (ref. CRA's Order Closure of the RAS 2015), because:

    267.1 It is unclear how the number of hours of Supervision has been calculated and if this includes also the time spent on this activity by external companies.

    267.2 Ooredoo has not provided evidence of non-discrimination (i.e. from the RAS, we do not find Supervision performed for Ooredoo comparable activities).

268. Therefore, the CRA has developed a bottom-up model to calculate the cost for a man-hour.

269. For the basic salaries, the CRA has used values consistent with the HR Law No 15/2017. The CRA has used the pay scale for non-Qataris, which is shown in the following table.

Financial Grade	Minimum pay scale for the grade (QAR/month)	Maximum pay scale for the grade (QAR/month)
Excellent	23000	26000
Special	19000	23000
First	17000	20000
Second	13500	17000
Third	12000	15000
Fourth	10000	12000
Fifth	9000	11000
Sixth	8000	10000
Seventh	6000	8000
Eighth	5500	7500
Ninth	4500	6500
Tenth	3500	5500
Eleventh	3000	4500
Twelfth	2600	3500
Thirteenth	2200	3000

Table 31 HR Law No 15/2017 - Grades and Salaries Schedule No (2) [HR Law No 15/2017]

270. Housing and other allowances have also been taken into account. The quantification of these allowances is based on CRA's experience and set at a medium level.

271. 18 working days per month has been assumed calculated as follows:

30 days per month, minus 8 days off for the weekends, minus 3.75 days off for holidays (i.e. 45 days of holidays per year divided by 12)

272. The CRA assumed 8 hours worked per day, which is the general standard for private companies.

273. The cost per hour has been then recharged to include the business supporting cost needed to the staff for performing the activity (i.e. IT cost, furniture cost, cars, etc.) and the cost of other staff coordinating and supervising the activity. The % of recharge is consistent with RAS 2015 results.

The following table shows the results of CRA's model, where different options have been considered, varying for basic salaries of the staff involved in this activity.

			Low range (grade eleventh - minimun pay scale)	Medium range (grade seventh - maximum pay scale)	High range (grade second - maximum pay scale)	comments
a	basic salary	QAR/month	3,000	8,000	17,000	
b	housing allowance	QAR/month	2,250	6,000	12,750	assumed as 75% of the salary
c	other allowances	QAR/month	750	2,000	4,250	assumed as 25% of the salary
d=a+b+c	total salary	QAR/month	6,000	16,000	34,000	
e	# of working day per month	# of days	18	18	18	30 days minus 8 days (weekends) minus 3.75 days (holidays, assuming 45 days of total holidays)
f=d/e	cost per day	QAR/day	329	877	1,863	
g	# hour per day	# of hours	8	8	8	
h=f/g	cost per hour	QAR/hour	41	110	233	
i	% recharge	%	30%	30%	30%	
l=h*(1+i)	Full Cost per hour	QAR/hour	53	142	303	

Average Full Cost per hour	QAR/hour	166

Table 32 Estimates of the cost per hour [CRA calculation]

274. According to CRA's calculations, the cost per hour ranges from 53 to 303 QAR per hour, with 166 QAR per hour being the average.

6.4.3.1.2 Comments by the Service Providers

275. Ooredoo has not provided comments.

276. Qnbn is of the view that the cost per hour is around 115 QAR/hour.

277. For Vodafone refer to the above section 6.4.1.1.2.

6.4.3.1.3 Proportionality Test results

278. The RAS does not provide visibility of these cost attributed to Retail Products. Hence the CRA could not verify non-discrimination in the RAS.
279. We could not verify, whether internal activities comparable to those performed by the OLOs on Ooredoo's ducts are supervised or not.
280. The CRA has requested Ooredoo to improve the RAS 2016 to include a specific cost center so that non-discrimination between Ooredoo's retail arm and the OLOs can be verified.

6.4.3.1.4 Price Margin Squeeze Test results

281. PMS test has not been performed since duct products are not provided under retail bases.

6.4.3.1.5 Benchmark

282. These services are very country specific, being mostly salary-based. Therefore no benchmark has been performed.

6.4.3.2 Alternative approaches identified

283. No alternative approaches have been found.

6.4.3.3 Foreseen options

284. The CRA is of the view that 166 QAR per hour – i.e. the average of the above calculations - is an appropriate value.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Cost per Hour applicable to Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products	QAR/hour	375	166	166	166
Change to previous year			-56%	0%	0%

Table 33 Cost per hour – Wholesale Charges for consultation [CRA calculation]

285. This charge is applicable to the Supervision, Field Feasibility Analysis, GIS Update and Ad-Hoc Engineering Support that are charged based on the cost per hour.
286. Ooredoo has been required to provide more information on the cost per hour. Upon CRA's request, Ooredoo is also auditing relevant figures which should help the CRA in setting this charge.

6.4.3.4 Consultation Question

Question 25	Do stakeholders agree with the CRA's proposed cost per hour applicable to "Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products?" Stakeholders are explicitly invitated to submit evidence of the cost per hour applicable for these products. Evidence could include invoices paid to external companies for comparable services or salaries of the employess involved in comparable activities.

6.4.4 Access Request ("AR"), Access Area Request ("AAR") and Route Access Request ("RAR")

287. The following sections analyze the charges associated to access request services, namely:

287.1 Access Area Request ("AAR" as per the RIAO). This is discussed in section 6.4.4.1.

287.2 Route Access Request ("RAR" as per the RIAO). This is discussed in section 6.4.4.2.

287.3 Access Request ("AR" as per the IAA, NB for the purposes of calculation in this CD we use the sum of AAR and RAR). This is discussed in section 6.4.4.3.

6.4.4.1 Area Access Request ("AAR")

288. The Area Access Request is submitted by the OLO to Ooredoo for gathering information on ducts and other network element deployed within a specific area (ref. to section 2.3, Annex 1: Service Implementation of the RIAO approved by the CRA in June 2016, CRA 2016/06/22B).

289. Ooredoo's RAS does not include detailed information for the costing of this product. Hence the CRA has asked the SPs to provide a bottom-up model to show the cost incurred in providing the service.

6.4.4.1.1 References available

290. We note that Ooredoo has submitted its cost in 100 duct segment increments, whereas Qnbn has submitted "average" values, regardless the number of duct segments.

291. In order to make the submissions comparable, the CRA has used the minutes for the activities (a) "Preparation of GIS information, maps and network data including XML files and shape files." and (b) "Collating, verifying and sending GIS information, maps and network data including XML files and shape files." to make a calculation for 100 duct segments.

This makes Ooredoo's and Qnbn's submission comparable, i.e. we end up with two comparable scenarios:

291.1 Cost regardless the number of duct segment ("Average duct segments");

291.2 Cost per 100 duct segments ("100 duct segments").

292. The following tables show Ooredoo's and Qnbn's submissions in detail:

Table 34 Access Area Request Costing –Average Scenario - Ooredoo [Ooredoo and CRA calcultion]

Table 35 Access Area Request Costing –Average Scenario – Qnbn [Qnbn]

Table 36 Access Area Request Costing –100 duct segments Scenario – Ooredoo [Ooredoo]

Table 37 Access Area Request Costing –100 duct segment scenario – Qnbn [Qnbn and CRA]

Summary

293. The following table summarizes the submissions of Ooredoo and Qnbn, adding an option based on the average cost per hour as calculated by the CRA[18] (ref. section 6.4.3).

	Cost per manhour	Scenario A) Cost regardless of number of duct		Scenario B) Cost per 100 duct segments			
		All segments		First 100 segments		additional 100 segments	
		time	cost	time	cost	time	cost
	QAR/h	h	QAR	h	QAR	h	QAR
Ooredoo	667	11.86	6,005	4.56	3,041	1.70	690
Qnbn	115	10.81	1,243	3.51	404	1.70	196
CRA	166	11.34	1,884	4.04	671	1.70	283

Table 38 Access Area Request - Costing Summary [CRA calculation]

294. The large cost difference between the SPs is mainly due to the cost per man-hour. Regarding the actual time needed Qnbn and Ooredoo are in close alignment.

295. The CRA deems the times needed as reasonable, as both Service Providers now have some experience with the underlying service.

296. As noted above the CRA cannot verify the absence of discrimination because there is not visibility of comparable activities performed by the Network Arms of Ooredoo for the Retail Arms of Ooredoo.

6.4.4.1.2 Options

297. The man hour cost as claimed by Ooredoo is yet to be confirmed (cf section 6.4.3 Hourly Cost.) As this is a key cost parameter, the CRA has requested an audit of this figure, which is currently ongoing.

298. The CRA has also yet to see the process as currently implemented in Ooredoo in “real live” in order to assess the efficiency of these processes.

299. In the absence of robust, audited figures, the CRA will rely on its own bottom-up model for the calculation of the man hour cost.

300. Whether to charge per 100 duct segments or to use a figure for an average request, the CRA prefers a charge on an average basis. This will ease the burden of administration and increase the predictability of the revenues for Ooredoo and of the

18 We used an average of time proposed by Ooredoo and Qnbn

costs for the OLOs.

6.4.4.1.3 Consultation Question

Question 26	Do stakeholders agree with the CRA's proposed Wholesale Charge for "Access Area Request", i.e. using the man-hour cost as per CRA's calcuation and a charge for an average number of duct segements?

6.4.4.2 Route Access Request ("RAR")

301. Subject to submitting an AAR, a Route Access Request(s) is submitted by the OLO to Ooredoo for a specific route with defined start (Point A) and end (Points B). For clarity, although the RAR has two end points A and B, branching of the route between both ends is allowed with as many branching levels (connected to each other within the route) as may be needed to enable the rollout of the OLO network. The RAR will cover all Network Elements in that route A to B (ref. to section 2.2, Annex 1: Service Implementation of the RIAO approved by the CRA in June 2016, CRA 2016/06/22B).

302. Ooredoo's RAS does not include detailed information for the costing of this product.

303. Hence the CRA has asked the SPs to provide a bottom-up model to show the cost incurred in providing the service.

6.4.4.2.1 References available

304. We note that Ooredoo has submitted its cost in 100 duct segment increments, whereas Qnbn has submitted "average" values, regardless the number of duct segments.

In order to make the submissions comparable, the CRA has used the minutes for the activities (a) "Provide response to OLO with the requested report and the required details" and (b) "Check and verify the OLO's site survey results and provide feedback" to make a calculation for 100 duct segments.

This makes Ooredoo's and Qnbn's submission comparable, i.e. we end up with two comparable scenarios:

304.1 Cost regardless the number of duct segment ("Average duct segments")

304.2 Cost per 100 duct segments ("100 duct segments")

305. The following tables show Ooredoo's and Qnbn's submissions in detail:

Table 39 Route Access Request Costing – Average Scenario - Ooredoo [Ooredoo and CRA calculation]

Table 40 Route Access Request Costing – Average Scenario – Qnbn [Qnbn]

Table 41 Route Access Request Costing –100 duct segments Scenario – Ooredoo [Ooredoo]

Table 42 Route Access Request Costing –100 duct segment scenario – Qnbn [Qnbn and CRA calculation]

Summary

306. The following table summarizes the submissions of Ooredoo and Qnbn, adding an option for the average cost per hour as calculated by the CRA[19] (ref. section 6.4.3).

	Cost per manhour	Scenario A) Cost regardless of number of duct		Scenario B) Cost per 100 duct segments			
		All segments		First 100 segments		additional 10 segments	
		time	cost	time	cost	time	cost
	QAR/h	h	QAR	h	QAR	h	QAR
Ooredoo	404	7.67	3,098	15.14	6,119	1.35	547
Qnbn	115	19.25	2,214	20.79	2,391	1.06	122
CRA	166	13.46	2,237	17.96	2,986	1.21	201

Table 43 Route Access Request Costing – Summary [CRA calculation]

307. The large cost difference between the SPs is mainly due to the cost per man-hour. Regarding the actual time needed Qnbn and Ooredoo are in close alignment.

308. The CRA deems the times needed as reasonable, as both Service Providers now have some experience with the underlying service.

309. From the RAS, the CRA cannot verify the absence of discrimination because there is not visibility of comparable activities performed by the Network Arms of Ooredoo for the Retail Arms of Ooredoo.

6.4.4.2.2 Options

310. The man hour cost as claimed by Ooredoo is yet to be confirmed (cf section 6.4.3 Hourly Cost.) As this is a key cost parameter, the CRA has requested an audit of this figure, which is currently ongoing.

311. The CRA has also yet to see the process as currently implemented in Ooredoo in "real live" in order to assess the efficiency of these processes.

312. In the absence of a robust, audited figures the CRA will rely on its own bottom-up model for the calculation of the man hour cost.

313. Whether to charge per 100 duct segments or to use a figure for an average request, the CRA prefers a charge on an average basis. This will ease the burden of administration and increase the predictability of the revenues for Ooredoo and of the costs for the OLOs.

6.4.4.2.3 Consultation Question

Question 27	Do stakeholders agree with the CRA's proposed Wholesale Charges for "Route Access Request", i.e. using the man-hour cost as per CRA's calcuation and a charge for an average number of duct segements?

6.4.4.3 Access Request ("AR")

314. The Access Request Fee has been agreed by Ooredoo and Qnbn within the IAA (ref. Schedule 1: Service Implementation, section 2.2 and 2.3).

315. The Access Request is submitted by Qnbn for gathering information on ducts and other network element deployed within a specific area. It could also include a Request(s) for a specific route with defined start (Point A) and end (Points B.)

316. Ooredoo's RAS does not include detailed information for the costing of this product. Hence the CRA has used the bottom-up model provided by Ooredoo and Qnbn to

19 We used an average of time proposed by Ooredoo and Qnbn

calculate the cost of the AR.

6.4.4.3.1 References available

317. We understand that the fee for the AR can be set as sum of the fee for the AAR and of the RAR.

318. The following table summarizes the submission of Ooredoo and Qnbn, adding a scenario for the average cost per hour as calculated by the CRA (ref. section 6.4.3).

	Cost per manhour	Scenario A) Cost regardless of number of duct		Scenario B) Cost per 100 duct segments			
		All segments		First 100 segments		additional 100 segments	
		time	cost	time	cost	time	cost
	QAR/h	h	QAR	h	QAR	h	QAR
Ooredoo	466	19.53	9,103	19.70	9,160	15.24	4,994
Qnbn	115	30.06	3,457	24.30	2,795	12.30	1,415
CRA	166	24.79	4,121	22.00	3,657	12.30	2,044

Table 44 Access Request Costing – Summary [CRA calculation]

319. The other comments remain (cf. AAR and RAR).

6.4.4.3.2 Consultation Question

Question 28	Do stakeholders agree with the CRA’s proposed Wholesale Charges for “Access Request”, i.e. calculation of the AR as a sum of AAR and RAR, using the man-hour cost as per CRA’s calcuation and a charge for an average number of duct segements?

6.4.5 Successful and Unsuccessful Blockage Clearance

320. These products are currently charged “at documented cost incurred by Ooredoo”.

321. Unless justified concerns of the respondents, the above approach “time and material” shall be confirmed as charging mechanism for the years 2018, 2019 and 2020.

6.4.5.1 Consultation Question

Question 29	Do stakeholders agree with the CRA’s proposed approach for the Successful and Unsuccessful Blockage Clearance products?

6.4.6 Transportation charge

322. This product is currently charged at 150 QAR/vehicle/day or part thereof.

323. Unless justified concerns of the respondents, the above charge shall be confirmed for the years 2018, 2019 and 2020.

6.4.6.1 Consultation Question

Question 30	Do stakeholders agree with the CRA’s proposed approach for Transportation charge product?

6.4.7 Miscellaneous Expenses

324. These products are currently charged “at documented cost incurred by Ooredoo”.

325. Unless justified concerns of the respondents, the above approach “time and material”

shall be confirmed as charging mechanism for the years 2018, 2019 and 2020.

6.4.7.1 Consultation Question

Question 31	Do stakeholders agree with the CRA's proposed approach for the Miscellaneous Expenses product?

7 Review of the Wholesale Charges

326. The CRA is minded to include in the Order approving the Wholesale Charges a review clause. This clause would allow SPs to request for a review of the Wholesale Charges subject to a material change in e.g. costs.

327. The CRA is of the view that a request for review:

327.1 Shall be no earlier than 12 months from the implementation date of the Wholesale Charges;

327.2 Shall be supported by an objective justification and relevant cost data;

327.3 Shall not involve changing the methodology defined upon during the consultation stages such as guiding principles, cost base, cost standard, etc.

Question 32	Do stakeholders agree with the CRA's proposed review clause?

Annex I Current applicable Wholesale Charges - Summary

The following table shows the currently (2015-2017) valid Wholesale Charges

Termination Services

	Charges to be applied by Ooredoo and Vodafone		2015	2016	2017
1	**Termination Service**				
2	Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0190	0.0182	0.0175
3	Mobile Call Termination Service	QAR/min	0.0900	0.0831	0.0762
4	Call Termination Service to Toll-Free Numbers (reverse charge)	QAR/min	-0.0900	-0.0831	-0.0762
5	Video Call Termination	QAR/min	see MTR		
6	Call Termination Services to Numbers for Inbound International calls	QAR/min	Commercially agreed		
7	Traffic Originated from GCC countries: Call Termination for Inbound International	QAR/min	Commercially agreed		
8	Traffic Originated from RoW: Call Termination for Inbound International	QAR/min	Commercially agreed		
9	Termination Emergency Services	QAR/min	see FTR		
10	**Mobile Messaging Termination Service**				
11	SMS Termination	QAR/SMS	0.0130	0.0130	0.0130
12	Picture: MMS Termination	QAR/MMS	0.4300	0.4300	0.4300
13	Video: MMS Termination	QAR/MMS	0.4300	0.4300	0.4300
14	**3 Outgoing International Call Conveyance**		as and when arises		

Interconnection Links

Interconnection Links

Recurring Charges (QAR/m)

	2015	2016	2017
E1 (distance independent)	999	571	326
Km (distance dependent)	253	128	64

Connection (QAR)

	2015	2016	2017
Connection Charge	5,000	5,000	5,000
Disconnection/reconfiguration	950	950	950

Transmission Links

	Charges to be applied by Ooredoo				
	Transmission Link	Connection charge	Recurring Wholesale Charges		
	SDH	Retail minus	Retail minus	hybrid	benchmark
1	speed / length	all years	2015	2016	2017
2	for E1 (Standard SLA)	QAR	QAR/month	QAR/month	QAR/month
3	00-10	3,036	3,759	2,588	1,418
4	11-20	3,036	4,062	2,770	1,478
5	21-30	3,036	4,336	2,937	1,538
6	31-40	3,036	4,651	3,125	1,598
7	41-50	3,036	4,931	3,294	1,658
8	50 and above	3,036	7,299	4,584	1,868
9	for E3 (Standard SLA)	QAR	QAR/month	QAR/month	QAR/month
10	00-10	3,036	8,973	8,569	8,164
11	11-20	3,036	10,375	9,299	8,224
12	21-30	3,036	10,923	9,603	8,284
13	31-40	3,036	11,897	10,121	8,344
14	41-50	3,036	13,151	10,777	8,404
15	50 and above	3,036	19,265	13,940	8,614
16	forSTM1 (Standard SLA)	QAR	QAR/month	QAR/month	QAR/month
17	00-10	3,036	34,228	23,333	12,438
18	11-20	3,036	40,945	26,721	12,498
19	21-30	3,036	42,822	27,690	12,558
20	31-40	3,036	46,987	29,802	12,618
21	41-50	3,036	49,446	31,062	12,678
22	50 and above	3,036	64,416	38,652	12,888
23	forSTM4 (Standard SLA)	QAR	QAR/month	QAR/month	QAR/month
24	00-10	3,036	62,035	41,340	20,645
25	11-20	3,036	68,238	44,472	20,705
26	21-30	3,036	74,442	47,604	20,765
27	31-40	3,036	80,645	50,735	20,825
28	41-50	3,036	92,720	56,802	20,885
29	50 and above	3,036	93,652	57,374	21,095
30	forSTM16 (Standard SLA)	QAR	QAR/month	QAR/month	QAR/month
31	00-10	3,036	116,158	76,520	36,881
32	11-20	3,036	127,774	82,358	36,941
33	21-30	3,036	139,389	88,195	37,001
34	31-40	3,036	151,005	94,033	37,061
35	41-50	3,036	171,222	104,172	37,121
36	50 and above	3,036	172,190	104,761	37,331

Duct Services

Charges 2015, 2016, 2017

IAA and RIAO - Wholesale Charges Product	UoC	Wholesale Charge 2015, 2016, 2017	Comments
Duct Access Charge	QAR/m/cm2/pm	0.12	Applicable to IAA and RIAO
Facility Hosting Charge	QAR/Liter. First 20 liters of facility space per linear kilometer of route distance: no charge.	1.00	Applicable to IAA and RIAO
Supervision charge	Per actual effort, QAR/man-hour	375.00	Applicable to IAA and RIAO
Access Request Fee	QAR per access request	15,000.00	Applicable to the IAA
Access Area Request Fee	QAR per access request	0.00	Applicable to the RIAO
Route Access Request Fee	QAR per access request	15,000.00	Applicable to the RIAO
Field Feasibility Analysis	QAR/man-hour or part thereof (transportation and misc. expense not included)	375.00	Applicable to IAA and RIAO
GIS update	QAR/man-hour or part thereof to Update of GIS system in conformance with As -Built Drawings provided by OLO	375.00	Applicable to IAA and RIAO
Ad-hoc engineering support	QAR/man-hour or part thereof for expert support provided by Ooredoo at OLO request (transportation and misc. expenses not included)	375.00	Applicable to IAA and RIAO
Successful Blockage clearance (all categories)	per actual effort (time and material)	at documented cost incurred by Ooredoo	Applicable to IAA and RIAO
Unsuccessful Blockage clearance (all categories)	Unsuccessful attempt by Ooredoo to clear blockage under Major Road	at documented cost incurred by Ooredoo	Applicable to IAA and RIAO
Transportation charge	One day per vehicle	150.00	Applicable to IAA and RIAO
Misc. expenses	per actual effort (time and material)	time and material	Applicable to IAA and RIAO

Table 45 Currently Valid Wholesale Charges

Annex II Consultation Questions

Annex III Tables and Figures

*** End of Document ***

[NON CONFIDENTIAL]

Consultation on Setting Wholesale Charges for the years 2018-2020

CRA Reference: CRARAC 2017/09/27-B

Ooredoo reference: [OQ/Reg-5077/2017-10]

9 November 2017

Contents

1. Executive Summary

Introduction

1.1 Ooredoo is pleased to provide its response to the CRA's consultation with regards to Setting Wholesale Charges for the years 2018-2020, issued on 27 September 2017 (Ref: CRA/RAC-E/041/2017 and CRARAC 2017/09/27) ('Consultation Document').

1.2 Ooredoo notes the CRA letter of 22 October 2017 (Ref: CRA/RAC-T/134/2017), and thanks the CRA for granting an extension to the deadline for consultation responses.

1.3 Ooredoo highlights that a series of events have adversely impacted the telecommunications market in Qatar. The general economic downturn that was triggered by the fall in oil prices, together with the more recent blockade by other GCC countries have caused the total telecommunication revenues in Qatar to drop in 2016 and 2017. Both events, which the CRA does not appear to take into consideration in its assessment.

1.4 Ooredoo is gravely concerned by the CRA's proposals for an aggressive reduction in wholesale charges and the resultant impact it will have on the telecommunications sector, the service providers in Qatar, their shareholders and the long-term interest of end users within Qatar. The CRA's proposal appear to demonstrate CRA's detachment from the realities of the telecoms market and the impact recent events have had for Service Providers and the country in general. The proposed regulation largely ignores the CRA's responsibility to deliver on the objective of ensuring the orderly development and regulation of the telecommunication sectors within Qatar.

1.5 Moreover, the CRA neglects a fundamental principle for good regulatory practice, proportionality. The CRA has not provided any demonstrable evidence that its regulatory measures will have a net positive benefit for stakeholders. To do so, the CRA would be required to undertake a regulatory impact assessment, which would look at the benefits that the proposed regulation will deliver against the costs and other adverse impacts that may result. In ignoring such a basis principle of regulation, the CRA seeks to proceed with such intrusive regulation, which will damage the sector, result in a transfer of wealth from Qatar to other countries, harm service provider profitability and their subsequent investment appetite.

1.6 The reduction of the termination rate for international calls represents direct wealth transfer from Qatar to blockading (and other) countries, undermining widespread government initiatives to mitigate the negative effect of the economic blockade by its GCC neighbors. The CRA's action goes against government interest.

1.7 Ooredoo estimates that the proposed reduction in termination rates can siphon up to QAR 700 Mn from telecommunication market in terms of wholesale revenues in the course of next three years.

1.8 If the impact of the reduction in termination rate for international calls on retail revenues is factored in, the total market revenue erosion can be up to QAR 2 bn over the period.

1.9 Despite these substantial costs it seeks to impose on the sector, the CRA has completely failed to identify any market failure that would call for CRA intrusive regulation. As demonstrated by the Retail Price Benchmarks report published by the CRA on its website[1] on 10 July 2017, in most of the relevant retail price comparisons Qatar scored better or at the par with other GCC and Arab countries. It is simply unclear what the CRA is seeking to achieve, apart from a wholesale destruction of the Qatari telecommunications market, a wholesale erosion in shareholder value and dividends, and no guaranteed benefits to consumers.

1.10 The reduction of the termination rates will lead to a reduction in the total market size (in terms of revenues), and to a loss of revenues and margins for Service Providers. Ooredoo expects that economic downturn combined with economic blockade by other GCC countries will result in stagnation of the telecommunication market revenues in next three years. The CRA's regulation will cause the total telecommunication market to actually shrink. This regulatory impact will be visible in the Service Providers' financial reports.

1.11 Rating agencies have already downgraded the credit rating of both Qatar and Ooredoo in the recent past and they maintain a negative outlook. Given its substantial negative impact on Service Providers revenue and profitability prospects, the CRA's regulatory action will contribute to further downgrade(s) in credit rating of the Service Providers. This will have a knock on effect by reducing shareholder value, as well as increasing the cost of investment financing for service providers. The higher cost of financing will likely negatively affect customers in the short-term through higher prices and in long-term through lower network

[1] Document is available at:
http://cra.gov.qa/sites/default/files/Qatar%20Price%20Benchmarking%20Report%202016.pdf

investments that will result following the worsening financials of service providers and a lower appetite for capital expenditure.

1.12 In summary, the cost of the proposed regulation is significant for the country, the service providers and consumers. In the absence of demonstrable and clear net benefit for these key stakeholders, the CRA must seriously consider a major revision to its proposals and give appropriate weight to its alignment with the reality of the telecommunications market and the wider economic situation. Not doing so risks long-term damage to the development of the telecommunication sector.

1.13 Service providers have highlighted their concerns to the CRA in this respect on multiple occasions but to no avail. Ooredoo hopes that time and resources dedicated to the preparation of this response document will be given due consideration by the CRA, and it will finally acknowledge the adverse impact of the proposed regulation.

2. General observations

Legal Basis, the CRA obligations and Impact of Regulation on Telecommunication Sector

2.1 The CRA proposed reduction in wholesale charges regulation will have an adverse impact on the financial position of both Ooredoo and Vodafone Qatar. It will have an adverse impact on their respective shareholders and bond holders, and will be seen by the world and in particular regional countries, as a sign of the general impact the economic blockade is having against the country, which would not be a true reflection of the state of affairs, but an artificial creation by the CRA's own making. Such an outcome goes against government interest.

2.2 This exercise is unlikely to have any socio-economic benefits, but instead its impact is more likely to put the service providers at a disadvantage and negatively affect the telecom market of the country.

2.3 Ooredoo has sought to appeal to the CRA in several personal meetings with the CRA, and pleaded not to disrupt the market at this sensitive time. Ooredoo proposed that the CRA either delay such contemplated action or ensure that any adverse impact on the sector is minimized through moderating the proposed declines in wholesale charges that the CRA seeks to impose. It is unfortunate that such pleadings have been ignored by the CRA, with its narrow blinkered vision, ignoring wider consequences.

2.4 The CRA regulation will have a detrimental impact on the service provider's performance and will reduce the contribution the telecommunications sector makes to the country Gross Domestic Product (GDP). The CRA's regulation may also result in a further reduction in Qatar's sovereign credit rating and credit rating for service providers, increasing the cost of borrowing for the country and adversely affect the market value of both telecom Service Providers in Qatar. A negative change to the credit rating would increase the cost of borrowing for both telecom Service Providers in Qatar and ultimately may lead to increases in prices for customers.

2.5 Ooredoo believes the CRA regulation is ill thought out and ill timed. The economic blockade has already negatively affected the sector, with service providers suffering from reduced roaming and international calling revenues. Ooredoo forecasts that the telecommunications market revenues will decline in the year 2017 and show only marginal growth in the following three years.

2.6 The proposed reduction in mobile and fixed termination rates proposed by the CRA will reverse the small albeit positive forecast market revenue growth in 2018 into a revenue decline. This would thus be the third year where the total Qatari telecom market revenue has declined. The revenue decline in 2016 was caused by the economic downturn due to collapse of oil prices, and in 2017 by the economic blockade, whilst the 2018 decline would be due to the CRA's proposed regulatory intervention.

2.7 The CRA proposed action will likely result in the total market revenues falling over the next three years by up to QAR 700 mn, when impact on wholesale revenues is considered only. Accounting for the impact on retail international calls revenues (further detailed in question 13 below), the total revenue loss could be up to QAR 2 bn over the period, as illustrated in the graph below. Ooredoo estimates that approximately QAR 1.7 bn of this revenue loss would contribute into margin loss.

Figue Redacted

Figure 1: Impact of Regulation on telecommunication revenues

2.8 It is important to note that Ooredoo Qatar generates 25% and 29% of Ooredoo Group revenue and EBITDA respectively[2]. It also contributes [redacted] of total net profit attributable to shareholders[3]. The impact of the CRA's proposed regulation would thus adversely affect overall Ooredoo Group financial performance. The current Stand Alone Credit Profile (SACP) of Ooredoo with S&P[4] is BBB-, one step above a junk rating threshold, (Ooredoo's rating based on state support is uplifted by three notches). Ooredoo is also set on for negative credit outlook by rating agencies already. Institutional Ooredoo bondholders who by definition prefer a lower risk profile for their portfolio investments will see such ratings as very concerning.

2.9 The revenue and margin drop caused by the proposed CRA's regulation is likely to cause Ooredoo's SACP rating to descent further down to BB+ or lower, effectively crossing the junk rating threshold. As illustrated in the table below there is a gradual progression of spreads as rating drop, whilst there is a large jump as one moves from BBB- to BB+; the reason being that many institutional investors (e.g. pension funds by law) cannot own junk rated debt as part of their portfolio. The drop in the rating will cause substantial sell-off of Ooredoo bonds, raising the cost of Ooredoo's bonds (expected return) up by 120+ points. Consequently, increased interest service cost will put pressure on future dividends, leading to greater share discounting and further increase the cost of capital for Ooredoo.

2.10 To compensate for the reduction in the margin and increased cost of financing, Ooredoo will be forced into a major cost saving drive, that will likely result in the reduction and / or delay in investments and hence reduction in long-term customer benefits. In such circumstances, it is also likely that service providers will seek to pass on some of these adverse effects onto consumers through higher prices.

[2] Refer to Q3/2017 results published by Ooredoo on: http://ooredoo.com/en/media/news_view/ooredoo-group-reports-qar-24-billion-in-revenue-for-9m-2017/

[3] Refer to the attached excel file providing Ooredoo Qatar Q3/2017 financial results.

[4] Refer to S&P document available at: http://ooredoo.com/wp-content/uploads/2015/12/2017-08-30-SP-affirmed.pdf

Rating Agency Ratings: Company Default Spreads				
Fitch's Rating	*S&P's Rating*	*Moody's Rating*	*Default spread in basis points**	*Increase in spread*
AAA	AAA	Aaa	54	
AA+	AA+	Aa1	62	8
AA	AA	Aa2	67	5
AA-	AA-	Aa3	72	5
A+	A+	A1	76	5
A	A	A2	78	2
A-	A-	A3	86	7
BBB+	BBB+	Baa1	107	21
BBB	BBB	Baa2	118	12
BBB-	BBB-	Baa3	144	26
BB+	BB+	Ba1	264	120
BB	BB	Ba2	266	2
BB-	BB-	Ba3	268	2
B+	B+	B1	301	33
B	B	B2	365	64
B-	B-	B3	452	88
CCC+	CCC+	Caa1	789.95	
CCC	CCC	Caa2	948.71	
CCC-	CCC-	Caa3	1,053.27	*

Table 1: Rating spread - as of Sept 2017

2.11 A general principal that is accepted by almost all international regulatory bodies is that any regulatory intervention should seek to address specific market failures. A further consideration must be that the benefits derived as a result of such regulatory intervention must outweigh the cost imposed on the sector. The CRA unfortunately has not prescribed the market failure its regulatory intervention seeks to address, or clearly outlined the costs and benefits to the sector as a consequence.

2.12 One of the justifications typically used by regulatory authorities to justify lower wholesale rates is a drive for lower retail rates, assuming that the industry can and would pass on the lower wholesale rates. However, as the CRA itself has acknowledged, retail prices in Qatar are already low. The International Retail Price benchmark report published by the CRA in 2017 indicates that retail prices in Qatar are one of the lowest in the GCC region.

2.13 The need for such intrusive and adverse regulation for the sector and the country is therefore highly questionable. It would also appear out of line with the mandate provided to the CRA under the Telecommunications Law of 2006, in particular, the CRA's obligations to:

- to promote the telecommunication sector in order to consolidate national, social and economic development (Article 2 point 1), and
- to ensure orderly development and regulation of the telecommunication sector (Article 2 point 13).

2.14 One of the key arguments the CRA uses to justify such sharp falls in the wholesale rates is that it has a duty to ensure that wholesale rates are cost based. We believe the CRA is incorrect in such an interpretation. Article 19(1) of the Telecommunications Law requires the General Secretariat to promote appropriate, effective and low cost interconnection between telecommunications networks and promoting access to facilities of other service providers to ensure interoperability of telecommunications services that originate or terminate in the State and **promoting the growth of competitive telecommunications services markets.** The key point being that the article does not require rates to equal to costs, and indeed its aim is to promote the growth of competitive telecommunications services, something that is unlikely with the proposed CRA rates.

2.15 Article (29) requires that the tariff for telecommunications services provided by dominant service providers must be based on the cost of efficient service provision and the tariff must not contain any excessive charges, which result from the dominant position that the service provider enjoys. The fact that the CRA itself has concluded that the retail tariffs in Qatar are some of the lowest in the GCC, would suggest that it is unlikely that service providers are enjoying excessive charges. In fact, the primary concern within the Telecommunications Law is pricing services below cost (Article 43(6)).

2.16 Moreover, Ooredoo believes the proposed actions by the CRA, especially the suggestion that incoming international wholesale rates are brought down from commercially agreed rates with international counter-parts to purely cost based rates, will only have the effect of transferring wealth from Qatar to other nations including the blockade countries. What the CRA is proposing is seriously out of line of international practice, wherein wholesale international rates are commercially agreed between service providers in the respective countries, rather than being imposed by any one regulatory authority, whose jurisdiction cannot extend to service providers outside Qatar.

2.17 We believe the actions of the CRA in this context are counter-productive to Qatar's current national interest. Perversely, the actions of the CRA is likely to transfer wealth from Qatar to the blockading nations, who would be beneficiaries of the CRA's proposed action, rather than service providers or the people of Qatar.

2.18 Ooredoo therefore seeks the CRA to consider the economic impact such action will have on the sector and delay such regulation or to ensure that any adverse impact on the sector is minimized through moderating the proposed declines in wholesale charges that the CRA seeks to impose.

2.19 In the following section Ooredoo provides comments to each of the question posed by the CRA.

3. Specific responses to CRA questions

Question 1: Do stakeholders agree with the CRA's view and methodology for cost estimation?

3.1 This question does not fully reflect the material discussed in section 4.1 of the CRA's consultation document which precedes this question in. There are two different topics covered in section 4.1 of the consultation document:

- methodology to calculate costs of services
- methodology to set the wholesale charges

3.2 Regarding the cost methodology, Ooredoo has the following concerns: the extrapolation of the past cost trends even with the use of more moderate decline may result in under-recovery of service costs. In the regulatory horizon of 2018-2020, Ooredoo expects to make investments in 5G network upgrade and further network enhancement to meet demands related to the 2022 World Cup. Moreover, based on historical trends, the major sport events planned to take place in Qatar in coming years (Athletic World Cup and Football World Cup) are likely to have increased inflationary pressure that will also impact the input costs of Service Providers and hence costs of wholesale services.

3.3 Reliance on international benchmarks when defining wholesale markup ignores the lack of economies of scale and scope within wholesale operations in Qatar given the small size of the market and therefore the CRA proposed actions would not enable Ooredoo actual cost recovery.

3.4 Regarding the wholesale rate setting methodology, Ooredoo considers the CRA's proposed wholesale rates reduction to be too aggressive, ignoring its economic impact as we have already described above, which is oblivious to key objectives the CRA must adhere to by the Telecommunication Law.

Question 2: Do stakeholders agree with the CRA's view and implementation of the PT test, i.e. having a threshold of 20%?

3.5 Ooredoo notes that the CRA has failed to provide relevant references of where such a test is utilized internationally. Moreover, Ooredoo questions its relevance for mobile termination services where interconnection traffic is more or less balanced. In addition, an insistence by the CRA on applying PT test for FTR in the absence of solving the issue of access deficit appears to demonstrate incoherent regulatory policy being applied by the CRA to fixed market.

Question 3: Do stakeholders agree with the CRA's view and implementation of the PMS test?

3.6 Ooredoo cannot agree with inclusion of CRF in PMS, as this approach completely lacks support in sound economics or any international regulatory precedence. The risk of potential revenue fluctuations are factored in the WACC already via credit rating mechanism (and via betas in the equity component) and therefore any costs that would need to be attributed to this risk is already applied via the WACC to both retail and wholesale services. The CRA must therefore remove the CRF from the PMS formula.

3.7 The CRA in section 4.3.1 do not address in detail what price and / or (retail) costs should be considered in the specific PMS and therefore Ooredoo cannot comment on what are important details required for the practical implementation of PMS at this point.

Question 4: Do stakeholders agree with the timeframe defined by the CRA?

3.8 Ooredoo agrees with the proposal that new wholesale charges will cover calendar years 2018, 2019 and 2020. Ooredoo notes that the new wholesale charges might come in force in January 2018 and assumes that current wholesale charges will stay in force till then and will not be changed retroactively. Confirmation from the CRA is sought in this respect.

Question 5: Do stakeholders agree with the overall methodological approach defined in this section?

3.9 As discussed in section two above and further elaborated below, Ooredoo does not agree with the dramatic reductions in termination rates proposed by the CRA. Doing so will cause substantial costs to Service Providers and ultimately customers, which are not likely to be offset by any corresponding benefits that the proposed regulation will deliver. The CRA has neither identified market failure it is trying to address through the proposed rate reduction nor has the CRA quantified the benefit this regulation aims to deliver to market participants.

Question 6: Do stakeholders agree with proposed use of benchmarks?

3.10 Ooredoo note that a number of the CRA's benchmarks are not representative in terms of how the presented values were calculated. Ooredoo also finds the use and interpretation of benchmarks by the CRA to be misleading on a number of occasions. Ooredoo comments on the use of specific benchmarks in more detail below.

Question 7: Do stakeholders agree with the application of glide paths and the methodology outlined in this section?

3.11 Ooredoo agrees with the use of the glide path as a general principle, to gradually reduce the wholesale charges, provided such a decline will not prevent cost recovery. However, Ooredoo does not agree with the steep declines in the wholesale rates proposed by the CRA as they are posed to do more harm than benefit to the telecommunication sector in Qatar.

Question 8: Do stakeholders agree with the use of zero rating for interconnection rates? If yes, for which services do stakeholders believe zero rating should be implemented?

3.12 No. The financial impact on Service Providers would be worse than any other proposed alternatives.

Question 9: Do stakeholders see other alternative approaches? This might be e.g. port charges for IC products or up-front lump sum payments. If yes, for which services do stakeholders believe such alternative approaches should be implemented?

3.13 Ooredoo do not have alternative proposals.

Question 10: Do stakeholders agree with the CRA's proposed Wholesale Charge for the Fixed Call Termination Service to Geographic Numbers? Which of the Options proposed by the CRA do you suggest and why?

3.14 The CRA is using international benchmarks on population density and FTR's to view the proposed FTR's for Qatar in wider context. The CRA considers Singapore to be closest to Qatar in terms of population density and bases FTR's comparison on this premise. Ooredoo notes from the CRA's population density benchmarks that, in terms of number of inhabitants per squared km, both UAE (111) and Ghana (124) are more similar to Qatar (221) than Singapore (7,909). Ooredoo also notes that fixed termination rates in these countries are much higher than the current and the CRA's proposed termination rates for Qatar. Also as illustrated in the Figure 2 below, across all countries with Ooredoo footprint Qatar has the smallest FTR already. There are no significant further reductions in FTR's expected in other countries where Ooredoo operates in next three years. The CRA's FTR rate reduction proposal is thus too extreme in this international comparison.

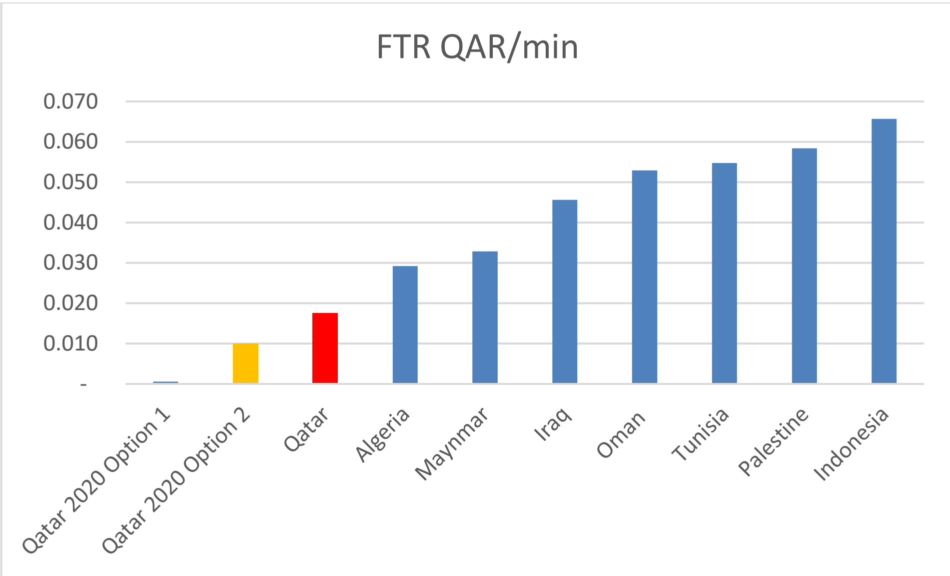


Figure 2: Fixed Termination Rates in the countries with Ooredoo operations. Source: Ooredoo's OpCo's

3.15 The CRA raises concern that fixed termination service does not pass the proportionality test. In this respect Ooredoo points out that the current technical interconnection solution for fixed call termination was agreed by Ooredoo and Vodafone Qatar as the optimal one, given the small volume of fixed to fixed traffic and the additional costs that would have to be incurred by both service providers were an alternative network topology used instead – see the graphical description of current and alternative interconnection arrangement below. Obviously any of the alternative solutions would represent additional costs in terms of putting in place additional interconnection links and employing additional ports on the switches.

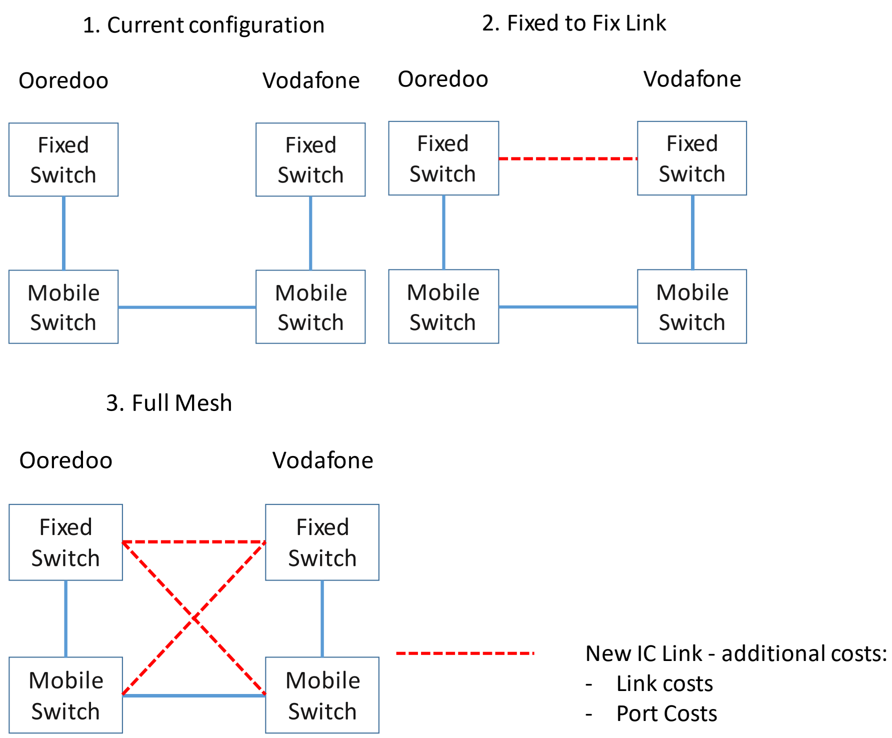


Figure 3: Current and alternative interconnection arrangements

3.16 Ooredoo during the previous consultation on wholesale charges within the year 2014 raised the fact that the FAC methodology alone does not provide the best basis on which to set regulated prices due to temporal variations (spikes and troughs) in costs that can incur due to the nature of the telecommunication business. This applies also in the case of the fixed termination cost that are derived from RAS information for the year 2015, which shows a significant drop in unit cost compared to the year 2014. This decrease was largely driven by the decline in the operation and maintenance cost associated with the UMG (fixed network switch) in comparison with the same cost category in previous years. This drop reflects data sourced from time analysis input used within RAS 2015, when the given department's effort was focused on alternative network element(s). However, this is not a long-term sustainable situation and Ooredoo expects these maintenance costs to increase again in 2016 and to bring the unit cost closer to the 2014 level.

3.17 Moreover, as historical experience shows, the inflation in Qatar is increasing when there is a major sports event occurring within country. As demonstrated in the graph below, the Asian Olympics games saw the price inflation in Qatar of 16%[5]. There is Athletic World Cup and Football World Cup scheduled to take place in Doha in 2019 and 2022 respectively. Ooredoo expects both of these events to contribute to the increase in inflation in Qatar, which will likely be reflected in the cost of labor and other Service Providers' costs as well as has been the case in the past.

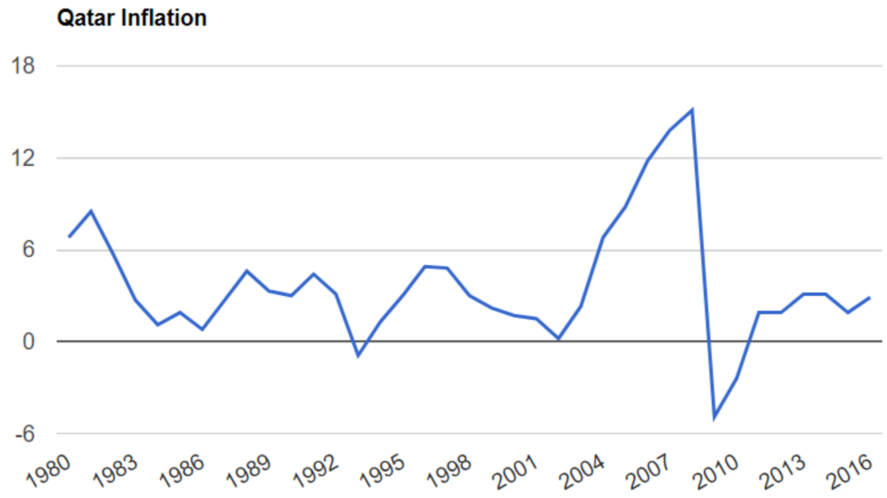


Figure 4: Qatar Inflation history

3.18 Hence, to avoid the under-recovery of the associated costs, Ooredoo's recommendation is to increase the fixed termination rate at the rate of 3% per year in the course of next three years. If this was not possible, then to at least keep at the same level as is today.

Question 11: Do stakeholders agree with the CRA's proposed Wholesale Charge for the Mobile Call and Video-Call Termination Service? Which of the Option proposed by the CRA do you suggest and why?

3.19 The mobile termination service represents a major part of the total wholesale revenues and a dramatic drop in termination rates suggested by the CRA will cause the total telecommunication market revenue to decrease for a third year in the row. In the absence of the drop in wholesale rates for national termination services

[5] Source: http://www.theglobaleconomy.com/Qatar/Inflation/

(which otherwise represents loss of [redacted] mn QAR market revenues in next three years), the total market revenues is expected to show modest but positive increase[6]. The dramatic drop in mobile termination rate is ill timed given the economic circumstances negatively affected by both general economic downturn and economic blockade. Minded of its consequences, Ooredoo cannot agree with the proposed reductions of wholesale charges for the mobile voice and video call termination services. Instead, Ooredoo urges the CRA to delay any revision of mobile termination rates or to adopt a much more gradual decline that would not disrupt the market, as the current CRA proposals will. In this respect, Ooredoo refers the CRA back to its initial response submitted on 6 June 2017.

Question 12: Do stakeholders agree with the CRA's proposed approach for setting the "Call Termination Service to Toll-Free Numbers (reverse charge) for fixed and mobile"?

3.20 Ooredoo agrees, provided the CRA accepts Ooredoo's position on FTR and MTR.

Question 13: The CRA is interested in hearing a justification for the SPs on the (non) regulation of Call Termination Services to Numbers for Inbound International calls. This argumentation should include clear figures in terms of volumes, revenues and cost.

3.21 The proposed reduction of the termination rates for incoming international calls would have major negative impact on both Ooredoo and Vodafone Qatar revenues and profit margins. It would effectively result in the transfer of wealth from Qatar to other countries thus benefiting blockade GCC countries as well as other countries.

3.22 The CRA in consultation document states the following: *"We also understand that the commercial rates are set reciprocally, i.e. the change of rates of one operator are followed eventually by the other operator. A logical effect is that customers rather use OTT services for international calls rather than (inflated) retail telecommunication services. Therefore setting regulated rates for the product might be beneficial for the customer and reduce the drain of international calls to OTT providers."*

3.23 The statement above illustrates the CRA's detachment from practical business reality. First, the commercial rates are not set reciprocally. Second, one cannot

[6] Refer to the attached excel file for the data evidence supporting this claim.

compete with something that is priced at zero rate (OTT VoIP is). As already demonstrated in Ooredoo's Response to the Market Definition and Dominance Designation – Phase II Information Request submitted to the CRA on 15 September 2015 (Ref: OQ/Reg-4226/2015-09), in the face of OTT substitution, price declines for international calls do not anymore lead to corresponding increase in the volume of calls per subscribers and as such, result in revenue and margin decline for service providers.

3.24 Any reduction of the international call termination rate that Ooredoo is able to negotiate with the service providers outside of Qatar hinges on the commitment of increased volumes of traffic sent by Ooredoo to that service provider. In other words, no service provider will voluntarily reduce its own international call termination revenues. This traffic volume increase is mainly achieved by Ooredoo (or any other service provider) by winning subscribers from other network(s) via retail price reduction.

3.25 There are two possible market reactions to the CRA's proposed reduction of international call termination rate: a) Service Providers outside of Qatar will simply pocket the extra margins and Service Providers in Qatar will lose "only" the wholesale revenues (about QAR [redacted] mn in next 3 years), b) service providers outside of Qatar will in response to reduced termination rate in Qatar drop their retail price for calls to Qatar. Given such dramatic reduction in termination rates for international calls proposed by the CRA (and supported by larger economies of scale and more relaxed retail regulations) this will allow service providers outside of Qatar to set retail rates for international calls to Qatar below those set by service providers in Qatar for reciprocal service. This will affect the terms of trade in international calls. The volume of international calls coming to Qatar will increase and volume of international calls going from Qatar will decline.

3.26 Take an example of a Pakistani worker in Qatar. Assuming the CRA proceeds with its proposals, it would be cheaper for him to have a call with his family back home when the call is originated from Pakistan instead from Qatar[7]. And since the family has effectively one common budget; the salary made in Qatar is transferred to back home to Pakistan already on regular basis, there is no budget constrain liming volume of calls generated from Pakistan to Qatar.

[7] Note that Ooredoo currently pay voice termination rate in Pakistan of [redacted] QAR/min, which is much higher than the corresponding termination rate for incoming calls from Pakistan that the CRA is proposing.

3.27 Consequently, service providers within Qatar will now instead of earning retail prices on each call between expat worker in Qatar and his family back home, a much-reduced international incoming termination rate.

3.28 Furthermore, as the volume of international call traffic from Qatar to other countries will decrease, any discounted termination rates negotiated in the past with such counter-parts will not apply, as Service Providers in Qatar will fail to meet the volume thresholds committed to benefit from those discounts. Consequently, Service Providers in Qatar will have to increase their retail prices for international calls for its customers to cover the increased cost of termination at the destination countries. This price increase will via price elasticity effects, lead to a further reduction in the volume of international calls from Qatar, which will in turn cause further increase in international call termination rates by the foreign counterparts of Qatari Service Providers. A vicious downward spiral of decreasing value will be created by the CRA contemplated action. Ooredoo estimates that accounting for the effects of a) and b) together, the total revenues on telecom market in Qatar will be reduced by QAR [redacted]bn in next three years. Because there will not be reciprocal reduction in termination rates for international calls from Qatar abroad, the reduction in termination rates for incoming international calls will be translated also to margin impact for Service Providers in Qatar.

3.29 Currently there is significant trade imbalance in international voice call traffic, with Qatar being a net exporter of traffic. Ooredoo in the first 9 months of the year 2017 sent out [redacted] minutes and received [redacted]. This imbalance is driven by two main factors: relative retail price for incoming and outgoing international calls and income and price elasticities. Ooredoo in the attached excel file provides evidence of how balance of trade in international calls has changed over time for Qatar, with the decline of retail price for international calls from Qatar. This data aim to serve as a supporting evidence for the above claim that reduction in retail price for outgoing international calls relative to the retail price for incoming international calls does effect terms of trade and that CRA regulation will have dramatic detrimental effect on Service Providers in Qatar by reducing their total margin by up to [redacted] bn QAR. Note that over the time period 2009-2016, the average termination rate for international calls from Qatar has declined significantly by [redacted] allowing for a corresponding drop in retail prices and increases in the volume of such calls. This decline was tied to specific traffic volume commitments from Ooredoo side. On other hand, average termination rates of incoming international calls to Qatar have not changed much, as the Ooredoo counterparts abroad were not in the past interested in similar arrangements whereby reduction in termination rate in Qatar would be tied to specific volume increase commitment from their side. This situation resulted in a decline in total volume of incoming internationals calls to Qatar as these were substituted by calls in the opposite direction. The CRA proposal to reduce international call termination rate by [redacted] will likely reverse the flow of international voice call traffic. The CRA's proposed steep termination rate reduction for incoming international calls is not tied to specific incoming voice call volume commitments. This termination rate reduction provide all Service Providers abroad with same retail price flexibility without any burden to meet specific volume commitments (unlike service providers in Qatar) and hence they do not have to be afraid of failing to meet volume commitments once they reduce their retail price in case that their competitors will follow the same move. Reduced costs and lack of restrictions in terms of specific volume commitments thus provide right incentive for Ooredoo's counterparts abroad to reduce their retail price to further enhance their gains from the international trade for voice calls.

Question 14: Do stakeholders agree to set the charge for the "Termination Emergency Services" at the same level of the FTR?

3.30 Ooredoo agrees with this proposal provided the CRA accepts Ooredoo's position on FTR.

Question 15: Do stakeholders agree with the CRA's proposed Wholesale Charge for the SMS Termination? And Question 16: Do stakeholders agree with the CRA's proposed Wholesale Charge for the MMS Termination (Picture and Video)?

3.31 Ooredoo notes that the current SMS and MMS termination rates pass the PMS test. Although we do not agree that minimum retail price for a service provider should be used to perform the PMS test as per the CRA's methodology. Instead, the average retail revenue per unit of a service set by Ooredoo should be used as per the definition of the PMS test[8] and international practice. Hence, Ooredoo see no need to reduce the SMS termination charge any further.

[8] Margin squeeze occur when the vertically integrated operator sets wholesale prices high enough and/or retail prices low enough that the retail margin of the downstream access seeker is squeezed, preventing it from recovering its retail costs.

3.32 Ooredoo notes that EU average termination rate for the SMS service is 2.2 Euro cents[9] (i.e. 0.1 QAR) and that the CRA's target proposed rate for 2020 is way out of this international benchmark figure. The MMS termination charge is not being regulated by EU regulatory authorities at all[10]. Moreover both SMS and MMS service has declined in total volumes over time being effectively replaced by OTT messaging services**.** As demonstrated in Ooredoo's Response to the Market Definition and Dominance Designation – Phase II Information Request submitted to the CRA on 15 September 2015 (Ref:OQ/Reg-4226/2015-09), the average mobile customer in Qatar spends [redacted] minutes a day being engaged with OTT messaging applications versus only [redacted] minutes spent using traditional SMS / MMS services.

3.33 Given the fact that both SMS and MMS service have by now been largely replaced by OTT messaging services (as effective substitutes) Ooredoo considers in general that the definition of the relevant markets for the SMS and MMS termination services to be obsolete and not reflecting the market reality. Since the OTT services are not regulated by the CRA and since they represent effective substitute for these services, Ooredoo proposes that he CRA deregulates the termination services for SMS and MMS and allows service providers to agree the termination rates for these services on a commercial basis. While not a major source of the wholesale revenues, the dramatic reduction in the wholesale termination rates for these services as proposed by the CRA are not supported be international practice and will contribute to a drop of the wholesale revenues for both service providers with its consequent negative implications as highlighted in the section 2 above.

Question 17: Do stakeholders agree with the above Option for the Outgoing International Call Conveyance?

3.34 Ooredoo agree with the CRA that regulation of this service is irrelevant.

Question 18: Do stakeholders agree with the CRA's proposed Wholesale Charge for Interconnection Links?

[9] Refer to the BEREC report available at http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/7095-termination-rates-at-european-level-january-2017

[10] We also note that as per BEREC report above, Danish Regulatory Authority stopped regulating SMS termination rate as of 2016.

3.35 RAS unit capacity costs have increased between 2014 and 2015 because of a total decline in the volume of the capacities sold / deployed in Ooredoo's network. This fact does not support the CRA's declining trend used for the proposed wholesale charges and as an outcome, cost recovery would be questionable for Ooredoo.

3.36 The 2014 and 2015 RAS distance related network costs were QAR [redacted] and [redacted] /km/month respectively. The year over year decrease is a result of rapid increase in the use of longer distance low capacity SDH E1 leased lines to connect Ooredoo's base stations. SDH leased line distance related unit costs for 2016 and going forward are projected to increase as a result of this SDH capacity being replaced by MPLS technology. This fact does not support the CRA's declining trend used for the proposed wholesale charges and as an outcome Ooredoo cost recovery may be at risk

3.37 Ooredoo also notes serious inconsistency in the CRA's approach to the use of the RAS costs in setting wholesale charges for interconnection links and SDH leased lines. In the section 6.2 of the consultation document, the CRA states: *"…The CRA relies on the average cost per unit per km of the wholesale SDH Rings, sourced from RAS 2015. This network component has been deemed reliable after the review of the RAS 2015."* Yet in the section 6.3 of the same document discussing the wholesale charges for SDH leased lines, the CRA states: *"Due to lack of information to be able to obtain reasonably accurate pricing (for SDH leased lines), the CRA believes that it is appropriate to apply the benchmark methodology used to set the wholesale charges for 2017."* If the CRA does not consider the RAS costs for SDH network to be reliable and detailed enough to support setting wholesale charges for SDH leased lines and relies on benchmark information instead, then to ensure consistency in setting the wholesale charges, the CRA should use the very same cost benchmarks also to set the wholesale charges for the interconnection links.

3.38 For the reasons explained above, given the past and expected future decline in the volume of sold / deployed SDH leased lines, Ooredoo expects that unit costs for the SDH based services will increase within the regulatory period of 2018-2020. In order to avoid setting the wholesale charges below costs, Ooredoo recommends the CRA does not reduce the current wholesale charges for interconnection links and SDH leased lines any further. Meanwhile, Ooredoo is enhancing the robustness and details of the cost information for the SDH based services. The interconnection and SDH leased lines wholesale charges can be reviewed once the CRA's gains confidence in the related RAS cost information.

Question 19: Do stakeholders agree with the CRA's proposed Wholesale Charge for recurrent charges of SDH Transmission Links, i.e. to continue to use the Benchmark?

3.39 As outlined above, Ooredoo agrees with the use of benchmark for setting wholesale charges for the SDH leased lines. Also for the reasons explained in the response to the previous question, the actual unit costs of SDH lines are expected to be at the level recorded in 2015 during the 2018-2020 time period. This fact does not support the CRA's trend used for proposed charges and as an outcome the future wholesale charges risk being set below cost. Ooredoo recommend the CRA does not reduce the current wholesale charges for SDH leased lines any further.

3.40 Ooredoo is working on improving the robustness of the cost calculation for these services and when available will propose to replace current benchmark with actual costs.

Question 20: Are stakeholders interested in Transmission Links based on Ethernet Technology? Do you find the potential charges calculated by the CRA acceptable? Please provide cost information to calculate a cost oriented charge for this product.

3.41 Ooredoo considers the discussion of the wholesale charges for transmission links based on Ethernet premature. As highlighted by Ooredoo's letter to the CRA and to MOTC[11], a number of policy issues have to be addressed at a government level before further access obligations are imposed on Ooredoo. To the best of Ooredoo's knowledge, this has not happened yet. In addition, as highlighted to Ooredoo and the CRA, the question regarding the role for the QNBN within the market structure remains unanswered and poses specific additional risks to Ooredoo's return on investment. Instead of the CRA trying to estimate the cost of the Ethernet leased lines, the CRA should take a more proactive role in engaging with government to initiate and progress discussions and clarify the future vision for the sector and the role QNBN should play within that vision, if at all.

Question 21: Do stakeholders agree with the CRA's proposed Wholesale Charge for the Transmission Links connection fees?

[11] Letter with subject "Policy Statement – Regulating for the Future" dated 10 August 2014 (Ref: OQ/Reg-3542/2014-08).

3.42 The RAS 2015 wholesale national leased circuits installation cost is QR [redacted]/ E1. The CRA's proposed 2018-2020 rates trend will thus likely cause wholesale charges for connection fees to be below cost in the future. Ooredoo's recommendation is to maintain the current wholesale price or apply a 3% increase per annum to ensure cost recovery in the face of expected inflationary costs going forward.

Question 22: Do stakeholders agree with the CRA's proposed Wholesale Charge for the Duct Access product?

3.43 The CRA in the presented benchmark analysis portrays current wholesale charges for access to duct in Qatar as being one of the highest in the world. There are number of problems with these benchmarks, which lead to an exaggeration of duct charges in Qatar by international comparison, simply because the CRA are not comparing apples to apples.

3.44 As each country in the CRA's benchmark sample uses different charging units, the CRA had to translate these various charges into a common unit measure. In their calculations of unit costs, the CRA had to make a large set of assumptions, which as explained below skew the benchmark results against Qatar significantly.

3.45 The CRA in their calculation apply unified assumption of duct occupancy rate of 80% to a number of countries for which cost translation is required. This assumption appears unrealistic for two reasons: given physical dimensions of cables and ducts this effectively represents full utilization of ducts, which is highly unlikely and ignores the fact that utilization will naturally vary across countries. The actual duct occupancy in Qatar is much lower than 80%. This assumption is the main reason why Ooredoo's duct charges look high in comparison to the other countries.

3.46 The cost base used to set wholesale charges varies across countries in the sample from fully allocated cost based on historical cost accounting (FAC/HCA) to LRIC cost based on current cost accounting (LRIC/CCA). Different cost methodologies applied to the same service in the same country will produce very different results. The CRA has failed to acknowledge or any way correct their benchmark analysis to reflect this fact.

3.47 The asset life used for ducts usually varies between 25 to 50 years. Ooredoo is using in its financial accounting duct lifetime of [redacted] years. This will contribute to inflating costs for Qatar in relative international comparison.

3.48 The CRA has ignored the impact of duct topology, and geo-location i.e. duct surface cover and its cost varies significantly from one type of surface to the other. Ducts built in more dense areas (city), costs a lot more than duct built in rural area. These will in reality result in naturally higher cost of duct in Qatar compared to other countries in the benchmark sample. The majority of duct infrastructure within Ooredoo's network would be classified as urban rather than rural. This also means that on average more customers can be reached within shorter distances (of ducts) in Qatar than in other countries. None of this is apparent from the CRA benchmark presentation.

3.49 Older ducts have lower costs, unless revalued with CCA/LRIC. This is because older assets have a lower net book value (NBV) and hence lower cost of capital employed (WACC*NBV). Qatar is characterized by a larger percentage of new developments (i.e. younger duct infrastructure with higher costs associated in the HCA FAC model) in comparison with the benchmark countries.

3.50 In summary, due to the assumptions used by the CRA in their benchmark calculations, the cost / charges for duct access is artificially inflated for Qatar in the international comparison as presented by the CRA. This is explained by:

- The major part of the duct infrastructure in Qatar is built in dense areas with more expensive surface;
- The duct assets are depreciated by Ooredoo over [redacted] years, whereas many other jurisdictions have 20-25 years;
- The Ooredoo duct infrastructure is relatively new and occupancy is likely lower in Qatar than in some other countries (with more service providers sharing ducts).

The cost resulting from FAC/HCA model may be higher in Qatar than in some of the other countries. However, definitely the duct cost / charge for Qatar would not be as large relative to other countries as CRA portrays in their benchmark if correct comparison methodology was used.

3.51 The actual 2015 RAS network costs alone for duct service are QAR [redacted]/m2/m/month. The 2015 RAS network cost plus wholesale costs are QAR [redacted]/m2/m/month. The same RAS costs for 2014 was QAR [redacted]/m2/m/month. Ooredoo therefore considers the proposed CRA's charges for duct access to be below RAS costs.

3.52 Ooredoo's recommendation is to increase the wholesale charge for duct access to ensure costs recovery going forward.

Question 23: Stakeholders are invited to provide their view on alternative mechanism for charging Duct Access, with particular reference to the introduction of lump-sums upfront to the commitment for buying a certain maximum amount of volume

3.53 Ooredoo has no alternative suggestions at this point of time.

Question 24: Do stakeholders agree with the CRA's proposed Wholesale Charge for "Facility Hosting"?

3.54 The 2015 RAS network costs are QAR [redacted]/liter/month. If the RAS wholesale costs are included, the proposed CRA pricing is below the total RAS costs.

Question 25: Do stakeholders agree with the CRA's proposed cost per hour applicable to "Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products?" Stakeholders are explicitly invited to submit evidence of the cost per hour applicable for these products. Evidence could include invoices paid to external companies for comparable services or salaries of the employees involved in comparable activities.

3.55 Ooredoo notes that the CRA calculation of labor cost per hour significantly underestimates the total labor related costs actually incurred by Ooredoo. The CRA's calculation fully neglects a number of other labor cost categories such as for example annual bonus, cost of long term incentive scheme (costs of shadow shares allocated and paid to employees), medical costs, children education costs, training costs, travel costs, service gratuity costs and pension contribution costs. These costs represent on average [redacted]% of total labor costs of Ooredoo's employees.

3.56 Hence, the CRA's derived cost per hour is simply not acceptable as it grossly underestimates the actual cost per hour incurred by Ooredoo and would not allow for cost recovery.

3.57 The AAR and RAR cost models including the Ooredoo's derivation of labor cost per hour are currently undergoing independent audit review. To ensure recovery of the costs incurred by Ooredoo, we insist that the cost figures confirmed by the audit are used as a basis for setting relevant wholesale charges related to duct access service activities.

Question 26: Do stakeholders agree with the CRA's proposed Wholesale Charge for "Access Area Request", i.e. using the man-hour cost as per CRA's calculation and a charge for an average number of duct segments? And Question 27: Do stakeholders agree with the CRA's proposed Wholesale Charges for "Route Access Request", i.e. using the man-hour cost as per CRA's calculation and a charge for an average number of duct segments?

3.58 The cost of the AAR / RAR depends on the number of duct segments. In the absence of the relevant data (there was only one wide ranging Access Request performed by QNBN under IAA), it is impossible to estimate number of segments per "average request". To ensure cost recovery, Ooredoo proposes the AAR charge to reflect actual number of duct segments per each AAR / RAR. Once reliable data sample is amassed for AAR's / RAR's allowing for cost estimate of average request, the option proposed by the CRA can be reconsidered.

3.59 Man-hour cost should reflect the cost actually incurred by Ooredoo as verified by independent audit to ensure relevant cost recovery, which is key principle of the Telecommunications Law. As explained above, the CRA derived man-hour costs grossly underestimate the actual labor costs incurred by Ooredoo and it is simply not acceptable.

Question 28: Do stakeholders agree with the CRA's proposed Wholesale Charges for "Access Request", i.e. calculation of the AR as a sum of AAR and RAR, using the man-hour cost as per CRA's calculation and a charge for an average number of duct segments?

3.60 It is not clear to Ooredoo what the CRA seeks to achieve at Question 28: "Do stakeholders agree with the CRA's proposed Wholesale Charges for "Access Request", i.e. calculation of the AR as a sum of AAR and RAR, using the man-hour cost as per CRA's calculation and a charge for an average number of duct segments?"

3.61 The terminology of AAR and RAR has been introduced as part of the CRA request for a reference offer for duct access from Ooredoo. The terminology RAR does not exist within the IAA. The IAA includes terminology that includes area access request and provisioning requests.

3.62 The CRA is aware that the IAA has been a commercially negotiated agreement between Ooredoo and QNBN, and has been in operation since 2012. That agreement was arrived at by both parties without regulatory direction, although the CRA has been fully cognizant of and integral to that agreement. The rates within that agreement were not reflective of actual costs, again something the CRA has not been concerned with since 2012.

3.63 If the task at hand is to determine regulated rates for the reference duct offer, it is unclear why the CRA seeks to aggregate the AAR and RAR, rather than keep those items separate as stated within the reference offer. Ooredoo would contend that the CRA should not be seeking to impose regulated rates on what are commercial agreements between two licenses. The only mechanism to do so is through the reference offers.

Question 29: Do stakeholders agree with the CRA's proposed approach for the Successful and Unsuccessful Blockage Clearance products?

3.64 Ooredoo agrees.

Question 30: Do stakeholders agree with the CRA's proposed approach for Transportation charge product?

3.65 Ooredoo agrees.

Question 31: Do stakeholders agree with the CRA's proposed approach for the Miscellaneous Expenses product?

3.66 Ooredoo agrees.

Question 32: Do stakeholders agree with the CRA's proposed review clause?

3.67 There are number of uncertainties that may affect the economy of Qatar and the cost inputs for Ooredoo and other Service Providers within Qatar in the near future, e.g. inflationary uplifts, cost of capital increase etc. These events represent potential triggers for a review of wholesale charges. Ooredoo therefore reserves its right to review all wholesale charges as required by the evolving economic circumstances.

الشركة القطرية لشبكة الحزمة العريضة
Qatar National Broadband Network

November 12, 2017

2017/CEO/PB/11-713

Mr. Mohammed Al Mannai
President
Communications Regulatory Authority
P.O. Box 23264, Al Nassr Tower
Doha, Qatar

Dear Mohammed,

Subject: Consultation on Setting Wholesale Charges for 2018, 2019, 2020

Qnbn acknowledges receipt of the above-referenced Consultation requesting Submissions, as amended, on or before 12 November, 2017.

Introduction

Qnbn is please to participate in this proceeding and has provided, previously, empirical data surrounding appropriate costs associated with infrastructure access. However, as noted in previous submissions the CRA should appreciate a certain amount of skepticism on the part of Qnbn towards addressing the economics in this proceeding dealing with access to Ooredoo telecom infrastructure.

As the CRA is well aware Ooredoo has been found to be engaging in unlawful activity as a result of anti-competitive practices with respect to access to its duct infrastructure. The CRA has issued two Decisions in this regard and multiple Orders with which Ooredoo does not comply. Additionally, the CRA has undertaken a lengthy regulatory proceeding which resulted in a Reference Offer for access to Ooredoo ducts. The CRA issued multiple Orders to Ooredoo to make the Reference Offer for ducts available to the marketplace. Again, Ooredoo fails to comply. Qnbn invested significant time, effort and resources in these proceedings. All to no avail; access to Ooredoo ducts or any Dominant Service Provide products is not a reality in the State of Qatar.

The CRA is addressing the economics of services which Ooredoo has no intention of making available to the marketplace. Unless and until the CRA can enforce its Decisions and Orders on duct access, it seems that in this proceeding, the CRA will have successfully addressed the charges for duct products; but duct products and services from the incumbent Dominant Service Provider will still not be on offer in the marketplace.

Responses to CRA Questions 22-32

Qnbn proposes to only address the above-referenced questions which are specifically pertinent to infrastructure access. Also, any brevity on Qnbn's part should not be construed as detracting or minimizing from previous economic submissions or earlier views forcefully stated. Rather, Qnbn has reviewed the views stated by the CRA in its consultative document and concurs with much of what is stated therein as well as the methodologies utilized.

Qnbn does wish to add some precision to the duct access charge stated by the CRA, at pages 47-48, as applicable for the State of Qatar. The duct access charge in Qatar is 0.12 QAR/m/ cm2. However, it is more precise to state that the minimum charge is 0.36 QAR/m as the minimum leased space is 3 cm2.

Question 22: Qnbn agrees with the CRA's proposed Wholesale Charge for the Duct Access product provided that there is no minimum space leased. As noted above, the current minimum $3cm^2$ should not apply but rather reference should be to the actual utilized space.

Question 23: Lump sum payments based on volume commitments are a non-starter for new fixed (passive) market entrants such as Qnbn. Qnbn does not have a universal service obligation and, to be fiscally responsible, it deploys fiber based upon customer demand. Qnbn has been painstaking in communicating this strategic reality to the CRA. It is Qnbn's customers who determine active service requirements and request fiber from Qnbn. It is fiscally impossible for Qnbn to be in a position to agree volume commitments in any given Zone or development within the State of Qatar.

Question 24: Qnbn is in full agreement with the CRA's proposed Wholesale Charge for Facility Hosting.

Question 25: Qnbn could agree to the proposed charge (166 QAR/hour) subject to the following conditions:

- The charges will be applicable for field activities only;
- Any office activities (including desktop activities, GIS update, etc.) should be excluded; and
- Such charges should be capped at 166,000 QAR per quarter.

Question 26: At the outset Qnbn wishes to note, given its actual experience, its interest in any audit undertaken of Ooredoo man hour costs. The CRA is invited to discuss with Qnbn, as a sanity check, its own per man hour costs. Qnbn favors costs arrived at regardless of the number of ducts (the proposal given in Scenario A).

Question 27: Qnbn favors costs arrived at regardless of the number of ducts (the proposal given in Scenario A).

Question 28: Qnbn disagrees with the introduction of the concept of the AR and the proposed charge associated with it. The CRA itself, in the RIAO proceeding and resulting agreement for the marketplace, did away with the AR and replaced it with the AAR and the RAR. There is no valid point in reconsidering the AR once again.

Question 29: Qnbn agrees with the CRA proposal for the "Documented cost incurred by Ooredoo"

PROVIDED such cost do not exceed the duct blockage fees given in the IAA for clearing blockages in the different types of roads (see IAA schedule 4 clause 7).

Question 30: Qnbn agree with the CRA's proposed approach for the Transportation charge product.

Question 31: Qnbn agree with the CRA's proposed approach for the Miscellaneous Expenses product.

Question 32: Qnbn agree with the CRA's proposed approach for a review clause provided any revision is mutually agreed to before being applicable. Further any review should be on the basis of 24 months as some period of certainty on charges is both required and beneficial.

Given that the proposed charges are proposed for 2018 and onwards Qnbn looks forward to receipt of a final disposition of this consultation in the next several weeks or some form of Interim Order as to retroactive application.

Yours Sincerely,

Philip Brazeau
Head of Regulatory
Qatar National Broadband Network

Vodafone Qatar P.Q.S.C. submission to the Communications Regulatory Authority's consultation document

"Setting wholesale charges for the years 2018-2020" issued 27 September 2017

12 November 2017

Non-Confidential Version

Confidential information has been replaced by [✂]

Vodafone Qatar P.Q.S.C

QSTP, Tech 2, Level 2, PO Box 27727, Doha, Qatar

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Introduction and executive summary

1. Vodafone Qatar P.Q.S.C. ("**Vodafone Qatar**") welcomes the opportunity to respond to the Communications Regulatory Authority ("**CRA**") consultation document titled "Setting the Wholesale Charges for the years 2018-2020" ("**CD**") issued on 27 September 2017.

   Vodafone Qatar fully supports the CRA's vision and mandate to ensure that Qatar avails of world class high quality telecommunications services at reasonable prices so that the telecommunications sector can play fully its role to support the economic and social development of the country. However, we are concerned with the proposals of the CRA which do not go in the right direction and conflict with the overarching duties of the CRA as encapsulated in Article 2 the Telecommunications Law No 34 of 2006 (the "**Telecommunications Law**") and Article 4 of the the Emiri Resolution No 42 of 2014 (the "**Emiri Resolution**"). We urge the CRA to back the industry and create a strong platform for growth and investment in both mobile and fixed. This is in the interests of consumers.

2. The CRA's proposals will have a significant impact on the sector. Overall we estimate that if implemented the proposals relating to mobile will lead to lower revenues of [✂✂✂✂✂✂][✂✂✂✂✂✂][✂✂✂✂✂✂][✂✂✂✂✂✂][✂✂✂✂✂✂] for Vodafone Qatar alone over the price control period, this is represent [✂✂✂✂✂✂]of our annual revenues.

3. Competition in mobile has delivered good outcomes for the country and at time where gains it need to be consolidated, the CRA is proposing drastic cut to MTRs (-80% in three years) which will lead to further downward pressure on mobile revenues. Proposed MTRs will not allow Vodafone Qatar to recover its cost and will be completely out of step with benchmarks.

4. Further, regulating international inbound calls at local MTRs would be against the national interest of Qatar with a transfer of economic surplus from domestic operators to foreign operators with no benefits to consumers in Qatar. The CRA should instead support the industry and refrain from any regulatory intervention for international inbound calls.

5. In summary, the CRA's proposals, as they relate to mobile, send the wrong signal to investors and the mobile sector which is characterised by:

   - flat underlying revenue growth;
   - difficult geopolitical and macroeconomic environment negatively impacting growth opportunities and revenues such as roaming; and
   - the industry having to incur additional cost and face significant additional operational complexities as a result of the external environment.

At the same time, a new wave of investment in 5G is expected by mobile operators. Vodafone Qatar, despite being a lean and efficient operation, has not been able to make a positive profit since its market entry and its EBITDA margin has varied between 12% and 26%, not an evidence of super-normal profits. We continue to post net losses and mobile regulation will further depress overall industry revenues, a key indicator affecting share prices, company valuation and credit ratings.

6. In terms of market outcomes, the own benchmarking of the CRA[1] shows that mobile markets in Qatar are delivering strong outcomes for consumers with prices comparing favourably with its peers in the region and well with OECD benchmarks. Hence, we urge the CRA to articulate the market outcomes it is seeking to achieve through its proposals.

7. Further, as we have explained in our submission dated 25 May 2017, there are structural changes in the industry (and notably the exponential growth of data traffic) which give rise to real challenges to determine the appropriate allocation of cost between voice and data and hence the cost of termination. This uncertainty further justifies the need for caution to inform the CRA's judgement in setting MTRs.

8. Turning to fixed, access to bottleneck infrastructure remain an outstanding issue 11 years after the issuance of the Telecommunications Law with no wholesale regime in place and no Fixed Number Portability ("**FNP**"). Ooredoo's behaviour amounts to clear abuse of dominant position and coupled with the absence of effective regulatory intervention by the CRA it is continuing to deprive Vodafone Qatar of the opportunity to compete on a level playing field and to invest efficiently. Enforcing access to duct managed by Ooredoo and effective regulation (e.g. "FNP" and retail regulation) should be a key priority of the CRA and we are concerned that this appears deprioritised with no tangible progress in the last 18 months.

9. We are therefore asking the CRA to:

- Reconsider its proposals on MTRs and propose reasonable reduction, if any;
- Avoid value transfer to foreign operators by refraining from regulating international inbound calls; and
- Create a platform for effective competition and investment in fixed by taking appropriate enforcement actions against Ooredoo.

10. Our position on other matters being consulted upon is set out in the reminder of this document.

[1] CRA, Qatar Telecom Pricing 2016 – International Benchmarking Report, comparing prices in Qatar with other GCC countries, released July 2017.

Vodafone Qatar P.Q.S.C

QSTP, Tech 2, Level 2, PO Box 27727, Doha, Qatar

Question 1 Do stakeholders agree with the CRA's view and methodology for cost estimation?

Vodafone Qatar supports the use HCA/FDC for the purpose of estimating cost and the use of Ooredoo's Regulatory Accounts ("**RAS**") where appropriately audited. In that regards, we note with some concerns that many years after the introduction of the RAS, the RAS does not enable the CRA to have a clear view of wholesale cost and the cost of leased lines. We recommend that this be looked at closely by the auditors and the CRA. Vodafone Qatar costing information should be used in parallel.

11. The CRA's approach to forecasting appears reasonable although we note that the mixing of network cost derived based on a specific allocation key with forecast of traffic from different sources may lead to inconsistent unit cost results.

12. One-time fee can constitute barriers to entry and are difficult to estimate from regulatory accounts. Hence, we recommend consideration of bottom-up level models for those wholesale charges.

Question 2 Do stakeholders agree with the CRA's view and implementation of the PT test, i.e. having a threshold of 20%?

13. Vodafone Qatar has no objection to the use of the Proportionality Test ("**PT**") and the threshold of 20%.

Question 3 Do stakeholders agree with the CRA's view and implementation of the PMS test?

14. In principle Vodafone Qatar has no objection when the Price Margin Squeeze ("**PMS**") Test although its applicability, parameter values and methodology are unclear in so far as only a "generic form" is provided. Vodafone Qatar would appreciate clarity on the circumstances in which it is being applied (e.g. as part of the tariff approval process) and further details on the test and its relevant parameters.

Question 4 Do stakeholders agree with the timeframe defined by the CRA?

15. As we have previously explained, Vodafone Qatar supports the use of a three years period for price control. The option to review charges during the price control period should be limited to material changes only.

Question 5 Do stakeholders agree with the overall methodological approach defined in this section?

16. The CRA proposes to translate directly into wholesale charges costs which have been estimated based on Ooredoo's and/or Vodafone Qatar's cost information and which pass both the PT and PMS tests. It does so using a glide path approach whereby at the end of the glide path the wholesale charges equal the forecasted cost. If the tests are not passed, the charges have to be adjusted so that they pass the tests.

17. Vodafone Qatar does not agree to this mechanistic approach to rate setting which is inconsistent with the duties of the CRA. There are inherent tensions in setting wholesale charges and we are concerned with the approach of the CRA which consists of seeking to set wholesale charges based on cost in a mechanistic fashion by invoking only Article 29 of the Telecommunications Law. The CRA must recognise and take into account the overarching objectives placed on it in the Telecommunications Law and the Emiri Resolution and articulate how its proposals contribute to achieving those objectives. Article 2 of the Telecommunications Law says that the regulation of the sector shall achieve the following objectives:

> "1. promoting the telecommunications sector in order to consolidate national, social and economic development;
> 2. enhancing the telecommunications sector's performance in the State of Qatar through encouraging competition and fostering use of telecommunications services;
> 3. encouraging the introduction of advanced and innovative information and telecommunications technologies to meet the needs of customers and the public;
> 4. increasing customers' benefits and safeguarding their interests;
> 5. encouraging sustainable investment in the telecommunications sector"

18. Further, Article 4 of the Emiri Resolution requires the CRA to:

> "2. Provide the legal, transparent, organizational and fair environment to construct a competitive, innovative and investment attractive sector.
> 3. Encourage competition, prevent or limit non-competitive practices, prevent the misuse of any person or entity to his sovereign status in the market and take the necessary procedures in this regard.
> 4. Protect the rights and interests of the public and service providers in the market, enhance the transparency and work to render advanced and innovated services having high quality and for reasonable prices to meet the requirements of the public."

19. In Vodafone Qatar view and as we elaborate in the "Introduction and Summary" section and below (see in particular response to Questions 11 and 13), the CRA's proposals in mobile (cut of MTRs by of 80% in three years and regulation of international in-bound) go in the wrong direction and do not support the development and growth of the mobile industry.

20. The market dynamics and situation in fixed are completely different with access to bottlenecks, such as duct, still a distant reality. We believe that for fixed bottleneck close alignment of rates with efficient cost is the correct approach as this will foster competition in downstream markets and bring prices to more appropriate level while avoiding inefficient duplication of infrastructure. As a national asset built under monopoly conditions and largely depreciated, effective access and efficient use of duct managed by Ooredoo is critical to level the playing field and enable competing investment.

Question 6 Do stakeholders agree with the proposed use of benchmarks?

21. Vodafone Qatar supports the use of relevant benchmarks as a cross-check. This is important to ensure that charges remain within reasonable bounds. Benchmark can also be used where information is not reliable or available.

Question 7 Do stakeholders agree with the application of glide paths and the methodology outlined in this section?

22. Vodafone Qatar supports the use of glide paths to bring wholesale charges to the desired level.

Question 8 Do stakeholders agree with the use of zero rating for interconnection rates? If yes, for which services do stakeholders believe zero rating should be implemented?

23. Vodafone Qatar does not support the use of "zero rating" or "bill-and-keep" for interconnection agreements. To Vodafone Qatar' knowledge bill-and-keep is in place in a handful of countries. We note in passing that bill and keep will be illegal in Europe based on the draft European Electronic Communications Code. We also would like to clarify that traffic between Vodafone Qatar and Ooredoo are not balanced.

24. Should the CRA be considering changing the established interconnection arrangements in place, we recommend that in keeping with good regulatory practice, the CRA conducts a detailed analysis of bill-and-keep including a review of international experience of the benefits relative to the status quo; effect on the promotion of economic efficiency and cost recovery. It would also be necessary for the CRA to assess whether such change would be consistent with the Applicable Regulatory Framework ("**ARF**") and the steps required to implement bill-and-keep, including consultations with the industry.

Question 9 Do stakeholders see other alternative approaches? This might be e.g. port charges for IC products or up-front lump sum payments. If yes, for which services do stakeholders believe such alternative approaches should be implemented?

25. No, Vodafone Qatar does not think that alternative approaches for interconnection should be considered for the coming price control period.

Question 10 Do stakeholders agree with the CRA's proposed Wholesale Charge for the Fixed Call Termination Service to Geographic Numbers? Which of the Options proposed by the CRA do you suggest and why?

26. The CRA proposed the following four options for FTRs (page 25 of the CD):

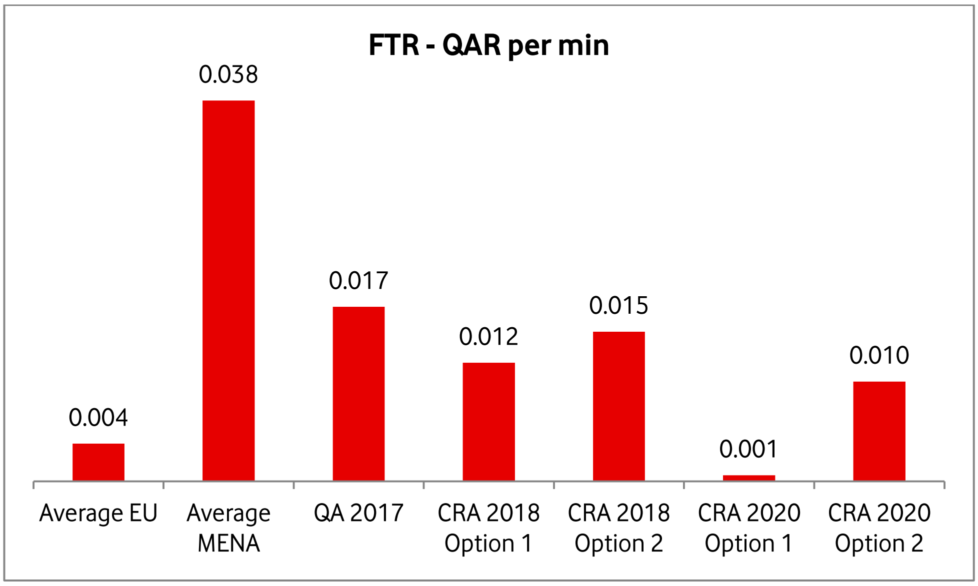
		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale charges, which pass the PT (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0119	0.0063	0.0006
Change to previous year			-32%	-47%	-90%
Option 2 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0150	0.0125	0.0100
Change to previous year			-14%	-17%	-20%
Option 3 – Fixed and Mobile Blended Wholesale Charges (n.b. susceptible of changes according to the level of the MTR)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	not applicable	0.0549	0.0353	0.0158
Change to previous year		not applicable	not applicable	not applicable	not applicable
Option 4 – Zero Rating					
Fixed Call Termination Service to Geographic Numbers	QAR/min	not applicable	0.0000	0.0000	0.0000
Change to previous year		not applicable	not applicable	not applicable	not applicable

27. As per our response to Question 8, we do not support Option 4 - Bill and keep.

28. We also do not support Option 3, a blended termination rate for fixed and mobile. Fixed and mobile termination costs are different and translate into higher termination rates to mobile than to fixed. As confirmed by the CRA's benchmarks the EU average for MTRs is about 12 times greater than the EU average for FTRs (QAR 0.004 vs 0.044 per min). A blended charge will under-compensate operators for terminating traffic on mobile and over-compensate operators for terminating traffic on fixed networks. We also note that termination on mobile and termination on fixed are in different economic markets. For those reasons, Vodafone Qatar considers that it is more appropriate to keep the pricing for services in these markets distinct.

29. According to the CRA the PT is not passed with "network costs associated to two termination charges are 452% above those allocated to the on-net call" (CD, para 123, page 21). This is a very substantial difference which should be investigated and explained by the CRA. At present, it either implies that the network costs allocated to termination are wrong or the network costs allocated to on-net calls are or both. The routing factor table and unit cost per network elements for each call scenario available in Ooredoo's RAS should enable the CRA to identify the cause of the differences as the set-up for interconnection alone is unlikely to explain such gap.

30. We also note that Option 1 would lead to a drop of 97% of FTR in three years. Such a drastic cut is unrealistic and confirms the need for the CRA to further investigate the issues highlighted above regarding the PT and to conduct an analysis network element by network element. Further the end point would be completely out of step with benchmarks as illustrated in the below table:



Source: Vodafone Qatar analysis based on CRA data.

Under Option 1, the FTR would be 6 times lower than the EU average of FTR. While FTR may continue to decline in the coming years, they would need to drop in the EU by 85% in the coming years. Such drop is unlikely given that most countries have now transitioned to pure LRIC.

31. The CRA makes a number of statements to justify why FTRs in Qatar can be expected to be higher than in the EU but lower than in other MENA and African countries. The main argument of the CRA regarding cost structure is based on population density. In our view this is misplaced because:
    - Population density is relevant for the access network but this is not included in the FTR.
    - The main cost driver would be customers (or traffic) per exchange. However it is not clear that Qatar would have more customers or traffic per exchange.
    - Labour and land cost are a significant component and Qatar face higher cost than other non-oil abundant MENA countries and African countries.
    - The benchmark of the CRA does not show strong correlation between population density and FTR.

32. Overall and pending further clarifications from the CRA to explain the gap between Option 1 and Option 2 which should be much narrower it would appear that the rates under Option 2 are reasonable when compared to benchmarks.

Question 11 Do stakeholders agree with the CRA's proposed Wholesale Charge for the Mobile Call and Video-Call Termination Service? Which of the Option proposed by the CRA do you suggest and why?

33. The CRA proposes three options for MTRs as reproduced below (CD, para 148, page 29). Vodafone Qatar does not support Options 2 and 3 for the reasons we set out in our responses to Questions 8 and 10 above.

		Approved Charge	Charges for consultation		
QAR/min		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Mobile Call and Video-Call Termination Service	QAR/min	0.0762	0.0561	0.0360	0.0159
Change to previous year			-26%	-36%	-56%
Option 2 – Fixed and Mobile Blended Wholesale Charges (n.b. susceptible of changes according to the level of the FTR)					
Mobile Call and Video-Call Termination Service	QAR/min	not applicable	0.0549	0.0353	0.0158
Change to previous year		not applicable	not applicable	not applicable	not applicable
Option 3 – Zero Rating					
Mobile Call and Video-Call Termination Service	QAR/min	not applicable	0.0000	0.0000	0.0000
Change to previous year		not applicable	not applicable	not applicable	not applicable

34. Under Option 1, the CRA is proposing to lower MTRs by 80% in three years. Vodafone Qatar disagrees with this proposal. While Vodafone Qatar acknowledges that there may be some room for MTRs to decline when compared to benchmarks, reductions, if any, should be gradual to an acceptable level and not detrimental to the overall sector growth.

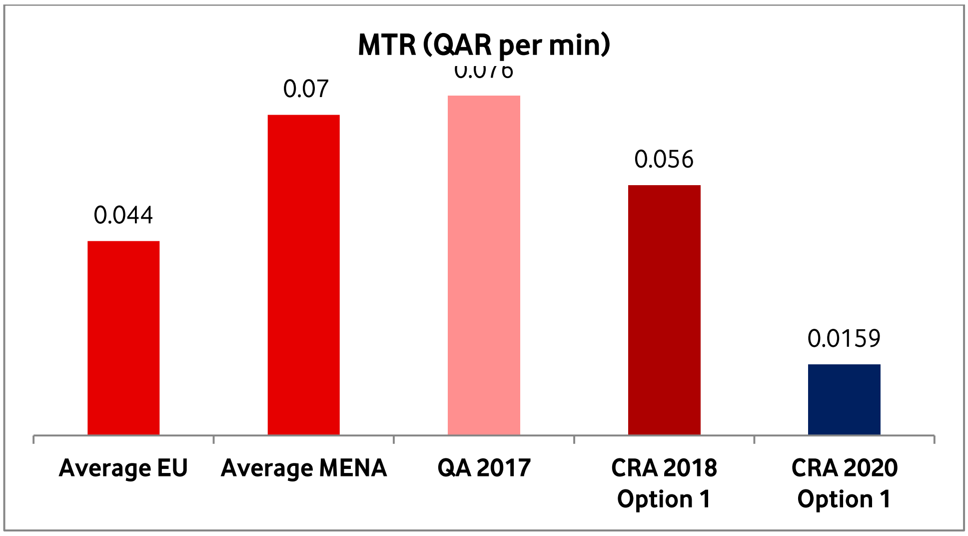
35. Vodafone Qatar's considers that the CRA's proposed drastic cut is neither reasonable nor justified. It the wrong signal to investors and the mobile sector characterised by flat underlying revenue growth, a difficult geopolitical and macroeconomic environment which is negatively impacting growth opportunities and revenues such as roaming and as a result of which the industry has to incur additional costs and face significant additional operational complexities well known to the CRA. At the same time, a new wave of investment in 5G is expected by mobile operators. Vodafone Qatar, despite being a lean and efficient operation, has not be able to make a positive profits since its market entry and its EBITDA margin has varied between 12% and 26%, hardly an evidence of super-normal profit. We continue to post net losses. Lowering MTRs will further depressed overall industry revenues which is a key indicator affecting share prices and credit ratings. It could lead to increase in financing cost which in turn will need to be passed on to consumers.

36. Further in terms of market outcomes, the own benchmarking of the CRA[2] shows that mobile markets in Qatar are delivering strong outcomes for consumers with prices comparing favourably with its peers in the region and well with OECD benchmarks. The Report also shows that Vodafone Qatar is consistently cheaper than Ooredoo. Competition in mobile in Qatar has

[2] CRA, Qatar Telecom Pricing 2016 – International Benchmarking Report, comparing prices in Qatar with other GCC countries, released July 2017.

produced good results and continues to spur innovation and drive operators to introduce new technologies rapidly and on a wide scale: Vodafone Qatar has a wide coverage of 4G and 4G +. It is not clear what the CRA intends to achieve through those cut.

37. Further and as can be seen from the below graph the proposals will be completely out of step with benchmarks. If implemented, the CRA proposals will lead to MTR half of the European average and about a quarter of the MENA average.



Source: Vodafone Qatar analysis based on CRA data.

38. Further it should be noted that no significant downward trend in MTRs is expected in Europe where pure LRIC has been in place for a number of years. This is confirmed by key European countries where glide paths are in place and/or proposed for the next three years (see below table). For example in the UK, where MTRs are among the lowest in Europe, there are expected to remain flat in the next three years. France has proposed annual decreases of 3%.

39. If implemented, the CRA's proposal will led to MTRs in Qatar being 36% lower than the UK where the pure LRIC cost standard apply, i.e. where the scope of relevant cost is significantly narrower, and 50% lower than in Bahrain, where according to the CRA's logic, MTRs should be lower than in Qatar.

		Current	Glide path		
Country	**Currency**	**2017**	**2018**	**2019**	**2020**
Germany	€ cents	1.1	1.07	0.95	n/a
	Δ		-3%	-11%	
Greece	€ cents	0.982	0.958	0.946	n/a
	Δ		-2%	-1%	
UK (proposed)	Pence	0.495	0.468	0.449	0.433
	Δ		-5%	-4%	-4%
Spain (proposed)	€ cents	1.09	0.65	0.65	0.65
	Δ		-40%	0%	
France	€ cents	0.74	0.72	0.7	0.68
	Δ		-3%	-3%	-3%
Bahrain (no review planned)	fils	2.4	2.4	2.4	2.4
	Δ		0%	0%	0%

Comment: for the UK, rates are before inflation meaning that MTR will remain flat for the period

Source: Vodafone Qatar

40. In our 25 May 2017 submission, we also explained at length that the structural changes observed in the industry, and notably the exponential growth of data traffic relative to voice and our revenue mix which remain heavily dependent on voice revenue, called for a cautionary approach by the CRA in setting MTRs. We demonstrated that these structural changes give rise to a real challenge to determine the appropriate allocation of cost between voice and data with different allocation bases (traffic, revenue or usage) producing markedly different results. Our comments have been ignored by the CRA notwithstanding their bearing on the setting of reasonable MTRs. This is a significant shortfall of the CRA's analysis.

41. We also transparently submitted our cost and explained in details the basis for the range of estimates we put forward. That the CRA dismissed them as not "reliable" without even seeking to engage with Vodafone Qatar in the 4 months between the submission date and the issuance of the CD is a cause of serious concern. Our cost submission is based on data from our financial statements and our Long Range Plan. As explained in the absence of regulatory financial accounting systems and procedures, there are limitations to our estimates as they are a reflection of our cost. We have undertaken further analysis and identified that irrelevant cost were included in the "Other Opex category". The amended results are [✂✂✂✂✂✂] than our May 2017 submission and are summarised in the table below (further details can be found in Annex).

[✂✂✂✂✂✂]
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42. For ease of comparison, the below table shows our cost based estimates using the 1 MB = 1 min conversion ratio. Leaving aside the question of appropriate conversion factors, it shows that the proposal of the CRA would lead to MTRs half of our cost by 2020 (0.0159 vs [✂✂✂✂✂]).

[✂✂✂✂✂✂]
[✂✂✂✂✂✂]
[✂✂✂✂✂✂]

43. As the CRA would have noted from our files, the main reasons why the result differ between this analysis and our submission on product level revenue and cost dated 15 January 2017 relate to different conversion factors used and the calculation of the cost of capital. For the present exercise the cost of capital has been calculated by applying the current WACC to our capital employed as per the standard approach in regulatory costing.

44. Turning to the CRA's comments as to why MTRs in Qatar may be in the lower range of international benchmarks, in addition to our comments on FTR (e.g. on land and labour cost) it should be noted that having largely unpopulated areas which are covered add to the cost and that having no high points does not help as a mast on top of a hill can cover much more than a mast on the top of a building (in Malta the hilliness of the country was used to explain why it had the lowest MTR in Europe).

45. For the reasons above, we do not support the CRA's proposal to drop MTR by 80% in a three year time horizon as this would result in MTRs falling below our cost and further depressed industry revenues during a challenging macro-economic and political context. We urge the CRA to rethink its proposal in light of the current environment and industry trends and to explain the desired market outcomes it seeks to achieve with the proposed cut. We would also welcome clarification from the CRA as to how the proposal supports the furthering of the duties of the CRA as they relate in particular to the promotion of the sector and investment. In our view the ARF gives the CRA ample leeway to exercise its judgment in setting MTRs to an acceptable level balancing the different objectives of the CRA, especially when considering the effect of various allocation bases on MTRs.

Question 12 Do stakeholders agree with the CRA's proposed approach for setting the "Call Termination Service to Toll-Free Numbers (reverse charge) for fixed and mobile"?

46. Vodafone Qatar agrees.

Question 13 The CRA is interested in hearing a justification from the SPs on the (non) regulation of Call Termination Services to Numbers for Inbound International calls. This argumentation should include clear figures in terms of volumes, revenues and cost.

47. Vodafone Qatar does not support the regulation of termination for internationally originated calls at the domestic MTRs. We do not understand why the CRA is raising this question as it would be against the national interest to regulate MTRs for internationally originated calls at domestic MTRs. It would be particularly ill-advised to proceed with regulating international inbound termination rates as this would be against the national interest. It would hurt domestic operators without providing benefits to consumers in Qatar as the economic surplus generated by domestic operators on international inbound will benefit foreign operators and lead to a lower influx of foreign currency. As such it would be against the duties of the CRA set out in Article 2.1 of the Telecommunications Law to "promot[e] the telecommunications sector in order to consolidate national, social and economic development".

48. As the CRA would know the rates for terminating traffic in Qatar which are originated overseas are at present [✂✂✂✂✂✂][✂✂✂✂✂✂][✂✂✂✂✂✂][✂✂✂✂✂✂].

49. For Qatari consumers to benefit from the regulation of inbound international calls at the local MTR level would require two conditions to be met. First, the far end operator will need to pass on the full reduction in termination rate at the retail level leading to lower price to call Qatar and an increase of calls, the benefit to consumers in Qatar being the additional calls received. This is highly unlikely as pricing for international calls tend to be by zone (e.g. similar price across GCC countries) and the extent of pass through will depend of competition in the country of origin of the call. Further the limited volume of calls to Qatar is unlikely to lead to differentiated pricing. Overall, any potential benefit would be trivial and need to be balanced against cost as foreign operators will benefit from lower termination rates by retaining the savings while domestic operators will suffer from lower income from international inbound calls.

50. Second, a lower rate for international in-bound calls to Qatar will need to translate into a corresponding decrease for the termination rate for calls destined outside of Qatar. The benefit to consumers will be lower international calls. However, regulation will constrain our negotiating hand and hence lower MTR for international in-bound calls is unlikely to result in a corresponding decrease in the rate applied by the far end operator.

51. Rates are typically not reciprocal (except within the GCC). For example:
    - [✂✂✂✂✂✂✂][✂✂✂✂✂✂✂]
    - [✂✂✂✂✂✂✂][✂✂✂✂✂✂✂]

52. Given the population composition of the country, Qatar is a net sender of international traffic and for key destinations by a very significant amount (e.g. India, Pakistan, Egypt, Bangladesh, Philippines where the termination for the originating country is lower than the termination rate to Qatar). Hence, for our high volume destinations we regularly negotiate with far end operators to seek competitive rates in order to respond to competition on international calls and with OTT but the question of reciprocity does not come up in negotiations.

53. The statement made by the CRA according to which the current situation with international termination lead to higher cost of international calls for retail customers in Qatar is therefore incorrect.

54. We also note that in a large number of countries in Europe (such as Italy, Greece, the Czech Republic, Spain, Malta, Portugal) there is no regulation of rate for international inbound traffic originated outside the European Economic Area in order to further the national interest and protect domestic operators.

55. To conclude, Vodafone Qatar considers that the regulation of international inbound rate at the local MTR level would be detrimental to the country and the operators' interests with no tangible benefits to consumers. Should the CRA be minded to consider regulating international inbound calls, we urge the CRA to carry out first a detailed analysis of the cost and benefits of regulating international inbound calls; explain how it will benefit the country and how it will satisfy its duties.

Question 14 Do stakeholders agree to set the charge for the "Termination Emergency Services" at the same level of the FTR?

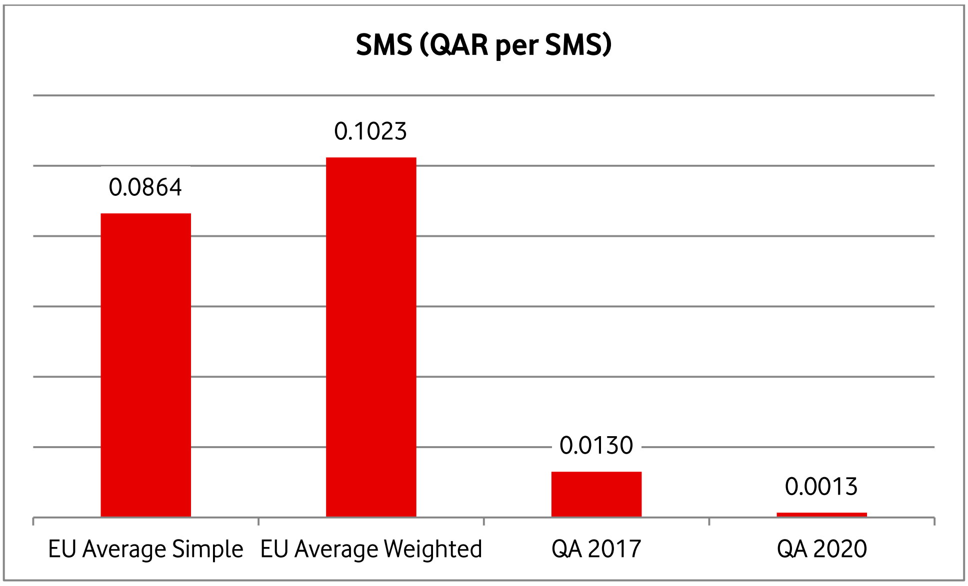
56. In so far as the underlying costs of termination for emergency services are comparable to the cost of FTR, Vodafone Qatar has no objection to the proposal of the CRA to apply the same rate.

Question 15 Do stakeholders agree with the CRA's proposed Wholesale Charge for the SMS Termination?

57. The CRA proposes the below glide path for SMS with an overall drop of 90% in three years (CD, page 34, para 167).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
SMS Termination	QAR/SMS	0.0130	0.0091	0.0052	0.0013
Change to previous year			-30%	-43%	-75%

58. While SMS traffic is declining at fast pace driven by OTT alternatives, Vodafone Qatar does not support such a drastic cut. They would set Qatar further out of line with benchmarks.



Source BEREC, Termination rates at European level January 2017

Question 16 Do stakeholders agree with the CRA's proposed Wholesale Charge for the MMS Termination (Picture and Video)?

59. The CRA proposes the below glide path for MMS with an overall drop of 95% in three years (CD, page 36, para. 177).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
MMS Termination (Picture and Video)	QAR/MMS	0.4300	0.2936	0.1572	0.0208
Change to previous year			-32%	-46%	-87%

60. While MMS traffic is largely immaterial, Vodafone Qatar does not support such drastic cut.

Question 17 Do stakeholders agree with the above Option for the Outgoing International Call Conveyance?

61. Vodafone Qatar agrees with the CRA's proposal.

Question 18 Do stakeholders agree with the CRA's proposed Wholesale Charge for Interconnection Links?

62. The proposals of the CRA for interconnection links are reproduced below (CD, page 39, para 201). No changes are proposed for one-off fees. The main component of the two-part tariff is the distance element which the CRA is proposing to reduce by 50% over three years.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
E1 (distance independent)	QAR/E1/month	326	230	133	37
Change to previous year			-30%	-42%	-72%
Km (distance dependent)	QAR/E1/km/month	64	54	43	32
Change to previous year			-17%	-20%	-25%
Connection Fee	QAR/link	5,000	5,000	5,000	5,000
Change to previous year			0%	0%	0%
Disconnection/reconfiguration Fee	QAR/link	950	950	950	950
Change to previous year			0%	0%	0%

63. Vodafone Qatar supports the proposals of the CRA for this product for which there is limited scope for competitive pressure and is the straight input cost for competitors to Ooredoo. We note that one-off charges do not appear to bear any relation with underlying cost: for an STM1 the connection charge amount to QAR 315.000.

Question 19 Do stakeholders agree with the CRA's proposed Wholesale Charge for recurrent charges of SDH Transmission Links, i.e. to continue to use the Benchmark?

64. The CRA proposes to continue to use the benchmarking approach and dataset used in the previous proceedings with a forecast of 6.6% annual decline in cost. Vodafone Qatar notes with some concern that the RAS of Ooredoo is still not reliable enough for the CRA to derive robust cost estimate of transmission and leased lines. We are also surprised to note that the CRA has not been able to update its benchmark. Overall the reductions appear on the low side especially when compared the X factor set by Ofcom for leased lines. [3]

[3] See https://www.ofcom.org.uk/__data/assets/pdf_file/0015/72303/bcmr-final-statement-volume-one.pdf.

Question 20 Are stakeholders interested in Transmission Links based on Ethernet Technology? Do you find the potential charges calculated by the CRA acceptable? Please provide cost information to calculate a cost oriented charge for this product.

65. Vodafone Qatar supports the introduction of Ethernet based transmission links. We refer the CRA to our detailed submission dated 15 May 2016.

66. Regarding the pricing approach of the CRA it is not clear why the cost of a completely different and higher cost technology (SDH), should be used to calculate the cost of Ethernet based transmission. Based on the RAS, the CRA should be able to build the cost stack of Ethernet based transmission. It should also have visibility of the cost stack when approving retail price changes for Ethernet based retail services.

Question 21 Do stakeholders agree with the CRA's proposed Wholesale Charge for the Transmission Links connection fees?

67. Connection fees should be looked at as and when the service description is modified to ensure that they do not create a barrier to entry.

Question 22 Do stakeholders agree with the CRA's proposed Wholesale Charge for the Duct Access product?

68. Vodafone Qatar would like to emphasise that it is not in a position to provide practical and meaningful Qatar-specific contribution on duct access, due to the lack of access to duct which prevails because of Ooredoo's continuous refusal to comply the ARF and the various Orders issued by the CRA.

69. Vodafone Qatar's last attempt to activate the reference offer as ordered by the CRA goes back to a year ago. Ooredoo's behaviour amounts to clear abuses of its dominant position which coupled with the absence of effective regulatory intervention by the CRA is continuing to deprive Vodafone Qatar of the opportunity to compete with on a level playing field and to invest efficiently. Enforcing access to duct managed by Ooredoo should be a key priority of the CRA and we are concerned that this appears deprioritised with no tangible progress in the last 18 months.

70. Proposed charges for monthly rental by the CRA are clearly out of steps with benchmarks: Ooredoo's wholesale charges are 2 to 5 times more expensive that Spain and Portugal, two best-in-class countries in Europe for duct access where Vodafone has deployed extensively using ducts. The annual trend proposed (-2%) does not seem correct: year on year one would expect a steeper decline given the capital intensity of duct. Through the normal depreciation process the capital employed and return on capital should decline. In turn, this should lead to a reduction in the annual cost of a larger magnitude than the proposed 2%.

Question 23 Stakeholders are invited to provide their view on alternative mechanism for charging Duct Access, with particular reference to the introduction of lump-sums upfront to the commitment for buying a certain maximum amount of volume

71. Vodafone Qatar does not object to lump-sums payment but these should be designed very carefully to ensure that they are not discriminatory and do not create barriers to entry. Link to it is the issue of one-off charges. However we note that at this point there is no information readily available on duct controlled by Ooredoo or effective access to those ducts.

Question 24 Do stakeholders agree with the CRA's proposed Wholesale Charge for "Facility Hosting"?

72. Vodafone Qatar is not in a position to comment on this charge given the information provided in the CD.

Question 25 Do stakeholders agree with the CRA's proposed cost per hour applicable to "Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products?" Stakeholders are explicitly invited to submit evidence of the cost per hour applicable for these products. Evidence could include invoices paid to external companies for comparable services or salaries of the employees involved in comparable activities.

73. Vodafone Qatar supports the use of bottom-up modelling for supervision charges which should be capped on a per km basis to provide the right incentive for Ooredoo to be efficient and avoid penalisation of access seekers due to the lack of accurate records/tools. One-offs charges constitute a significant barrier to entry for duct access which is magnified in the context of Ooredoo where there is no on-line system for access request with up-to-date information on duct locations and availability. The availability of such tool has proven to be a key driver for the uptake of duct access in Spain and Portugal. It has enable Vodafone to deploy fibre in an efficient way. Normally site survey should be optional and considered only where the access seeker finds that the status on the ground does not match the database.

74. Regarding supervision consisting of a dedicated Ooredoo resource attending all the work), Vodafone Qatar does not consider it to be necessary for all installation activities. Instead some random visit of say 5% of installation work and after work completion could be undertaken.

Question 26 Do stakeholders agree with the CRA's proposed Wholesale Charge for "Access Area Request", i.e. using the man-hour cost as per CRA's calculation and a charge for an average number of duct segments?

75. This charge is yet another barrier to entry and a discriminatory charges caused by Ooredoo's lack of accurate records regarding its duct infrastructure. Accordingly, this charge should reflect efficient cost and not be based on the time it takes Ooredoo to update its records.

76. Our key proposal here would be that for all processing activities (e.g. preparation and sending GIS information, maps and network data including XML files and shape files), there should be a

software management tool similar to the CRA web tool from Ericson to automate all back-office activities an online tool. This would be a win-win for all stakeholders:

- For Ooredoo: automated tool replacing the database and manual processes will lead to cost savings, efficient processes and secure accurate tracking for all of Ooredoo's assets and changes (e.g. utilised space, Vodafone Qatar / Ooredoo cables).
- For access seekers: faster request processing and cost savings, enabling faster roll-out.
- For the CRA: tool will support CRA's objective to foster efficient investment and will provide full visibility on requests status. Tool could be used when/if conflicts arise between Ooredoo and access seekers.

77. Having an on-line tool is an essential element to level the playing field. To save cost, Ooredoo could use the tool already purchased by the CRA.

Question 27 Do stakeholders agree with the CRA's proposed Wholesale Charges for "Route Access Request", i.e. using the man-hour cost as per CRA's calculation and a charge for an average number of duct segments?

78. See Vodafone Qatar's response to Questions 25 and 26.

Question 28 Do stakeholders agree with the CRA's proposed Wholesale Charges for "Access Request", i.e. calculation of the AR as a sum of AAR and RAR, using the man-hour cost as per CRA's calculation and a charge for an average number of duct segments?

79. Vodafone Qatar strongly objects to this charge. Vodafone Qatar cannot understand why the CRA is proposing to re-introduce a charge which the CRA itself has removed as part of the RIAO proceedings in 2015 and 2016 after various consultation rounds.

Question 29 Do stakeholders agree with the CRA's proposed approach for the Successful and Unsuccessful Blockage Clearance products?

80. Vodafone Qatar has no objection to a time and material approach with documented cost, although we are concerned that they may not be reflective of an efficient operation and hence could lead to inefficiencies being passed on to competitors by Ooredoo.

Question 30 Do stakeholders agree with the CRA's proposed approach for Transportation charge product?

81. Vodafone Qatar does not have strong objection with this charge.

Question 31 Do stakeholders agree with the CRA's proposed approach for the Miscellaneous Expenses product?

82. Vodafone Qatar has no objection to a time and material approach with documented cost, although we are concerned that they may not be reflective of an efficient operation and hence could lead to inefficiencies being passed on to competitors by Ooredoo.

Question 32 Do stakeholders agree with the CRA's proposed review clause?

83. Vodafone Qatar agrees that a review clause could be warranted to accommodate material changes. However this should be on an exceptional basis and should not constitute a back door to permanent renegotiation of charges.

Annex A – Revised cost estimates

Current	0.0762								
Unit cost / Scenario	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**FY17 $cpm**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**
Conversion factor	*MTR*	*MTR*	*MTR*	*MTR*		% change			
MB -> Min: 1	[redacted]								
MB -> Min: 2	[redacted]								
MB -> Min: 4	[redacted]								
Revenue	[redacted]								
60% to voice ST	[redacted]								
40% to voice	[redacted]								
20% to voice LT	[redacted]								
Usage based	[redacted]								
YT - MB-> Min: 0.25	[redacted]								
FB - MB-> Min: 0.5	[redacted]								
ItuneHD - MB-> Min: 0.03	[redacted]								
ItuneHD - MB-> Min: 0.08	[redacted]								

Cost allocated / Scenario	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**		**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**
Conversion factor	*MTR*	*MTR*	*MTR*	*MTR*		% change			
MB -> Min: 1	[redacted]								
MB -> Min: 2	[redacted]								
MB -> Min: 4	[redacted]								
Revenue	[redacted]								
60% to voice ST	[redacted]								
40% to voice	[redacted]								
20% to voice LT	[redacted]								
Usage based	[redacted]								
YT - MB-> Min: 0.25	[redacted]								
FB - MB-> Min: 0.5	[redacted]								
ItuneHD - MB-> Min: 0.03	[redacted]								
ItuneHD - MB-> Min: 0.08	[redacted]								

Communications Regulatory Authority
State of Qatar
هيئة تنظيم الاتصالات
دولة قطر

Setting Wholesale Charges for the years 2018-2020

Second Consultation Document and Responses to the First Consultation Document

Deadline to respond is February 3, 2018

Version for ALL

Confidential information has been removed

Confidential to Ooredoo
Confidential to Qnbn
Confidential to Vodafone

CRARAC 2017/12/13-NC
December 13, 2017

Table of Contents

1 Background

1. On May 21, 2015, the CRA approved the Wholesale Charges applicable to the Products included in the Reference Interconnection Offers ("RIO") of Ooredoo Q.S.C. ("Ooredoo") and Vodafone Qatar Q.S.C. ("Vodafone"), in the Reference Transmission Offer ("RTO") of Ooredoo and in the Reference Infrastructure Access Offer for Ducts of Ooredoo ("RIAO" ref. CRA Order 2015/05/21F).
2. On March 28, 2017, the CRA sent to Ooredoo, Qnbn and Vodafone ("Service Providers" or "SPs") a Data Request for costing the Wholesale Products in subject, along with a simplified version of the cost model used by the CRA to perform forecasts and calculations. On April 25, 2017, the CRA held an Industry Meeting to provide the SPs with clarifications on the Data Request.
3. Most of the SPs did not provide the data within the timeline set by the CRA (May 25, 2017). Hence, on June 12, 2017, the CRA sent a letter to the SPs moving the deadline for the issuing of the First Consultation Document to September 15, 2017 (ref. CRA's letter CRA/RAC-E/062/2017).
4. On September 27, 2017, CRA issued the First Consultation Document (First CD) consulting SPs about Wholesale Charges proposed for years 2018, 2019 and 2020.
5. Ooredoo, Qnbn and Vodafone responded to the First CD by the deadline set by the CRA (November 12, 2017). The CRA notes that even if responses given by stakeholders have expressed their disagreement with some of the propositions included by the CRA in the First Consultation Document, they have not provided supporting information nor evidences as requested in the consultation instructions (for instance, no alternative calculations or models have been submitted). This implies that, in the absence of alternative information and/or suggestions, CRA has not been able to evaluate other potential scenarios to revisit initial CRA's position.
6. On December 6, 2017, CRA set the Cost of Capital at 10.45% (ref. CRA Order 2017/12/06).
7. The CRA estimates that the regulated Wholesale Charges result in total domestic wholesale revenues of around QAR 140 million per year[1].

✄ and ✄

Figure 1 National Wholesale Revenues – CRA's estimate based on SPs' data [SP data, CRA calculation]

8. As shown in the Figure above:
    8.1 Mobile Termination revenues account for more than 80% of the total National Wholesale Revenues;
    8.2 Wholesale Revenues for Mobile Termination services between Ooredoo and Vodafone are almost balanced (39% and 44% of total Wholesale Revenues, respectively); and
    8.3 The regulated Wholesale Services represent with QAR 140 million p.a. around 1.4% of the total industry revenues (around QAR 10 billion).
9. Therefore, changes in Wholesale Charges are not expected to affect the overall industry's income, profitability and its investment capacity significantly.

[1] For the Interconnection Traffic Services, revenues have been calculated as volume 2017 forecasted by Ooredoo and Vodafone times the current wholesale charges; for Interconnection Links, Transmission Links and Ducts data have been sourced from Ooredoo's RAS 2015

2 Instructions for responding to this Consultation

2.1 Consultation Procedures

10. In keeping with open and transparent regulatory processes, the CRA herewith consults on the Setting of Wholesale Charges.
11. SPs are invited to provide their views and comments on the consultation questions.
12. To the extent possible, submissions must be supported by relevant evidence.
13. If a Service Provider is in disagreement with the CRA's findings, the Service Provider is requested to provide:
    - 13.1 The reasons for disagreement with the CRA's findings;
    - 13.2 Its alternative suggestion in a clear and concise manner;
    - 13.3 Wholesale Charges proposed according to its alternative methodology;
    - 13.4 The calculations, models or estimations which lead to such Wholesale Charges, in an editable format which allows the CRA to review and validate the formulas (such as Microsoft Excel); and
    - 13.5 The assumptions, relevant justifications and references of all data sources behind any alternative calculations.
14. Comments on the topics already closed by the CRA are welcomed if supported by new and additional arguments and or data.
15. Any submissions received in response to this Consultation Document ("CD") will be carefully considered by the CRA. Nothing included in this CD is final or binding. However, the CRA is under no obligation to adopt or implement any comments or proposals submitted.
16. Comments should be submitted by email to raconsultation@cra.gov.qa, copying fmassone@cra.gov.qa before the date stated on the front cover. The subject reference in the email should be stated as Consultation on "Setting Wholesale Charges".
17. It is not necessary to provide a hard copy in addition to the soft copy sent by email.
18. Deadline for SPs to submit their comment is indicated on the cover page.

2.2 Publication of comments

19. In the interests of transparency and public accountability, the CRA intends to publish the submissions to this consultation on its website at www.cra.qa.
20. All submissions will be processed and treated as non-confidential unless confidential treatment of all or parts of a response has been requested.
21. In order to claim confidentiality for information in submissions that stakeholders regard as business secrets or otherwise confidential, stakeholders must provide a non-confidential version of such documents in which the information considered confidential is blacked out. This "blackened out" portion/s should be contained in square brackets. From the non-confidential version, it has to be clear where information has been deleted. To understand where redactions have been made, stakeholders must add indications such as "business secret", "confidential" or "confidential information".
22. A comprehensive justification must be provided for each and every part of the submission required to be treated as confidential. Furthermore, confidentiality cannot be claimed for the entire or whole sections of the document as it is normally possible to protect confidential information with limited redactions.
23. While the CRA will endeavor to respect the wishes of respondents, in all instances the decision to publish responses in full, in part or not at all remains at the sole discretion of the CRA.

24. By making submissions to the CRA in this consultation, respondents will be deemed to have waived all copyrights that may apply to intellectual property contained therein.

25. For more clarification concerning this consultation, please contact Francesco Massone (fmassone@cra.gov.qa).

3 Legal Basis

26. The following legal provisions, which are not exhaustive, provide the legal basis for the CRA to set the Wholesale Charges:

3.1 Emiri Decision No. (42) of 2014 Establishing the Communications Regulatory Authority

27. Article 4 of the Emiri Decision makes the CRA responsible for regulating the communications information technology and the post sector, as well as access to digital media, with the aim of providing advanced and reliable telecommunication services across the State.

28. Article 4(1) empowers the CRA to set Regulatory frameworks for the communications, information technology, the post sector, and access to digital media, in line with the general policies of the sector and to enable optimum performance.

29. Article 4(2) charges the CRA with actions finalized to encourage competition and prohibit or minimize anti-competitive practices, prevent misuse by any person or entity of its market dominance position, and take all necessary measures to achieve this.

30. Article 4(4) requires the CRA to protect the rights and interests of the public and Service Providers in the market, promote transparency and provide advanced, innovative and quality services at affordable prices to meet the needs of the public.

31. Article 4(6) make the CRA responsible for ensuring interconnection and access for all users by setting conditions for effective interconnection and access.

32. Article 15(2) empowers the CRA to develop appropriate Charge regulations, giving priority to the telecommunications market, or telecommunications services according to market requirements, and determine fees for retail and wholesale services.

3.2 Telecommunication Law 2006 ("Law")

33. Article (19) provides for "… promoting appropriate, effective and low cost interconnection between telecommunications networks …"

34. Article 25 provides that the CRA shall determine the rights and obligations of a Dominant Service Provider which include any requirements relating to the contents and publication of an interconnection reference offer and access agreements.

35. Article 28 states that Dominant Service Providers must submit to the CRA the offers for the Charges, prices and charges of the telecommunications services in the markets where they have been designated as dominant Service Providers and obtain the prior approval for them.

36. Article 29 provides that the Charge for telecommunications services provided by dominant Service Providers must be based on the cost of efficient service provision and the Charge must not contain any excessive charges which result from the dominant position that the Service Provider enjoys. This Article also states that the CRA may issue decisions along with justifications to amend the Charges where it finds that they are not in line with the cost of the service provision, provided that such decision must prescribe the new Charge amount.

3.3 Executive By-Law for the Telecommunications Law 2009 (“By-Law”)

37. Article 6 empowers the CRA to issue legal instruments including Orders for the implementation of the provisions of the By-Law and the Law.

38. Article 50(1) provides that the CRA may require that interconnection or access charges of any Dominant Service Provider be subject to Article (29) of the Law and Articles 56, 57, 58 and 59 of this By-Law.

39. Article 54 of the By-Law prescribes that the CRA shall have the authority to review all Service Provider Charges, including wholesale and retail Charges, and to determine any requirements regarding Charges, their approval and publication, and the CRA may issue regulations or orders to regulate the Charges of Service Providers.

40. Article 56 requires that Charges that are subject to filing with and approval by the CRA shall enter into force only after they have been approved by a decision from the CRA.

41. In accord with Article 59 the CRA may require a Dominant Service Provider to prepare or participate in the development of a cost study of its telecommunications services if it determines that a cost study would be necessary in implementing any scheme of Charge or price regulation. Also, the CRA may require any Dominant Service Provider to prepare or participate in the development of a cost study for the purpose of determining the costs of providing different types of telecommunications services or the business activities of the Service Provider and the CRA shall decide on the cost categories, form, approach, procedures and timing of the cost study. The Service Provider shall comply with all requirements identified by the CRA; and shall file with the CRA the study. The CRA shall consult with the Service Provider required to file a cost study and any other interested parties before it makes an order requiring the study. The CRA may require a Dominant Service Provider to adopt identified cost accounting practices to facilitate cost studies or to achieve any other regulatory purpose under the Law or the By-Law, including the separation of accounts among different categories of business activities or services or as directed by the CRA.

42. Article 60 empowers the CRA to develop methods of price control and to consult Service Providers or any other interested parties. The CRA may issue orders or notices prescribing guidelines for the development of proposals for methods of price control; or setting out directions for the further development of any proposal that has been filed with the CRA or any method of price control that is under development by the CRA. The CRA may also approve of a proposal or method of price control for implementation by one or more Service Providers. Following development and approval of any method of price control, the CRA may also issue regulations, rules, orders or notices required for its implementation.

3.4 Order on Wholesale Charges applicable to Wholesale Services for years 2015, 2016 and 2017 (CRA 2015/05/21F, dated May 21, 2015)

43. This Order and the annexed document “Wholesale Charges and their relationship with Retail Charges - Economic Analysis and Response” (CRA 2015/05/21G-NC) set the Wholesale Charges for years 2015, 2016, 2017.

44. Costing and pricing principles defined in this Order are deemed valid for setting the Wholesale Charges for years 2018 onwards, if still applicable.

3.5 Wholesale Reference Offers approved by the CRA and privately agreed contracts

45. The Wholesale Charges are set for the Wholesale Products as defined in the:

45.1 Reference Interconnection Offer ("RIO") of Ooredoo and Vodafone approved by the CRA on October 31, 2016 (CRA 2016/10/13);

45.2 Reference Transmission Offer ("RTO") of Ooredoo approved by the CRA on October 31, 2016 (CRA 2016/10/13);

45.3 Reference Infrastructure Access Offer for Duct of Ooredoo ("RIAO") approved by the CRA on June 22, 2016 (CRA 2016/06/22).

45.4 Interconnection Agreement ("IA") between Ooredoo and Vodafone Qatar signed on March 15, 2009;

45.5 Transmission Services Agreement ("TA") between Ooredoo and Vodafone Qatar signed on September 2, 2009;

45.6 Infrastructure Access Agreement ("IAA") between Ooredoo and Qnbn signed on April 25, 2012.

3.6 Retail Tariff Instruction

46. Where applicable, the rules of the Retail Instruction ("RTI", ref. CRA 2015/05/07) are implemented to assess the relationship between the Wholesale and Retail Charges.

3.7 Cost of Capital

47. The Cost of Capital is set at 10.45% with the Order Determination of the Cost of Capital for Service Providers declared as having a Dominant Position, dated December 6, 2017 (CRARAC 2017/12/06).

4 Responses to the First Consultation Document, CRA's position and further Consultation Questions or Decisions

48. This Section:

48.1 Summarizes the responses submitted by the SPs to the First Consultation Document, sent to SPs on September 27, 2017 (CRA 2017/09/27);

48.2 Contains CRA's comments on the responses provided by the SPs;

48.3 Provides CRA's finding, proposed positions and further Consultation Questions.

4.1 Guiding Principles to set Wholesale Charges

4.1.1 Cost Base and Cost Standard

Question 1: Do stakeholders agree with the CRA's view and methodology for cost estimation?

4.1.1.1 CRA's position in the first Consultation Document

49. Article 29 of the Telecommunication Law requires low cost interconnection charges for telecommunications services based on the cost of efficient service provision. Therefore, CRA used operators' costs as reference for setting wholesale charges, applying adjustments when considered relevant.

50. With regards to the cost base and the cost standard, after having consulted the SPs, CRA opted for using a top-down model based on Historical Cost Accounting with Fully Distributed Costs (HCA/FDC), applying a forward-looking approach (i.e. projecting the HCA/FDC cost for the next years (ref. CRA letter CRA/RAC-E/023/2017, dated March 7, 2017)).

51. Following points summarize the methodology employed for the calculation of Recurring Wholesale Charges

51.1 To estimate the Network Unit Cost for the FYs

(i) 2016, 2017 and 2018, Network Cost from Ooredoo's RAS 2010-2015 have been forecasted for three (3) years. For the volume, the CRA has generally used the forecasted volume submitted by the SPs.

(ii) 2019 and 2020, prudent cost trends have been then used.

51.2 For the Wholesale Costs the CRA had no confidence in the Wholesale Cost included in the RAS of Ooredoo. Hence, CRA used a mark-up of 10% "on top" of Network Costs to include this item in the Wholesale Charges. This mark-up was based on a benchmark performed by CRA and is in line with the proceeding for setting the Wholesale Charges 2015 – 2017 (ref. CRA Order 2015/05/25F).

52. Following points summarize the methodology employed for the calculation of One-Time Fees

52.1 For the Network Costs the CRA typically used the approach described for the calculation of Wholesale Recurring Charges. Where this was not possible "bottom-up" models based on time and material are acceptable if properly justified.

52.2 Wholesale Costs, a mark-up of 10% "on top" of Network Costs has been used.

4.1.1.2 Ooredoo's response to the first Consultation Document

53. "*Regarding the cost methodology, Ooredoo has the following concerns: the*

extrapolation of the past cost trends even with the use of more moderate decline may result in under-recovery of service costs. In the regulatory horizon of 2018-2020, Ooredoo expects to make investments in 5G network upgrade and further network enhancement to meet demands related to the 2022 World Cup. Moreover, based on historical trends, the major sport events planned to take place in Qatar in coming years (Athletic World Cup and Football World Cup) are likely to have increased inflationary pressure that will also impact the input costs of Service Providers and hence costs of wholesale services."

54. "*Reliance on international benchmarks when defining wholesale markup ignores the lack of economies of scale and scope within wholesale operations in Qatar given the small size of the market and therefore the CRA proposed actions would not enable Ooredoo actual cost recovery*."

55. "*Regarding the wholesale rate setting methodology, Ooredoo considers the CRA's proposed wholesale rates reduction to be too aggressive, ignoring its economic impact, which is oblivious to key objectives the CRA must adhere to by the Telecommunication Law*."

4.1.1.3 Vodafone's response to the first Consultation Document

56. "*Vodafone Qatar supports the use HCA/FDC for the purpose of estimating cost and the use of Ooredoo's Regulatory Accounts ("RAS") where appropriately audited. In that regards, we note with some concerns that many years after the introduction of the RAS, the RAS does not enable the CRA to have a clear view of wholesale cost and the cost of leased lines. We recommend that this be looked at closely by the auditors and the CRA. Vodafone Qatar costing information should be used in parallel*."

57. "*The CRA's approach to forecasting appears reasonable although we note that the mixing of network cost derived based on a specific allocation key with forecast of traffic from different sources may lead to inconsistent unit cost results*."

58. "*One-time fee can constitute barriers to entry and are difficult to estimate from regulatory accounts. Hence, we recommend consideration of bottom-up level models for those wholesale charges*."

4.1.1.4 CRA's finding and proposed decision

On Ooredoo's comments

59. On the extrapolation of the past cost trends:

    59.1 The CRA recognizes the uncertainty surrounding the process of estimating future costs for regulated wholesale services. However, in order to reduce the associated risks, the CRA has been very prudent in calculating the cost trends to ensure cost recovery.

    As indicated in the First Consultation Document, where a flattening of the cost curve for a certain service has been observed in recent years, the annual future growth has not been estimated taking into account the CAGR 2010 – 2015, as per the defined methodology. Instead, only the evolution observed in the last period has been employed for determining the future growth, avoiding in such a way a situation of non-cost recovery. Moreover, where no clear cost trend was available, the CRA has left the costs stable.

    In addition to this, section 7 of the First Consultation Document proposed the introduction of a review clause (see question 32) in the Order approving the Wholesale Charges. According to this clause the SPs would be allowed requesting a review of the wholesale charges, providing evidences of wholesale charges below costs.

    The CRA notes that Ooredoo has not provided a specific correction on any of the cost trends or suggested different input figures.

    59.2 On March 28. 2017 (ref, CRA/RAC-E/027/2017), the CRA asked Ooredoo (and all the SPs) to provide the cost forecasted for the years 2016, 2017, 2018 and 2019 for each of the wholesale products object of this proceeding. Ooredoo did not provide the requested information for the voice and messages interconnection services, but only the volumes and a forecast of the wholesale charges. Ooredoo had the possibility to submit information relevant to support its current claims but failed to do it. In its response to the First Consultation Document, Ooredoo criticizes CRA's approach but – again – does not provide any quantitative information to support its position. Hence, the CRA is neither in the position to verify Ooredoo assertion nor to review its own cost-trends.

60. On the wholesale mark-up, as already reported in the Order on Closure of the RAS 2015, the CRA has no confidence in the wholesale costs included in Ooredoo's RAS. Given the lack of alternative sources, and until issues identified in Ooredoo's RAS are solved, the CRA will continue to rely on benchmark values as main reference.

61. On the magnitude of the reduction proposed by the CRA, please refer to the specific sections for CRA's positions (ref. section 4.3).

On Vodafone's comments

62. On the quality of the RAS, the CRA notes that all necessary effort will be done to solve the issues related to leased lines services and wholesale costs identified with the RAS reviews.

63. Concerning the uncertainty of the forecasting process, please refer to CRA's comments on Ooredoo submission (ref. point 59).

64. On the one-time fees, these have been generally estimated based on bottom-up calculations, with the aim to have charges oriented to efficient costs and avoid barriers to entry.

Proposed Decision

65. In summary:

    65.1 Ooredoo seems concerned with the cost trends applied by the CRA to the outcomes of Ooredoo's 2015 RAS for projecting the costs for the period 2016-2020. However, Ooredoo has not provided supporting information accompanied by strong evidence allowing CRA to review the cost trends. Vodafone finds CRA's approach to forecasting reasonable.

    65.2 On the cost base and standard, this is supported by Vodafone and was accepted by Ooredoo in previous consultations.

    The CRA notes that the HCA (Historical Cost Accounting) cost base with a FDC (Fully Distributed Costs) cost standard is the least aggressive scenario for setting the interconnection charges. If other approaches where adopted, e.g. CCA (Current Cost Accounting) cost base with the pure LRIC (Long Run Incremental Costs) cost standard the proposed interconnection charges could easily be reduced by another 30-50%.

66. In conclusion, CRA confirms the approach as proposed in the First Consultation Document (ref. section 4.1.1.1 above) and opts for using a top-down model based on Historical Cost Accounting with Fully Distributed Costs (HCA/FDC), applying a forward-looking approach (i.e. projecting the HCA/FDC cost for the next years).

4.1.2 Non Discrimination and Proportionality Test (PT)

Question 2: Do stakeholders agree with the CRA's view and implementation of the PT test, i.e. having a threshold of 20%?

4.1.2.1 CRA's position in the first Consultation Document

67. The PT has the scope to ensure that Wholesale Charges of products sold to Access Seekers are non-discriminatory in relation to the Network Cost of functionally similar products provided internally (to the retail arm of the SP).

68. The CRA notes, that this basic test is typically performed by the DSP before submitting cost figures to the CRA, since the non-discrimination is a requirement usually imposed on DSPs worldwide.

69. It is also obvious from a general fairness principle that an Access Seeker should not incur (significantly) higher cost than the (vertically integrated) Access Provider is charging itself.

70. The implementation of the PT was deeply discussed in the proceeding for setting the Wholesale Charges 2015 – 2017 (ref. CRA Order 2015/05/25F).

71. The CRA is aware that differences between the Network Cost of wholesale and retail services are generally not accepted in many jurisdictions at all unless they are properly justified (e.g. different hourly distribution, ABC information showing higher dedication of manpower for wholesale services, etc.). Therefore, strictly speaking, any difference should be materially justified.

Nevertheless, the CRA is aware that the Network Cost of an e.g. MTR might be different from an on-net call due to different routings and Network Elements involved.

72. Therefore, the CRA deems a maximum of 20% as reasonable to assess the relation.

73. For example, to perform the PT, the CRA compares twice the Wholesale Charges of the Mobile Termination Rate with the Network Cost of an end-to-end on-net mobile call.

74. The following table shows an illustrative example of the PT as implemented by the CRA.

						Reasonable Difference	20%
Corresponding Retail Product		(Internal) Network Product		(External) Wholesale Product		Proportionality Test	
Name	Unit	Name	Cost	Name	Cost	Max Cost (inlcluding) RD	Pass
F:F (on-net)	QAR/min	Origination + Termination	0.50	2 FTR	1.00	0.60	NO
M:M (on- net)	QAR/min	Origination + Termination (including Video Calls)	1.00	2 MTR (including Video Calls)	0.50	1.20	YES
SMS (on- net)	QAR/SMS	Origination + Termination	0.20	2 SMSR	0.10	0.24	YES
MMS (on- net)	QAR/SMS	Origination + Termination	0.30	2 MMSR	0.15	0.36	YES

Table 1 Illustrative example of the Proportionality Test as implemented by the Authority [CRA]

4.1.2.2 Ooredoo's response to the first Consultation Document

75. "*Ooredoo notes that the CRA has failed to provide relevant references of where such a test is utilized internationally. Moreover, Ooredoo questions its relevance for mobile termination services where interconnection traffic is more or less balanced. In addition, an insistence by the CRA on applying PT test for FTR in the absence of solving the issue of access deficit appears to demonstrate incoherent regulatory policy being applied by the CRA to fixed market*."

4.1.2.3 Vodafone's response to the first Consultation Document

76. "*Vodafone Qatar has no objection to the use of the Proportionality Test ("PT") and the threshold of 20%*."

4.1.2.4 CRA's finding and proposed decision

On Ooredoo's comments

77. On the use of the PT, the CRA notes that the reason behind the realization of this test is to comply with CRA's regulatory objective of guaranteeing the principle of non-discrimination, as imposed by the Qatari Telecommunications Law in the Article 44 "*Prohibition of Unjustified discrimination*".

The CRA has also been very prudent and introduced in the test a threshold of 20%, while the majority of the Regulatory Authorities impose DSPs with a value of 0% for this threshold. This means that, in other jurisdictions, the network cost per unit attributed to the Retail Arms of the DSPs must be the same as the network cost per unit attributed to the OLOs and any difference must be fully justified by the DSPs.

Thus, CRA's approach should be seen as more flexible and favorable for the DSPs, allowing for a 20% difference between Retail and Wholesale network cost per unit. It must be noted that the removal of this threshold would lead to a reduction of some of the wholesale charges.

The CRA also indicates that the PT has been passed by all services except the fixed call termination service. Please refer to section 4.3.1.4 for further details on CRA's position.

78. As towards Ooredoo's request for benchmark, CRA notes that non-discrimination is a principle typically followed by regulators in costing exercises such as, for instance, Spain[2], Croatia[3], France[4], Portugal[5], Morocco[6], Tunisia[7] or Saudi Arabia[8]. This principle establishes that the equivalence of usage in the network must be reflected in an equivalence of costs. On solving the issue of the Access Deficit, the CRA reminds to Ooredoo that the approval of the Tariffs for access products (i.e. voice, broadband and TV) is based on a model that ensures the full cost recovery of the fiber access network. The approval of new Tariffs for access products is subordinated to the profitability of the fiber access network as a whole, but not to the profitability of each and any single products. This mechanism - that has never been opposed by Ooredoo - ensures the absence of the Access Deficit. Therefore, the CRA could not understand Ooredoo's reference to an Access Deficit.

Proposed Decision

79. The CRA confirms the approach as proposed in the First Consultation Document.

80. In summary, to ensure that Wholesale Charges of products sold to Access Seekers are non-discriminatory in relation to the Network Cost of functionally similar products provided internally (to the retail arm of the SP), the CRA will apply the PT before translating the cost in wholesale charges.

4.1.3 Price / Margin Squeeze Test methodology (PMS)

Question 3: Do stakeholders agree with the CRA's view and implementation of the PMS (Price Margin Squeeze) test?

4.1.3.1 CRA's position in the first Consultation Document

81. DSPs must demonstrate the absence of a Price/Margin-Squeeze ("PMS") for their services. This should be based on the Wholesale Charges of existing wholesale products or, where relevant, the charge of proposed wholesale products.

82. The Price Margin Squeeze test checks whether competing SPs can replicate the retail service with wholesale inputs. The CRA will consider the best available information in deciding the appropriate levels of prices.

83. For the purpose of this consultation, the CRA confirms the PMS test as defined in the Order and attached Economic Analysis for setting the Wholesale Charges 2015 –

[2] https://www.cnmc.es/sites/default/files/1478899_0.pdf

[3] http://www.hakom.hr/UserDocsImages/dokumenti/Instructions%20On%20Accounting%20Separation%20And%20Cost%20Accounting.pdf

[4] https://www.arcep.fr/uploads/tx_gsavis/06-1007.pdf

[5] https://www.anacom.pt/render.jsp?categoryId=158368

[6] http://www.fratel.org/wp-content/uploads/2011/12/200805-Khaouja-ANRT.pdf

[7] http://www.intt.tn/upload/files/decision%20ES%20fixes%20version%20finale.pdf

[8] http://www.citc.gov.sa/ar/new/publicConsultation/Documents/Attachment1AccountingSeparationRegulatoryFramework.pdf

2017.

84. The following table shows the generic form of the PMS Test.

Price margin Squeeze

Retail Product		Retail Charge	CRA Propoposed wholesale charge	Outpayment	Retail MU	CRF	Granularity	cost for provisioning	pass
					40%	fixed and mobile			
Product X	QAR/min	10.00	8.00	-	3.20	0.80	-3.60	8.40	yes
Product Y	QAR/min	15.00	13.00	2.00	6.00	1.50	-6.75	15.75	no

Table 2 Price margin Squeeze – generic example [CRA]

85. For the avoidance of doubt, this test could also be used for assessing ex-post competition cases.

4.1.3.2 Ooredoo's response to the first Consultation Document

86. "*Ooredoo cannot agree with inclusion of CRF (Compound Risk Factor) in PMS (Price Margin Squeeze), as this approach completely lacks support in sound economics or any international regulatory precedence. The risk of potential revenue fluctuations are factored in the WACC already via credit rating mechanism (and via betas in the equity component) and therefore any costs that would need to be attributed to this risk is already applied via the WACC to both retail and wholesale services. The CRA must therefore remove the CRF from the PMS formula*."

87. "*The CRA in section 4.3.1 do not address in detail what price and / or (retail) costs should be considered in the specific PMS and therefore Ooredoo cannot comment on what are important details required for the practical implementation of PMS at this point*."

4.1.3.3 Vodafone's response to the first Consultation Document

88. "*In principle Vodafone Qatar has no objection when the Price Margin Squeeze ("PMS") Test although its applicability, parameter values and methodology are unclear in so far as only a "generic form" is provided. Vodafone Qatar would appreciate clarity on the circumstances in which it is being applied (e.g. as part of the tariff approval process) and further details on the test and its relevant parameters*."

4.1.3.4 CRA's finding and proposed decision

On Ooredoo's comments

89. The CRF is utilized to mitigate the risks of forecasting costs and volumes. The CRA does not share Ooredoo's view that the CRF is redundant because of the WACC. The WACC allows for a reasonable rate of return on the investments but does not mitigate the risks of forecasting costs and volumes.

90. On the Retail Charge used for the PMS, on October 1, 2017, the CRA sent to Ooredoo a file excel including[9] – amongst others - the calculations of the PMS (ref. CRA letter CRA/RAC-T/115/2017).

From the excel file, Ooredoo had the possibility to verify that:

90.1 The CRA used the average revenues as Retail Charge.

90.2 The Retail mark-up is an average mark-up, calculated as Total Retail own cost

[9] This excel file was sent only to Ooredoo because included confidential data to Ooredoo

on top of Network Cost and Outpayments, consistently with the information included in the RAS 2015.

91. On general, the CRA notes that Ooredoo has not provided specific comments or alternative approaches, supporting a review of the CRA's position.

On Vodafone's comments

92. The CRA notes Vodafone's request for clarification, which is provided below.

Proposed Decision

93. The CRA further clarifies the scope and the methodology of the PMS in the following points.

93.1 This test aims at ensuring the replicability of Ooredoo's products to an alternative operator that decides to purchase wholesale services for offering products to its retail customers.

93.2 The test is passed, when

$$Retail\ Charge\ \geq\ (Wholesale\ Charge + Outpayments)\ x\ (1 +\ Retail\ Markup_{\%})\ x\ (1 + CRF_{\%})\ x\ (1 + Granularity_{\%})$$

Formula 1 PMS Test

Retail Charge: average unit revenue generated by Ooredoo for the equivalent retail service;

Wholesale Charge is the regulated fee paid by the alternative operator;

Outpayments are the interconnection charges paid for the service (e.g. in case of terminating the call abroad);

The retail mark-up: it includes all the costs other than network costs (i.e. overheads and retail costs such as marketing, advertising, billing, etc.). The Retail Mark-up is calculated using the latest approved RAS of Ooredoo;

CRF: this is the Compound Risk Factor, whose main objective is to mitigate the risk that the existing uncertainties may cause the offer to be below cost; and

Granularity: this expresses the difference between the actual call in exact seconds and the billed calls, always rounded up to the next full minute.

94. The CRA notes that the CRF was introduced to mitigate the risk and uncertainties surrounding the Price Margin Squeeze test (e.g. projections of future costs and volumes) which could cause the Retail Tariffs not to be replicable.

95. In conclusion, the CRA confirms the approach as proposed in the First Consultation Document. Hence, the margin squeeze test described above shall be used by the CRA to ensure that competing SPs can replicate retail services provided by dominant SPs, by means of wholesale services acquired to them. For the avoidance of doubt, this test could also be used for approving the Tariffs and for assessing ex-post competition cases.

96. The same approach was also used to set the Wholesale Charges for the years 2015, 2016 and 2017 (ref. CRA Order 2015/05/25F).

4.2 Mechanism for setting the Wholesale Charges

4.2.1 Applicable timeframe

Question 4: Do stakeholders agree with the timeframe defined by the CRA?

4.2.1.1 CRA's position in the first Consultation Document

97. CRA was of the view that Wholesale Charges should cover the calendar years 2018, 2019 and 2020.

4.2.1.2 Ooredoo's response to the first Consultation Document

98. "*Ooredoo agrees with the proposal that new wholesale charges will cover calendar years 2018, 2019 and 2020. Ooredoo notes that the new wholesale charges might come in force in January 2018 and assumes that current wholesale charges will stay in force till then and will not be changed retroactively. Confirmation from the CRA is sought in this respect*."

4.2.1.3 Vodafone's response to the first Consultation Document

99. "*Vodafone Qatar supports the use of a three years period for price control. The option to review charges during the price control period should be limited to material changes only*."

4.2.1.4 CRA's finding and proposed decision

Proposed Decision

100. The CRA notes that Ooredoo and Vodafone agree that the new wholesale charges shall cover the calendar years 2018, 2019 and 2020, as proposed by the CRA.

101. Hence, the CRA will set the New Wholesale Charges for the calendar years 2018, 2019 and 2020.

102. The current Wholesale Charges shall be applied until the new charges are approved. This has been confirmed separately (ref. CRA letter CRA/RAC-T/153/2017, dated December 5, 2017).

4.2.2 Overall methodological approach

Question 5: Do stakeholders agree with the overall methodological approach defined in this section?

4.2.2.1 CRA's position in the first Consultation Document

103. The CRA has four following main references for setting new wholesale charges, namely:
    - 103.1 Ooredoo's and/or Vodafone's cost information, to calculate cost oriented wholesale charges;
    - 103.2 Proportionality Test results;
    - 103.3 Price Margin Squeeze Test results; and
    - 103.4 Benchmarks/Bottom Up Models.

104. In case tests are passed, costs can be translated directly into Wholesale Charges. If cost oriented wholesale charges do not pass the tests, they need to be adjusted to pass the tests, so that they can be translated into Wholesale Charges.

4.2.2.2 Ooredoo's response to the first Consultation Document

105. "*Ooredoo does not agree with the dramatic reductions in termination rates proposed by the CRA. Doing so will cause substantial costs to Service Providers and ultimately customers, which are not likely to be offset by any corresponding benefits that the proposed regulation will deliver. The CRA has neither identified market failure it is trying to address through the proposed rate reduction nor has the CRA quantified the benefit this regulation aims to deliver to market participants*."

106. Additionally, in the Executive Summary of the letter submitted, Ooredoo also states: "*The proposed regulation largely ignores the CRA's responsibility to deliver on the objective of ensuring the orderly development and regulation of the telecommunication sectors within Qatar*."

4.2.2.3 Vodafone's response to the first Consultation Document

107. "*Vodafone Qatar does not agree to this mechanistic approach to rate setting which is inconsistent with the duties of the CRA. There are inherent tensions in setting wholesale charges and we are concerned with the approach of the CRA which consists of seeking to set wholesale charges based on cost in a mechanistic fashion by invoking only Article 29 of the Telecommunications Law. The CRA must recognise and take into account the overarching objectives placed on it in the Telecommunications Law and the Emiri Resolution and articulate how its proposals contribute to achieving those objectives. Article 2 of the Telecommunications Law says that the regulation of the sector shall achieve the following objectives: "1. promoting the telecommunications sector in order to consolidate national, social and economic development; 2. enhancing the telecommunications sector's performance in the State of Qatar through encouraging competition and fostering use of telecommunications services; 3. encouraging the introduction of advanced and innovative information and telecommunications technologies to meet the needs of customers and the public; 4. increasing customers' benefits and safeguarding their interests; 5. encouraging sustainable investment in the telecommunications sector*".

108. "*Further, Article 4 of the Emiri Resolution requires the CRA to: 2. Provide the legal, transparent, organizational and fair environment to construct a competitive, innovative and investment attractive sector; 3. Encourage competition, prevent or limit non-competitive practices, prevent the misuse of any person or entity to his sovereign status in the market and take the necessary procedures in this regard; 4. Protect the rights and interests of the public and service providers in the market, enhance the transparency and work to render advanced and innovated services having high quality and for reasonable prices to meet the requirements of the public."*

109. *"The CRA's proposals in mobile (cut of MTRs by of 80% in three years and regulation of international in-bound) go in the wrong direction and do not support the development and growth of the mobile industry."*

4.2.2.4 CRA's finding and proposed decision

On Ooredoo's comments:

110. On the reduction of the Wholesale Charges proposed by the CRA, the CRA indicates that this is consistent with the cost information available to the CRA, including the audited Ooredoo's RAS.

111. On the allegation that the "*proposed regulation largely ignores the CRA's responsibility to deliver on the objective of ensuring the orderly development and regulation of the telecommunication sectors within Qatar*", the CRA points out that this has already been considered in setting the new Cost of Capital and choosing prudent cost trends.

On Vodafone's comments:

112. On the approach used, the CRA clarifies that it is not taking a mechanistic approach: both the conservative cost trends applied and the Cost of Capital have been already used to balance the various objectives the CRA is responsible to achieve.

113. On Vodafone's statement that the CRA goes in the wrong direction, this is not substantiated. In many other jurisdictions, similar cuts have been done and low termination rates have been beneficial for both the SPs and the customers (ref. following paragraphs for further details).

Proposed Decision

114. The CRA notes that neither Ooredoo nor Vodafone have provided a rational to support their views. Also, no alternative approaches have been proposed.

115. The CRA stresses that reductions in wholesale charges imposed by national regulators worldwide in recent years have demonstrated to have positive impacts on the telecommunication sector. More specifically, these impacts are generally reflected in, among other aspects, increase of competition levels, benefits to customers and

fostering of demand. These aspects are described in detail in the following paragraphs:

115.1 **Increase in competition levels:** Reductions of wholesale charges have been generally accompanied by a growth in competition levels within the telecommunication market. As illustrative example, the following chart shows the Herfindahl Hirschman Index (HHI)[10] together with MTR evolution of a set of OECD countries[11] in the period 2006-2014. It is worth noting that the lower the index is, the higher is the competition in the assessed country.

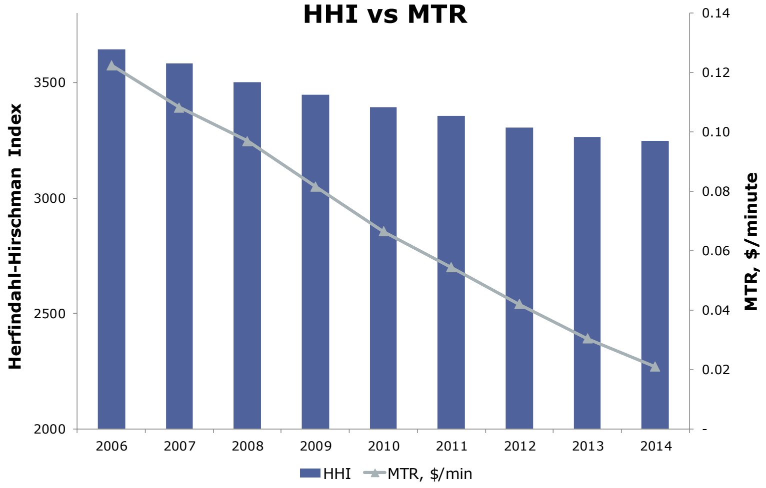


Figure 2 Evolution of average HHI and MTR in OECD countries [Source: GSMA and OECD]

From the chart above, it can be extracted that the increase of competition levels (reflected by a reduction of the HHI index) observed in the period 2006-2014 for the list of assessed countries took place in parallel with the reduction observed in the MTR.

115.2 **Benefits to customers:** The increase of competition levels in a telecommunication market generally entails benefits to customers in the form of innovative products or more affordable prices, offered by service providers in their efforts to differentiate against competitors. For instance, the following chart shows the evolution of mobile calls prices observed in the European Union over the period 2005-2014, as published by the European Commission:

[10] The HHI index reflects the level of concentration in the market of a given country and it is calculated as the sum of the squared market shares of all operators.

[11] List of countries considered: Australia, Austria, Belgium, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, South, Luxembourg, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States of America.

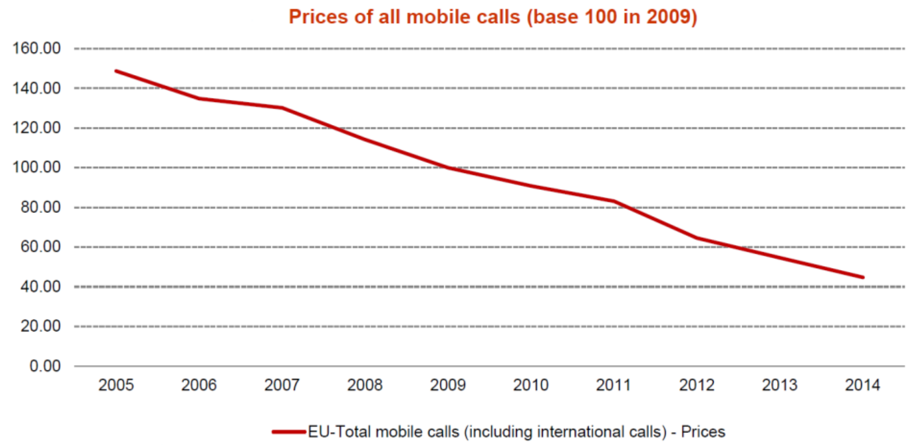


Figure 3 Evolution of the price of all mobile calls (2009 is the reference year, with a value of 100%)
[Source: EC]

The reduction of retail prices shown in the figure above was accompanied with an average reduction in MTR of 86% (from 12.36 to 1.69 Eurocent/min)[12], in the same period.

In the specific case of Qatar, a reduction of the average revenue for mobile national calls has also been observed over the years 2014-2016, along with a reduction of the applicable MTR, as illustrated in the following figure:

Figure 4 Evolution of the average revenue per minute of national mobile voice call vs MTR
[Source: MDDD, Annex B - Licensed activities only, CRA calculation]

As it can be observed, MTR and average price per minute have both followed a declining trend, whereas the average retail price per voice minute fell faster than the MTR.

115.3 **Fostering of Demand:** It is worth outlining that a decrease of retail prices ultimately leads to increases in the use of telecom services, benefiting customers and increasing networks' economies of scale. The following chart shows mobile traffic together with average MTR in a set of OECD countries[13] during the period 2005-2011.

[12] See following report published by BEREC: http://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/6086-termination-rates-at-european-level-janu_0.pdf

[13] List of countries: Austria, Belgium, Chile, Finland, France, Hungary, Ireland, Japan, Korea, Mexico, Norway, Portugal, Slovak Republic, Spain, Sweden, Switzerland and Turkey.

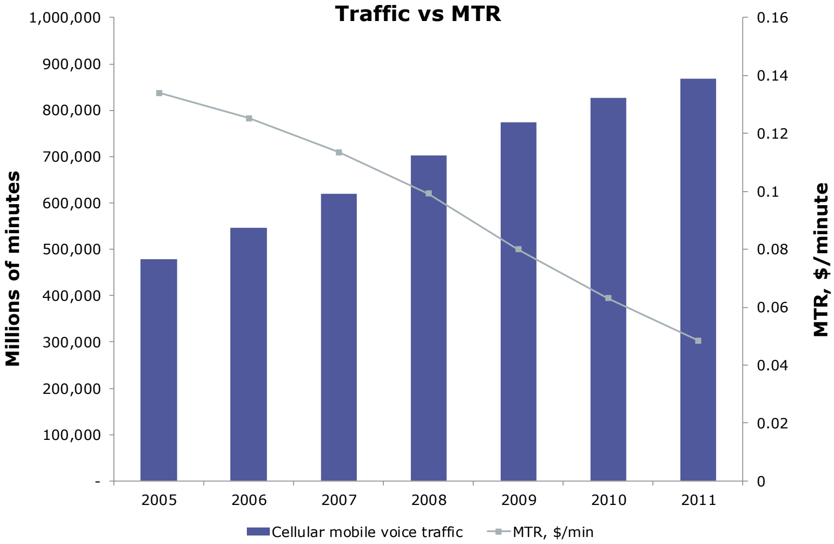


Figure 5 Comparison of mobile voice traffic vs MTR in OECD countries [Source: OECD]

The chart shows an increase in mobile traffic which took place in parallel with the reduction of MTR. At the same time, it must be outlined that the increase in traffic tends to compensate the reduction of retail prices.

A similar situation can be observed for Ooredoo Qatar where, for instance, the traffic of the mobile termination service has increased – in excess of the population growth - in the lasts years, as shown in the following chart:

Figure 6 Comparison of Ooredoo's mobile termination voice traffic vs MTR in Qatar [Source: Ooredoo]

116. The CRA has a broad mandate and multiple objectives to reach. In taking its decisions, the CRA has to balance the overarching goal of economic diversification, the interests of the Service Providers and those of the customers.

117. It is quite clear that the interests of the Service Providers (i.e. high revenues and profit with low investments and costs) are often different from the interests of the public (i.e. innovation, low prices, high quality).

118. Article 19 (1) of the Telecommunication Law requires the CRA to set low Interconnection and Access Charges, which, as shown above, typically lead to lower Retail Tariffs and higher demand levels, favoring the customers and the development of the Qatari economy. However, other CRA's objectives – such as favoring the investments in infrastructures in Qatar - would suggest the CRA to set higher Wholesale Charges.

119. To balance all the various objectives, the CRA:

119.1 Has relied on objective data and information (i.e. the Audited RAS of Ooredoo);

119.2 Has been very conservative when forecasting costs;

119.3 Has set the new Cost of Capital at the highest possible level of the calculated range.

120. The CRA is aware that significant reductions are proposed for some services. Therefore, in order to smooth the potential impact of the new wholesale rates, a mechanism of glidepath has been proposed, being the approach generally adopted in the international practice when current applicable charges are significantly different from the new cost-oriented charges.

121. In any decision, short-term benefits could differ from long-terms gains for the State of

Qatar. The CRA shall be focused on the latter.

122. The impact on the revenues of the reduction of FTR and MTR is not significant (i.e. 1%, as already mentioned in section 1 above). Also, the impact on the Margins of the SPs is negligible, given that the traffic is almost balanced between Ooredoo and Vodafone. More details on the economic impact are provided in points 158 and 185 below.

123. The CRA will set the Wholesale Charges for the calendar years 2018, 2019 and 2020 striking a balanced solution among the various conflicting goals.

4.2.3 Use of benchmarks

Question 6: Do stakeholders agree with proposed use of benchmarks?

4.2.3.1 CRA's position in the first Consultation Document

124. CRA stated that it intended to use benchmark information:

124.1 In cases in which no costing information is available or the information is considered inaccurate or unrepresentative;

124.2 As additional tool to understand where Qatari Wholesale Charges stand against other countries.

4.2.3.2 Ooredoo's response to the first Consultation Document

125. "*Ooredoo notes that a number of the CRA's benchmarks are not representative in terms of how the presented values were calculated. Ooredoo also finds the use and interpretation of benchmarks by the CRA to be misleading on a number of occasions. Ooredoo comments on the use of specific benchmarks in more detail below*".

4.2.3.3 Vodafone's response to the first Consultation Document

126. "*Vodafone Qatar supports the use of relevant benchmarks as a cross-check. This is important to ensure that charges remain within reasonable bounds. Benchmark can also be used where information is not reliable or available*."

4.2.3.4 CRA's finding and proposed decision

On Ooredoo's comments

127. The CRA's responses to Ooredoo on the benchmark are included in section 4.3.1 and 4.3.2 of this document.

On Vodafone's comments

128. The CRA acknowledges Vodafone's comments.

Proposed Decision

129. The CRA confirms the approach proposed in the First Consultation Document and will use relevant benchmarks: As a cross-check; and / or where information is not reliable or available.

130. This approach has been consistently applied by the CRA for the charges included in this document.

130.1 For the vast majority of the wholesale services, information extracted from Ooredoo's RAS and/or submitted by the SPs has been used as primary source for the definition of the wholesale charges.

130.2 Only for setting the charges of transmission links services and for defining the mark-up for wholesale costs, benchmarks have finally been used because relevant information is not reliable or available.

130.3 Benchmarks have been used as a cross-check tool to ensure the reasonability of the proposed wholesale rates for the most relevant wholesale services.

4.2.4 Application of glide paths

Question 7: Do stakeholders agree with the application of glide paths and the methodology outlined in this section?

4.2.4.1 CRA's position in the first Consultation Document

131. The CRA proposed the application of glide paths, based on equal yearly charge reductions, from the currently applicable charges until charges defined for the last year of the applicable timeframe as indicated in section 4.2.1.

4.2.4.2 Ooredoo's response to the first Consultation Document

132. "*Ooredoo agrees with the use of the glide path as a general principle, to gradually reduce the wholesale charges, provided such a decline will not prevent cost recovery. However, Ooredoo does not agree with the steep declines in the wholesale rates proposed by the CRA as they are posed to do more harm than benefit to the telecommunication sector in Qatar*."

4.2.4.3 Vodafone's response to the first Consultation Document

133. "*Vodafone Qatar supports the use of glide paths to bring wholesale charges to the desired level*."

4.2.4.4 CRA's finding and proposed decision

Proposed Decision

134. The CRA notes that the two respondents agree using the glide paths as mechanism for setting the Wholesale Charges.
135. The CRA also indicates that SPs have not expressed any disagreement with the use of equal steps in absolute terms for proposed glidepaths.
136. In conclusion, the CRA shall set the Wholesale Charges for the calendar years 2018, 2019 and 2020 based on a mechanism of glide path.

4.2.5 Alternative approaches

4.2.5.1 CRA's position in the first Consultation Document

137. CRA consulted about alternative approaches for charging wholesale services (such as e.g. Zero Rating).

4.2.5.2 Zero Rating

Question 8: Do stakeholders agree with the use of zero rating for interconnection rates? If yes, for which services do stakeholders believe zero rating should be implemented?

4.2.5.2.1 Ooredoo's response to the first Consultation Document

138. "*No. The financial impact on Service Providers would be worse than any other proposed alternatives*."

4.2.5.2.2 Vodafone's response to the first Consultation Document

139. "*Vodafone Qatar does not support the use of "zero rating" or "bill-and-keep" for interconnection agreements. To Vodafone Qatar' knowledge bill-and-keep is in place in a handful of countries. We note in passing that bill and keep will be illegal in Europe based on the draft European Electronic Communications Code. We also would like to*

clarify that traffic between Vodafone Qatar and Ooredoo are not balanced."

4.2.5.2.3 CRA's finding and proposed decision

Proposed Decision

140. The CRA appreciates Ooredoo's and Vodafone's contributions and notes that it does not expect to use the "zero rating" (or "bill-and-keep") mechanism for the regulation of wholesale services for the calendar years 2018, 2019, 2020.

4.2.5.3 Other approaches

Question 9: Do stakeholders see other alternative approaches? This might be e.g. port charges for IC products or up-front lump sum payments. If yes, for which services do stakeholders believe such alternative approaches should be implemented?

4.2.5.3.1 Ooredoo's response to the first Consultation Document

141. "*Ooredoo do not have alternative proposals*."

4.2.5.3.2 Vodafone's response to the first Consultation Document

142. "*No, Vodafone Qatar does not think that alternative approaches for interconnection should be considered for the coming price control period.*"

4.2.5.3.3 CRA's finding and proposed decision

143. The CRA's is not happy with the lack of alternatives proposed by the SPs. However, for the coming price control period, the CRA shall abstain to adopt alternative approaches.

4.3 Wholesale Charges: Conveyance Services

4.3.1 Fixed Call Termination Service to Geographic Numbers

Question 10: Do stakeholders agree with the CRA's proposed Wholesale Charge for the Fixed Call Termination Service to Geographic Numbers? Which of the Options proposed by the CRA do you suggest and why?

4.3.1.1 CRA's position in the first Consultation Document

144. The CRA consulted on the following options for the regulation of the "Fixed Call Termination Service to Geographic Numbers" service:

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale charges, which pass the PT (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0119	0.0063	0.0006
Change to previous year			-32%	-47%	-90%
Option 2 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0150	0.0125	0.0100
Change to previous year			-14%	-17%	-20%
Option 3 – Fixed and Mobile Blended Wholesale Charges (n.b. susceptible of changes according to the level of the MTR)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	not applicable	0.0549	0.0353	0.0158
Change to previous year		not applicable	not applicable	not applicable	not applicable
Option 4 – Zero Rating					
Fixed Call Termination Service to Geographic Numbers	QAR/min	not applicable	0.0000	0.0000	0.0000
Change to previous year		not applicable	not applicable	not applicable	not applicable

Table 3 Fixed Call Termination Service to Geographic Numbers – Wholesale Charges [CRA calculation]

4.3.1.2 Ooredoo's response to the first Consultation Document

145. "*The CRA is using international benchmarks on population density and FTR's to view the proposed FTR's for Qatar in wider context. The CRA considers Singapore to be closest to Qatar in terms of population density and bases FTR's comparison on this premise. Ooredoo notes from the CRA's population density benchmarks that, in terms of number of inhabitants per squared km, both UAE (111) and Ghana (124) are more similar to Qatar (221) than Singapore (7,909). Ooredoo also notes that fixed termination rates in these countries are much higher than the current and the CRA's proposed termination rates for Qatar. Across all countries with Ooredoo footprint, Qatar has the smallest FTR already. There are no significant further reductions in FTR's expected in other countries where Ooredoo operates in next three years. The CRA's FTR rate reduction proposal is thus too extreme in this international comparison*."

146. "*The CRA raises concern that fixed termination service does not pass the proportionality test. In this respect Ooredoo points out that the current technical interconnection solution for fixed call termination was agreed by Ooredoo and Vodafone Qatar as the optimal one, given the small volume of fixed to fixed traffic and the additional costs that would have to be incurred by both service providers were an alternative network topology used instead*."

147. "*Ooredoo during the previous consultation on wholesale charges within the year 2014 raised the fact that the FAC methodology alone does not provide the best basis on which to set regulated prices due to temporal variations (spikes and troughs) in costs that can incur due to the nature of the telecommunication business. This applies also in the case of the fixed termination cost that are derived from RAS information for the year 2015, which shows a significant drop in unit cost compared to the year 2014. This decrease was largely driven by the decline in the operation and maintenance cost associated with the UMG (fixed network switch) in comparison with the same cost category in previous years. This drop reflects data sourced from time analysis input used within RAS 2015, when the given department's effort was focused on alternative network element(s). However, this is not a long-term sustainable situation and Ooredoo expects these maintenance costs to increase again in 2016 and to bring the unit cost closer to the 2014 level*."

148. "*Moreover, as historical experience shows, the inflation in Qatar is increasing when there is a major sports event occurring within country. The Asian Olympics games saw the price inflation in Qatar of 16%. There is Athletic World Cup and Football World Cup scheduled to take place in Doha in 2019 and 2022 respectively. Ooredoo expects both of these events to contribute to the increase in inflation in Qatar, which will likely be reflected in the cost of labor and other Service Providers' costs as well as has been the case in the past*."

149. "*Hence, to avoid the under-recovery of the associated costs, Ooredoo's recommendation is to increase the fixed termination rate at the rate of 3% per year in the course of next three years. If this was not possible, then to at least keep at the same level as is today*."

4.3.1.3 Vodafone's response to the first Consultation Document

150. "*As per our response to Question 8, we do not support Option 4 - Bill and keep*".

151. "*We also do not support Option 3, a blended termination rate for fixed and mobile. Fixed and mobile termination costs are different and translate into higher termination rates to mobile than to fixed. As confirmed by the CRA's benchmarks the EU average for MTRs is about 12 times greater than the EU average for FTRs (QAR 0.004 vs 0.044 per min). We also note that termination on mobile and termination on fixed are in different economic markets. For those reasons, Vodafone Qatar considers that it is*

more appropriate to keep the pricing for services in these markets distinct."

152. "*According to the CRA the PT is not passed with "network costs associated to two termination charges are 452% above those allocated to the on-net call". This is a very substantial difference which should be investigated and explained by the CRA. At present, it either implies that the network costs allocated to termination are wrong or the network costs allocated to on-net calls are or both. The routing factor table and unit cost per network elements for each call scenario available in Ooredoo's RAS should enable the CRA to identify the cause of the differences as the set-up for interconnection alone is unlikely to explain such gap*."

153. "*We also note that Option 1 would lead to a drop of 97% of FTR in three years. Such a drastic cut is unrealistic and confirms the need for the CRA to further investigate the issues highlighted above regarding the PT and to conduct an analysis network element by network element. Further the end point would be completely out of step with benchmarks*".

154. "*Under Option 1, the FTR would be 6 times lower than the EU average of FTR. While FTR may continue to decline in the coming years, they would need to drop in the EU by 85% in the coming years. Such drop is unlikely given that most countries have now transitioned to pure LRIC*."

155. "*The CRA makes a number of statements to justify why FTRs in Qatar can be expected to be higher than in the EU but lower than in other MENA and African countries. The main argument of the CRA regarding cost structure is based on population density. In our view this is misplaced because: i) Population density is relevant for the access network but this is not included in the FTR. ii) The main cost driver would be customers (or traffic) per exchange. iii) However it is not clear that Qatar would have more customers or traffic per exchange. iv) Labour and land cost are a significant component and Qatar face higher cost than other non-oil abundant MENA countries and African countries. v) The benchmark of the CRA does not show strong correlation between population density and FTR*."

156. "*Overall and pending further clarifications from the CRA to explain the gap between Option 1 and Option 2 which should be much narrower it would appear that the rates under Option 2 are reasonable when compared to benchmarks*."

4.3.1.4 CRA's finding and proposed decision

On Ooredoo's comments:

157. On the benchmark, the CRA is fully aware that the high number of different aspects (e.g. geographical, economical, technical or market conditions) that affect the cost of provision in a certain country generally hamper the direct comparability with other countries. In addition to that, there are other regulatory aspects, such as methodological principles defined in the costing tool used as reference (e.g. cost base, cost standard, etc.) or policy-making decisions, that impede a direct correlation between the population density and the applicable FTR of countries from the benchmark.

At the same time, the CRA outlines that this benchmark has been exclusively used as an additional tool to crosscheck the proposed FTR with the international practice. However, there is no doubt that costing information available to the CRA is the most appropriate tool to define the FTR and ensure compliance with Article 29 of the Telecommunication Law, requiring Wholesale Charges to be cost-oriented.

158. On the impact of the proposed reduction in the FTR, the CRA has evaluated the weight of revenues generated by wholesale services over total revenues of Qatari SPs. The revenues generated by the FTR have very low relevance (ref. section 1). Hence, the CRA is confident that the proposed charges will not introduce any prejudicial distortion in the market.

159. On the current technical interconnection solution for fixed call termination, agreed

between Ooredoo and Vodafone, the CRA outlines the evolution of Ooredoo's network towards an integrated network where fixed and mobile calls will follow the same routing and have lower cost per unit. In addition, under the option 1, the CRA has allowed the FTR to be higher than the Retail internal cost for a fixed call, having introduced a leeway of 20% (ref. section 4.1.2 above).

160. On the fact that the FAC methodology alone does not provide the best basis for wholesale charges setting, the CRA notes that the use of the FAC cost standard was a methodological aspect previously consulted on and accepted by Ooredoo (ref. section 4.1.1). Indeed, the use of the audited RAS of Ooredoo should make Ooredoo confident on the evaluation of the wholesale charges. Moreover, even expressing disagreements with the cost trends proposed by the CRA, Ooredoo has neither corrected CRA's calculations nor provided alternative information or useful evidence allowing the CRA to evaluate potential alternative situations.

161. On the inflation, the CRA notes that Ooredoo has failed to provide evidences that support how such increase in the inflation had a relevant effect in either retail or wholesale costs for the operator.

162. On the request to keep the current FTR stable or increase it at the rate of 3% per year, the CRA notes that neither the RAS information supports this approach nor Ooredoo has delivered information or evidences supporting its request.

163. Finally, concerning Ooredoo's comment about a potential scenario below costs, please refer to CRA's position in section 5.1.5 where the option of the review clause is considered.

On Vodafone's comments:

164. On the "Bill and keep" (option 4), the CRA confirms that this approach shall not be used, as already indicated in section 4.2.5.2.3.

165. On the blended termination rate for fixed and mobile termination services (option 3), the CRA recognizes that this approach could lead to cross-financing between fixed and mobile services. In addition, the low adoption of this approach according to the international practice does not suggest opting for this alternative. On the other hand, this option would anticipate the convergence between fixed and mobile networks providing with a forward-looking wholesale charge.

166. On the differences observed between the retail on-net and the wholesale termination cost per unit in Ooredoo's RAS, these are due to the current technical interconnection solution for fixed call termination agreed between Ooredoo and Vodafone as the optimal one. Under this solution, mobile switches are used as intermedium step to interconnect fixed switches, increasing the network cost per unit of the FTR.

167. On Vodafone concerns on the reduction proposed by the CRA for the FTR over the period 2018-2020, the CRA refers Vodafone to the responses given above to Ooredoo on this same topic (ref. point 158).

168. With regards to Vodafone comments on the benchmark, the CRA would like to note the following:

    168.1 Vodafone states that the population density is relevant for the access network, while for the FTR the main cost driver would be customers (or traffic) per exchange. The CRA agrees with Vodafone that FTR costs would be related with the density of subscribers per exchange, which is in turn directly related with the population density.

    168.2 Vodafone also claims that labour and land costs are higher in Qatar than in other countries. The CRA notes that costs effectively incurred by Qatari operators related with these items are already properly reflected in the costs used to set the Wholesale Charges.

Proposed Options

169. Taking into consideration operators' contributions, the CRA now consults on the two following options:

169.1 **Option 1**: **Wholesale Charges, which pass the PT (with Glide Path)**

This approach follows the principle of non-discrimination and is aligned with CRA's scope to create a fair competitive field, permitting the OLOs to compete with Ooredoo. This approach is also forward looking given that Ooredoo is installing a unified network, where fixed and mobile calls will be routed in the same way. Hence, in the medium term the current routing will be obsolete and cost per unit will decrease from the current one (ref. Option 2).

This option is based on the Audited RAS of Ooredoo. Cost trends used by the CRA has not been corrected by the SPs. Indeed, the value proposed is higher than the Retail internal cost for a fixed call, because the CRA allows for a leeway of 20% (ref. section 4.1.2 above).

The CRA also notes that the Option 1 was previously employed for Setting the Wholesale Charges for the period 2015-2017 (ref. CRA Order 2015/31/05F).

169.2 **Option 2: Wholesale Charges, based on actual cost (with Glide Path)**

This option is based on the cost of the current technical solution implemented by Ooredoo.

170. The table below shows the Wholesale Charges proposed by the CRA for the options above, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale charges, which pass the PT (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0119	0.0063	0.0006
Change to previous year			-32%	-47%	-90%
Option 2 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0150	0.0125	0.0100
Change to previous year			-14%	-17%	-20%

Table 4 Fixed Call Termination Service to Geographic Numbers – Wholesale Charges [CRA calculation]

171. The CRA is minded to set the Wholesale Charge for this service consistent with the Option 1 above, as;

171.1 The same approach was used to set the Wholesale Charge for the years 2015, 2016 and 2017;

171.2 The Wholesale Charge would be forward looking from a technical and economic perspective, anticipating the convergence of the Fixed and Mobile Networks, which process is on-going;

172. Regarding the value proposed by the CRA for both of the above options, the CRA outlines that alternative cost trends and inputs are welcomed from SPs provided that they are specific, fully justified and accompanied by strong evidence and supporting information/calculations. Ooredoo is also specifically requested to review the cost trends, which are included in the file excel sent to Ooredoo on October 1, 2017 (ref. CRA letter CRA/RAC-T/115/2017).

Question 1	FTR: Which of the options proposed by the CRA (1 or 2) do you suggest to use and why?

4.3.2 Mobile Call and Video-Call Termination Service

Question 11: Do stakeholders agree with the CRA's proposed Wholesale Charge for the Mobile Call and Video-Call Termination Service? Which of the Option proposed by the CRA do you suggest and why?

4.3.2.1 CRA's position in the first Consultation Document

173. The CRA consulted on the following options for the regulation of the "Mobile Call and Video-Call Termination Service":

		Approved Charge	Charges for consultation		
QAR/min		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Mobile Call and Video-Call Termination Service	QAR/min	0.0762	0.0561	0.0360	0.0159
Change to previous year			-26%	-36%	-56%
Option 2 – Fixed and Mobile Blended Wholesale Charges (n.b. susceptible of changes according to the level of the FTR)					
Mobile Call and Video-Call Termination Service	QAR/min	not applicable	0.0549	0.0353	0.0158
Change to previous year		not applicable	not applicable	not applicable	not applicable
Option 3 – Zero Rating					
Mobile Call and Video-Call Termination Service	QAR/min	not applicable	0.0000	0.0000	0.0000
Change to previous year		not applicable	not applicable	not applicable	not applicable

Table 5 Mobile Call and Video-Call Termination Service – Wholesale Charges for consultation [CRA calculation]

4.3.2.2 Ooredoo's response to the first Consultation Document

174. "*The mobile termination service represents a major part of the total wholesale revenues and a dramatic drop in termination rates suggested by the CRA will cause the total telecommunication market revenue to decrease for a third year in the row. In the absence of the drop in wholesale rates for national termination services (which otherwise represents loss of ✄mn QAR market revenues in next three years), the total market revenues is expected to show modest but positive increase. The dramatic drop in mobile termination rate is ill timed given the economic circumstances negatively affected by both general economic downturn and economic blockade. Minded of its consequences, Ooredoo cannot agree with the proposed reductions of wholesale charges for the mobile voice and video call termination services. Instead, Ooredoo urges the CRA to delay any revision of mobile termination rates or to adopt a much more gradual decline that would not disrupt the market, as the current CRA proposals will. In this respect, Ooredoo refers the CRA back to its initial response submitted on 6 June 2017*."

175. Additionally, in the Executive Summary of the letter submitted, Ooredoo also states: "*One of the justifications typically used by regulatory authorities to justify lower wholesale rates is a drive for lower retail rates, assuming that the industry can and would pass on the lower wholesale rates. However, as the CRA itself has acknowledged, retail prices in Qatar are already low. The International Retail Price benchmark report published by the CRA in 2017 indicates that retail prices in Qatar are one of the lowest in the GCC region*."

4.3.2.3 Vodafone's response to the first Consultation Document

176. "*Vodafone Qatar does not support Options 2 and 3 for the reasons we set out in our responses to Questions 8 and 10 above*."

177. "*Under Option 1, the CRA is proposing to lower MTRs by 80% in three years. Vodafone Qatar disagrees with this proposal. While Vodafone Qatar acknowledges that there may be some room for MTRs to decline when compared to benchmarks, reductions, if any, should be gradual to an acceptable level and not detrimental to the overall sector growth*."

178. "*Vodafone Qatar's considers that the CRA's proposed drastic cut is neither reasonable nor justified. It the wrong signal to investors and the mobile sector characterised by flat underlying revenue growth, a difficult geopolitical and macroeconomic environment which is negatively impacting growth opportunities and revenues such as roaming and as a result of which the industry has to incur additional costs and face significant additional operational complexities well known to the CRA. At the same time, a new wave of investment in 5G is expected by mobile operators. Vodafone Qatar, despite*

being a lean and efficient operation, has not be able to make a positive profits since its market entry and its EBITDA margin has varied between ✂% and ✂%, hardly an evidence of super-normal profit. We continue to post net losses. Lowering MTRs will further depressed overall industry revenues which is a key indicator affecting share prices and credit ratings. It could lead to increase in financing cost which in turn will need to be passed on to consumers."

179. "*Further in terms of market outcomes, the own benchmarking of the CRA shows that mobile markets in Qatar are delivering strong outcomes for consumers with prices comparing favourably with its peers in the region and well with OECD benchmarks. The Report also shows that Vodafone Qatar is consistently cheaper than Ooredoo. Competition in mobile in Qatar has produced good results and continues to spur innovation and drive operators to introduce new technologies rapidly and on a wide scale: Vodafone Qatar has a wide coverage of 4G and 4G +. It is not clear what the CRA intends to achieve through those cut*."

180. "*Further, the proposals will be completely out of step with benchmarks. If implemented, the CRA proposals will lead to MTR half of the European average and about a quarter of the MENA average*."

181. "*Further it should be noted that no significant downward trend in MTRs is expected in Europe where pure LRIC has been in place for a number of years. This is confirmed by key European countries where glide paths are in place and/or proposed for the next three years. For example in the UK, where MTRs are among the lowest in Europe, there are expected to remain flat in the next three years. France has proposed annual decreases of 3%*."

182. "*If implemented, the CRA's proposal will led to MTRs in Qatar being 36% lower than the UK where the pure LRIC cost standard apply, i.e. where the scope of relevant cost is significantly narrower, and 50% lower than in Bahrain, where according to the CRA's logic, MTRs should be lower than in Qatar*."

183. [Additionally, Vodafone has presented longer explanations and modifications to the exercise previously submitted to the CRA on 25 May 2017, where the MTR was estimated based on Vodafone's information and assumptions.]

184. "*For the reasons above, we do not support the CRA's proposal to drop MTR by 80% in a three year time horizon as this would result in MTRs falling below our cost and further depressed industry revenues during a challenging macro-economic and political context. We urge the CRA to rethink its proposal in light of the current environment and industry trends and to explain the desired market outcomes it seeks to achieve with the proposed cut. We would also welcome clarification from the CRA as to how the proposal supports the furthering of the duties of the CRA as they relate in particular to the promotion of the sector and investment. In our view the ARF gives the CRA ample leeway to exercise its judgment in setting MTRs to an acceptable level balancing the different objectives of the CRA, especially when considering the effect of various allocation bases on MTRs*."

4.3.2.4 CRA's finding and proposed decision

On Ooredoo's comments:

185. On Ooredoo's comment that the reduction proposed by CRA in the MTR will cause the market revenues to decrease for a third year in the row, the CRA notes that Ooredoo has estimated a reduction of ✂[14] million QAR over the period 2018-2020. This equals to a reduction of -1% of the total revenues estimated by Ooredoo for the same period✂million QAR. The CRA is of the view that this reduction is not likely to

[14] It is also worth outlining that the impact calculated by Ooredoo has assumed the zero-rating scenario (MTR equal to zero), which is the most aggressive among the proposed options, and that as already indicated in section 4.2.5.2.3 it is not the option that CRA expects to use.

introduce any damage on the operator's performance.

Additionally, the reduction will not impact the margin of Ooredoo (and Vodafone). In fact, for a two-way interconnection service, wholesale costs incurred by the industry are netted. Given that the traffic for mobile calls is nearly balanced between Ooredoo (47%) and Vodafone (53%), the reduction in revenues would equally be reflected in the incurred costs, without substantial impact on the profit.

186. The CRA is also aware of the geopolitical and economic conditions that the State of Qatar is currently facing. However, there is no evidence that the reduction proposed in the MTR would negatively affect the development of the telecom sector as a whole. Indeed, low MTR has demonstrated to have a positive impact in investments conducted in the industry.

As example, one of the conclusions of the study "*Assessment of the 2009 Termination Rates Recommendation and costing methodologies for estimating termination rates*"[15] published by the European Commission was that an increase in mobile investments (measured by the increase of 55% in CAPEX in the 28 countries) had taken place in the European Union between 2009 and 2014. In that same period, the simple average of MTRs at European level was reduced by -76% (from 7.00 to 1.69 Eurocent/min)[16]. It can be highlighted that market conditions in Europe along that period where not the most favorable either (i.e. the countries of the European Union were facing a period of economic regression).

187. On the comments about the favorable position of Qatar when comparing prices offered by Qatari SPs to retail customers with respect to those observed in other jurisdictions, this situation could have been enabled in parallel with reductions in the MTR imposed in the past by the CRA. As such, CRA considers that further reductions of the MTR are fundamental to guarantee these consumers' benefits in the future. In the same line, the CRA notes that the non-reduction of the MTR would entail a scenario with artificially high wholesale costs. This scenario could potentially lead to controversial situations such as surplus gained from the wholesale charges used to subsidise retail services, which is prohibited according to the Qatari Telecommunications Law.

188. The CRA noted that Ooredoo has submitted an additional exercise in Excel format where it calculates the potential impact on the revenues of the Wholesale Charges proposed by the CRA. Ooredoo has used traffic forecasts for the mobile termination voice service that differ from those previously submitted (ref. response of Ooredoo to the Data Request sent by CRA to the operators on March 28, 2017). The following table shows the existing differences:

	2017	2018	2019
Original Submission (min)	✂	✂	✂
New Submission (min)	✂	✂	✂
Difference (%)	35%	58%	81%

Figure 7 Differences between traffic forecast for the mobile termination service [Source: Ooredoo]

Ooredoo is welcome to revise its assumptions, as long as a compelling rationale is being provided.

On Vodafone's comments

189. On the application of options 2 (fixed and mobile blended termination rate) and 3 (zero rating – bill and keep), the CRA confirms that these will not be applied in Setting the Wholesale Charges for the period 2018 – 2020 (ref. to section 4.3.1.4 for more details).

[15] See website: https://ec.europa.eu/digital-single-market/en/news/termination-rates-recommendation-helps-achieve-lower-and-more-consistent-rates-new-study-shows

[16] See following report published by BEREC: http://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/6086-termination-rates-at-european-level-janu_0.pdf

190. On the comment on the impact of proposed reduction of the MTR and on the favorable position of Qatar in terms of prices when compared with other jurisdictions, the CRA refers Vodafone to the responses given above to Ooredoo on these same topics (ref. points 185 and 187).

191. Vodafone is also concerned with the decrease proposed in the MTR (i.e. -79% in three-years).

CRA notes that the magnitude of this proposal is aligned with glidepaths previously applied by a number of national regulators worldwide:

191.1 In the period between April 2012 and December 2014 (less than 3 years of duration), the CNMC imposed to Spanish operators, reductions of the MTR in the range between -73% and -78%[17];

191.2 AGCOM imposed to Italian operators a reduction in between -61% and -72% in only one year (in the period July 2012 and July 2013);

191.3 In Germany[18], the regulatory agency imposed national operators a suddenly reduction of -58% in the MTR at the end of the year 2010.

191.4 In Luxembourg[19] the MTR was reduced by -89% in the year 2014.

192. On Vodafone's comment that no significant downward trend in the MTR is expected in other jurisdictions for the next three years, the CRA outlines the following:

192.1 In Jordan[20], the national authority (TRC) has imposed a reduction from the current MTR of 0.0641 QAR/min to a value of 0.0104 QAR/min in 2021, by means of a glidepath with equal steps. This entails a reduction of -84% in a period of 4 years.

192.2 In India[21], the Telecom Regulatory Authority of India has recently notified a reduction from the previous applicable charge of 0.0078 QAR/min to the new charge of 0.0033 QAR/min (reduction of -57%), with effect from October 2017 and applicable until December 2019. Additionally, this Authority has also announced that from January 2020, the MTR will be set to zero, following a bill-and-keep charging method.

192.3 In United Kingdom and France, the MTR already presents considerably low levels in the year 2017. For instance, currently, the MTR in United Kingdom (0.0247 QAR/min) and in France (0.0315 QAR/min) are respectively 47% and 33% lower than the average of the MTR in European countries (0.0469 QAR/min). For these countries, the low level of the MTR justifies the reduced trends applied in the subsequent period 2018-2020.

192.4 In Spain, in 2017, the MTR is set at 0.0465 QAR/min., value consistent with the average of the MTR in European countries (0.0469 QAR/min). Nevertheless, the National Regulatory Authority has recently decided[22] to reach a MTR of 0.0273 QAR/min in 2020. This entails a reduction of -41% in less than three years.

192.5 In Norway, the National Regulatory Authority has recently decided the reduction of the MTR from the currently applicable value of 0.0281 QAR/min to 0.0138 QAR/min, to be reached in January 2020 by means of glidepath.

Based on the above, the CRA confirms that the reduction proposed for Qatar in the

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17 See weblink: https://blog.cnmc.es/2011/12/02/nuevo-recorte-a-las-tarifas-de-terminacion-movil/

18 See following weblink from the OECD: http://dx.doi.org/10.1787/888933225193

19 See following weblink from the OECD: http://dx.doi.org/10.1787/888933225193

20 See weblink: http://www.trc.gov.jo/EchoBusV3.0/SystemAssets/PDF/AR/%D9%85%D8%B1%D8%A7%D8%AC%D8%B9%D8%A9%20%D8%B3%D9%88%D9%82%20%D8%A7%D9%84%D8%A7%D8%AA%D8%B5%D8%A7%D9%84%D8%A7%D8%AA/%D8%A7%D9%84%D9%82%D8%B1%D8%A7%D8%B1%20%D8%A7%D9%84%D8%AA%D9%86%D8%B8%D9%8A%D9%85%D9%8A8-12-2017/TRC%20Explanatory%20memorandum%20on%20pricing%20for%20mobile%20interconnection.pdf

21 See weblink: http://www.trai.gov.in/sites/default/files/IUC_Regulations_2017_Final.pdf

22 See weblink: https://www.cnmc.es/2017-11-21-la-cnmc-propone-rebajar-los-precios-mayoristas-del-movil-mas-del-40-365656

period 2018-2020 is not dissimilar from practices undertaken by other national authorities worldwide for the coming years.

193. In relation to the exercise submitted by Vodafone, the CRA has checked this model against another model submitted by Vodafone in July 2017. According to the model delivered in July 2017, the cost of the MTR falls within the range proposed by the CRA.

194. On the request to explain how the proposed charges allow CRA to fulfil its various obligations, we kindly refer Vodafone to section 4.2.2.4.

Proposed Decision

195. In conclusion, the CRA expects to regulate the service “Mobile Call and Video-Call Termination Service” based on the option 1 of those proposed in the First Consultation Document.

196. The CRA also notes that the current wholesale charges were set well above costs. By way of example, the comparison between the Qatari MTR applicable in 2015 (0.0900 QAR/min) and the cost produced by Ooredoo’s RAS for that same year (✂ QAR/min) leads to a difference in excess of 130% (or more than two times).

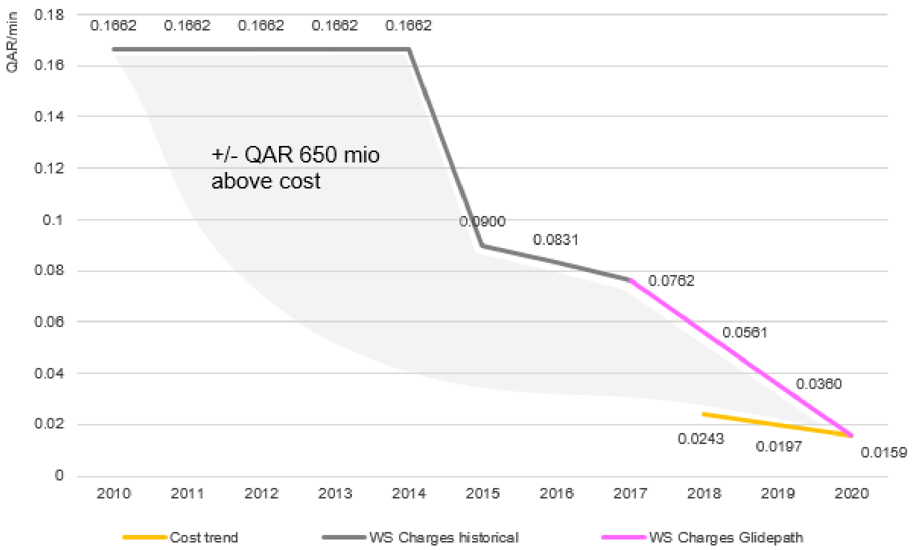

Figure 8 MTR vs cost [Ooredoo’s RAS and CRA calculation]

197. As shown in Figure 8 above, the regulated rates far exceed cost. Even with an existence of glidepath the excess is around QAR 650 million QAR for Ooredoo and Vodafone on the MTR alone.

198. This option is based on a cost-oriented scenario, in line with the Article 29 of the Telecommunications Law.

199. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
QAR/min		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Mobile Call and Video-Call Termination Service	QAR/min	0.0762	0.0561	0.0360	0.0158
Change to previous year			-26%	-36%	-56%

Table 6 Mobile Call and Video-Call Termination Service – Wholesale Charges for consultation [CRA calculation]

200. The CRA notes that very high margins for traditional interconnection services would provide limited incentives for migrating to newer and more cost-efficient technologies such as, VoLTE (Voice over LTE). This will be to the detriment of the development of the sector in Qatar and ultimately to the detriment of customers.

201. It is also important to highlight that the ongoing migration to a modern network combining fixed and mobile networks is likely to reduce cost. Hence, conservative cost trends applied by the CRA for forecasted costs are unlikely to leave wholesale charges below costs.

Question 2	MTR: Do stakeholders agree with the CRA's proposed Wholesale Charge for for Mobile Call and Video-Call Termination Service?

4.3.3 Call Termination Service to Toll-Free Numbers (reverse charge) for fixed and mobile

Question 12: Do stakeholders agree with the CRA's proposed approach for setting the "Call Termination Service to Toll-Free Numbers (reverse charge) for fixed and mobile"?

4.3.3.1 CRA's position in the first Consultation Document

202. CRA informed that it expected to regulate the "Call Termination Service to Toll-Free Numbers (reverse charge) for fixed and mobile" service at the same level as the "Mobile Call and Video-Call Termination Service" (see section 4.3.2.4).

4.3.3.2 Ooredoo's response to the first Consultation Document

203. "*Ooredoo agrees, provided the CRA accepts Ooredoo's position on FTR and MTR*."

4.3.3.3 Vodafone's response to the first Consultation Document

204. "*Vodafone Qatar agrees*."

4.3.3.4 CRA's finding and proposed decision

On Ooredoo's comments

205. Please refer to CRA's positions about FTR and MTR, given in sections 4.3.1.4 and 4.3.2.4.

Proposed Decision

206. The CRA appreciates that Ooredoo's and Vodafone's agree with the approach proposed by the CRA.

207. In conclusion, the CRA will set the wholesale charges for this service at the same level as the "Mobile Call and Video-Call Termination Service" (see section 4.3.2.4).

4.3.4 Call Termination Services to Numbers for Inbound International calls

Question 13: The CRA is interested in hearing a justification for the SPs on the (non) regulation of Call Termination Services to Numbers for Inbound International calls. This argumentation should include clear figures in terms of volumes, revenues and cost.

4.3.4.1 CRA's position in the first Consultation Document

208. CRA consulted Qatari SPs about their views with respect to the regulation of the "Termination Services to Numbers for Inbound International calls".

4.3.4.2 Ooredoo's response to the first Consultation Document

209. "*The proposed reduction of the termination rates for incoming international calls would have major negative impact on both Ooredoo and Vodafone Qatar revenues and profit*

margins. It would effectively result in the transfer of wealth from Qatar to other countries thus benefiting blockade GCC countries as well as other countries."

210. With regards to the statement included by the CRA in the Consultation Paper, Ooredoo notes the following: "*First, the commercial rates are not set reciprocally. Second, one cannot compete with something that is priced at zero rate (OTT VoIP is)*." Additionally, the operator also notes that "*In the face of OTT substitution, price declines for international calls do not anymore lead to corresponding increase in the volume of calls per subscribers and as such, result in revenue and margin decline for service providers*."

211. "*Any reduction of the international call termination rate that Ooredoo is able to negotiate with the service providers outside of Qatar hinges on the commitment of increased volumes of traffic sent by Ooredoo to that service provider. In other words, no service provider will voluntarily reduce its own international call termination revenues. This traffic volume increase is mainly achieved by Ooredoo (or any other service provider) by winning subscribers from other network(s) via retail price reduction*."

212. "*There are two possible market reactions to the CRA's proposed reduction of international call termination rate: a) Service Providers outside of Qatar will simply pocket the extra margins and Service Providers in Qatar will lose "only" the wholesale revenues (about ✂ QAR mn. in next 3 years), b) service providers outside of Qatar will in response to reduced termination rate in Qatar drop their retail price for calls to Qatar. Given such dramatic reduction in termination rates for international calls proposed by the CRA (and supported by larger economies of scale and more relaxed retail regulations) this will allow service providers outside of Qatar to set retail rates for international calls to Qatar below those set by service providers in Qatar for reciprocal service. This will affect the terms of trade in international calls. The volume of international calls coming to Qatar will increase and volume of international calls going from Qatar will decline*."

213. "*Furthermore, as the volume of international call traffic from Qatar to other countries will decrease, any discounted termination rates negotiated in the past with such counter-parts will not apply, as Service Providers in Qatar will fail to meet the volume thresholds committed to benefit from those discounts. Consequently, Service Providers in Qatar will have to increase their retail prices for international calls for its customers to cover the increased cost of termination at the destination countries*".

214. "*A vicious downward spiral of decreasing value will be created by the CRA contemplated action. Ooredoo estimates that accounting for the effects of a) and b) together, the total revenues on telecom market in Qatar will be reduced by QAR ✂ bn. in next three years. Because there will not be reciprocal reduction in termination rates for international calls from Qatar abroad, the reduction in termination rates for incoming international calls will be translated also to margin impact for Service Providers in Qatar*."

215. "*Currently there is significant trade imbalance in international voice call traffic, with Qatar being a net exporter of traffic. Ooredoo in the first 9 months of the year 2017 sent out ✂ minutes and received ✂*."

216. "*The CRA proposal to reduce international call termination rate by ✂% will likely reverse the flow of international voice call traffic. The CRA's proposed steep termination rate reduction for incoming international calls is not tied to specific incoming voice call volume commitments. This termination rate reduction provide all Service Providers abroad with same retail price flexibility without any burden to meet specific volume commitments (unlike service providers in Qatar) and hence they do not have to be afraid of failing to meet volume commitments once they reduce their retail price in case that their competitors will follow the same move. Reduced costs and lack of restrictions in terms of specific volume commitments thus provide right incentive for Ooredoo's counterparts abroad to reduce their retail price to further*

enhance their gains from the international trade for voice calls."

217. Additionally, in the Executive Summary of the letter submitted by Ooredoo, the operator also states: "*If the impact of the reduction in termination rate for international calls on retail revenues is factored in, the total market revenue erosion can be up to QAR ✂ bn. over the period*."

218. "*Rating agencies have already downgraded the credit rating of both Qatar and Ooredoo in the recent past and they maintain a negative outlook. Given its substantial negative impact on Service Providers revenue and profitability prospects, the CRA's regulatory action will contribute to further downgrade(s) in credit rating of the Service Providers. This will have a knock on effect by reducing shareholder value, as well as increasing the cost of investment financing for service providers. The higher cost of financing will likely negatively affect customers in the short-term through higher prices and in long-term through lower network investments that will result following the worsening financials of service providers and a lower appetite for capital expenditure*."

219. Additionally, in the General Observations of the letter submitted by Ooredoo, the operator also states: "*The CRA proposed reduction in wholesale charges regulation will have an adverse impact on the financial position of both Ooredoo and Vodafone Qatar. It will have an adverse impact on their respective shareholders and bond holders, and will be seen by the world and in particular regional countries, as a sign of the general impact the economic blockade is having against the country, which would not be a true reflection of the state of affairs, but an artificial creation by the CRA's own making. Such an outcome goes against government interest*".

220. "*The CRA regulation will have a detrimental impact on the service provider's performance and will reduce the contribution the telecommunications sector makes to the country Gross Domestic Product (GDP). The CRA's regulation may also result in a further reduction in Qatar's sovereign credit rating and credit rating for service providers, increasing the cost of borrowing for the country and adversely affect the market value of both telecom Service Providers in Qatar. A negative change to the credit rating would increase the cost of borrowing for both telecom Service Providers in Qatar and ultimately may lead to increases in prices for customers*."

221. "*It is important to note that Ooredoo Qatar generates ✂% and ✂% of Ooredoo Group revenue and EBITDA respectively. It also contributes ✂% of total net profit attributable to shareholders. The impact of the CRA's proposed regulation would thus adversely affect overall Ooredoo Group financial performance. The current Stand Alone Credit Profile (SACP) of Ooredoo with S&P is BBB-, one step above a junk rating threshold, (Ooredoo's rating based on state support is uplifted by three notches). Ooredoo is also set on for negative credit outlook by rating agencies already. Institutional Ooredoo bondholders who by definition prefer a lower risk profile for their portfolio investments will see such ratings as very concerning*."

Rating Agency Ratings: Company Default Spreads				
Fitch's Rating	S&P's Rating	Moody's Rating	Default spread in basis points*	Increase in spread
AAA	AAA	Aaa	54	
AA+	AA+	Aa1	62	8
AA	AA	Aa2	67	5
AA-	AA-	Aa3	72	5
A+	A+	A1	76	5
A	A	A2	78	2
A-	A-	A3	86	7
BBB+	BBB+	Baa1	107	21
BBB	BBB	Baa2	118	12
BBB-	BBB-	Baa3	144	26
BB+	BB+	Ba1	264	120
BB	BB	Ba2	266	2
BB-	BB-	Ba3	268	2
B+	B+	B1	301	33
B	B	B2	365	64
B-	B-	B3	452	88
CCC+	CCC+	Caa1	789.95	
CCC	CCC	Caa2	948.71	
CCC-	CCC-	Caa3	1,053.27	

Figure 9 Rating spread - as of Sept 2017 [Source: Ooredoo]

222. "*The revenue and margin drop caused by the proposed CRA's regulation is likely to cause Ooredoo's SACP rating to descent further down to BB+ or lower, effectively crossing the junk rating threshold. There is a gradual progression of spreads as rating drop, whilst there is a large jump as one moves from BBB- to BB+; the reason being that many institutional investors (e.g. pension funds by law) cannot own junk rated debt as part of their portfolio. The drop in the rating will cause substantial sell-off of Ooredoo bonds, raising the cost of Ooredoo's bonds (expected return) up by* ✂+ *points. Consequently, increased interest service cost will put pressure on future dividends, leading to greater share discounting and further increase the cost of capital for Ooredoo*."

223. "*To compensate for the reduction in the margin and increased cost of financing, Ooredoo will be forced into a major cost saving drive, that will likely result in the reduction and / or delay in investments and hence reduction in long-term customer benefits. In such circumstances, it is also likely that service providers will seek to pass on some of these adverse effects onto consumers through higher prices*."

4.3.4.3 Vodafone's response to the first Consultation Document

224. "*Vodafone Qatar does not support the regulation of termination for internationally originated calls at the domestic MTRs. We do not understand why the CRA is raising this question as it would be against the national interest to regulate MTRs for internationally originated calls at domestic MTRs. It would be particularly ill-advised to proceed with regulating international inbound termination rates as this would be against the national interest. It would hurt domestic operators without providing benefits to consumers in Qatar as the economic surplus generated by domestic operators on international inbound will benefit foreign operators and lead to a lower influx of foreign currency. As such it would be against the duties of the CRA set out in Article 2.1 of the Telecommunications Law to "promote the telecommunications sector in order to consolidate national, social and economic development*".

225. "*For Qatari consumers to benefit from the regulation of inbound international calls at the local MTR level would require two conditions to be met. First, the far end operator will need to pass on the full reduction in termination rate at the retail level leading to*

lower price to call Qatar and an increase of calls, the benefit to consumers in Qatar being the additional calls received. This is highly unlikely as pricing for international calls tend to be by zone (e.g. similar price across GCC countries) and the extent of pass through will depend of competition in the country of origin of the call. Further the limited volume of calls to Qatar is unlikely to lead to differentiated pricing. Overall, any potential benefit would be trivial and need to be balanced against cost as foreign operators will benefit from lower termination rates by retaining the savings while domestic operators will suffer from lower income from international inbound calls."

226. "*Second, a lower rate for international in-bound calls to Qatar will need to translate into a corresponding decrease for the termination rate for calls destined outside of Qatar. The benefit to consumers will be lower international calls. However, regulation will constrain our negotiating hand and hence lower MTR for international in-bound calls is unlikely to result in a corresponding decrease in the rate applied by the far end operator*."

227. "*Rates are typically not reciprocal (except within the GCC)*".

228. "*Given the population composition of the country, Qatar is a net sender of international traffic and for key destinations by a very significant amount (e.g. India, Pakistan, Egypt, Bangladesh, Philippines where the termination for the originating country is lower than the termination rate to Qatar). Hence, for our high volume destinations we regularly negotiate with far end operators to seek competitive rates in order to respond to competition on international calls and with OTT but the question of reciprocity does not come up in negotiations*."

229. "*The statement made by the CRA according to which the current situation with international termination lead to higher cost of international calls for retail customers in Qatar is therefore incorrect*."

230. "*We also note that in a large number of countries in Europe (such as Italy, Greece, the Czech Republic, Spain, Malta, Portugal) there is no regulation of rate for international inbound traffic originated outside the European Economic Area in order to further the national interest and protect domestic operators*."

231. "*To conclude, Vodafone Qatar considers that the regulation of international inbound rate at the local MTR level would be detrimental to the country and the operators' interests with no tangible benefits to consumers. Should the CRA be minded to consider regulating international inbound calls, we urge the CRA to carry out first a detailed analysis of the cost and benefits of regulating international inbound calls; explain how it will benefit the country and how it will satisfy its duties*."

4.3.4.4 CRA's finding and proposed decision

CRA Comments

232. The CRA thanks Ooredoo and Vodafone for their extensive comments.

233. The CRA has analysed the approaches commonly chosen by other regulators across the world for the regulation of international termination voice services:

   233.1 European Union: The general practice is to set the International Termination Rate (ITR) at the same levels as the National Rates (FTR or MTR) for intra-EU traffic, while commercial agreements are used to negotiate charges for traffic coming from services providers located in jurisdictions outside the EU.

   233.2 United Kingdom specifically: The National Regulatory Authority does not differentiate the origin of the international termination calls, what would indicate that all calls, including also those originated outside the EU, would be regulated based on the National Rates[23].

233.3 Bahrain[24], Ghana[25], India[26]: International termination rates are regulated and set differently to domestic charges.

233.4 United Arab Emirates[27], New Zealand[28]: These countries have regulated the international termination rates at the **same levels** as national termination rates.

233.5 Australia, Indonesia, Singapore and Lebanon: For these countries, no public information has been found regarding the regulation of international termination rates. Presumably, these rates would be based on commercial agreements.

233.6 Saudi Arabia: According the market review[29] in 2010, the market of wholesale international termination calls was not subject to ex-ante regulation. Therefore, commercial agreements would be applicable in this case.

233.7 We also note that no countries with a Zero Rating scenario have been identified for the international termination.

234. Based on the above recollection, the CRA is of the view that 4 Options are applied in other jurisdictions to regulate the international termination:

234.1 **Option 1**. International termination set at the **same level** as national termination. Under this option, national regulators impose the same wholesale charges for all termination voice calls, irrespective of the origin.

234.2 **Option 2**. International termination calculated as the **national termination plus a mark-up**, due to differences in costs. In some cases, regulators may opt for adding extra-rates on top of the national terminations, whose main objective is to reflect existing differences in terms of provision between the national and the international service (e.g. use of international gateways or specific links that may increase the cost).

234.3 **Option 3**. International termination based on **specific policy strategies**. In some jurisdictions, political decisions have led to the setting of rates above the national terminations, generally addressed to revenue generation. These rates would have not been set based on cost-oriented scenarios.

234.4 **Option 4**. **Non-regulation**. Service providers are free to negotiate applicable charges, based on commercial agreements reached with service providers from other jurisdictions.

235. The following outcomes are expected from the options listed above:

235.1 Options 1 and 2 often lead to low rates for the international terminations, given the fact that they are generally set based on cost-oriented scenarios.

235.2 Option 3 presents higher rates than the international termination cost.

235.3 Option 4 tends also to establish rates higher than international termination cost.

236. Main effects of high rates associated to the international termination services are:

236.1 At least in the short-term, high rates allow service providers to increase revenues. These additional revenues can be invested in the domestic network,

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23 See page 26, 3.52 of document https://www.ofcom.org.uk/__data/assets/pdf_file/0011/103340/mobile-call-termination-consultation.pdf

24 See link (page 7): http://www.tra.org.bh/media/document/MCD%2009%2015%20067%20RO%20Orders%20on%20Batelco%20Viva%20and%20Zain%20setting%20the%20regulated%20call%20termination%20rates%20PV.pdf

25 See link: https://nca.org.gh/assets/Uploads/Ghana-Electronic-Communications-Amendment-Act-Act-787.pdf

26 See link (page 7): http://www.trai.gov.in/sites/default/files/IUC_Regulations_2017_Final.pdf

27 See link (page 23): https://www.google.es/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0ahUKEwj9n6y4qcPXAhWMvBQKHdWkDDEQFgg3MAI&url=https%3A%2F%2Fwww.tra.gov.ae%2Fassets%2FiuZK4C0I.pdf.aspx&usg=AOvVaw0VTXE3vHNJq-cTaEH3K4Nd

28 See link (Decision 724, page 4): http://www.comcom.govt.nz/regulated-industries/telecommunications/regulated-services/standard-terms-determinations/mobile-termination-access-service/

29 See link (page 24): http://www.citc.gov.sa/en/Decisionsoffers/Decisions/Documents/Attch274-284_MDDDReport_English_Final_August_31_2010.pdf

increasing for instance coverage levels and quality of services or favoring the deployment of new technologies.

236.2 High rates may lead to an increase in retail prices that, in turn, may decrease traffic from international destinations. This would be against consumers' benefits since communications from abroad would be reduced. It is important to highlight that in the long-term, such decrease in traffic could lead to a counterproductive scenario with a reduction in revenues.

236.3 Migration from traditional voice services to communications services provided through internet (such as OTT services) are likely to occur as a result of high retail prices.

236.4 If imposed by regulators, high rates may limit the ability of service providers to negotiate rates for outgoing traffic (termination in other countries), what could lead to high retail tariffs for international calls.

236.5 Incentivize unwanted practices, such as the SIM Boxes, refiling, tromboning, etc.

237. At the present time no regulation is applicable in Qatar for international termination services. Hence, the CRA should be sure that a different approach would be beneficial to Qatar.

238. With respect to traffic statistics, as indicated by both Ooredoo and Vodafone, in Qatar, incoming international traffic is tremendously lower ([redacted]% according to information submitted by Ooredoo) than outgoing international traffic. In other words, Qatari customers are sending a higher number of calls to international destinations than those received from abroad.

239. The above situation has been further accentuated in the last years, with a continuous increase of outgoing international traffic and a reduction of incoming international traffic, as illustrated in the following figures, based on information provided by Ooredoo:

[redacted]

Figure 10 Evolution of internatinonal traffic and termination rates [Source: Ooredoo]

From the above chart, the following insights may be extracted:

239.1 The balanced situation observed in 2006 ([redacted] and [redacted] million of minutes for outgoing and incoming traffic, respectively) has evolved towards to the current situation, where the outgoing traffic is significantly higher (around 10 times).

239.2 Such evolution has been accompanied by a reduction in terminations rates paid for outgoing international traffic, while in the case of incoming international traffic, a flatter evolution of rates paid to Ooredoo for terminating calls in its network may be observed. We note that foreign operators pay around x times the rate as they receive.

239.3 Qatari service providers have indicated in their arguments that the evolution observed in termination rates for outgoing international calls is a consequence of the evolution in traffic. More specifically, their efforts for reducing retail prices for international calls offered to Qatari customers over that period would have led to an increase in outgoing international traffic. At the same time, such increase has allowed them to negotiate competitive rates for termination rates paid to services providers located in other jurisdictions, benefiting in such way from low termination rates paid for outgoing international traffic.

239.4 In contrast, the reduction of volumes observed in incoming international traffic has induced to a flatter evolution of termination rates paid to Qatari service providers for international calls terminated in their networks.

240. In the same context, the following chart shows the evolution observed in Ooredoo's average unit revenue together with total revenues associated to international outgoing calls over the period 2006-2016:

[redacted]

Figure 11 Evolution of unit and total revenues of outgoing internatinonal traffic [Source: Ooredoo]

The following considerations may be extracted:

240.1 Along the period 2006-2016, Ooredoo has reduced retail prices offered to Qatari customers for outgoing international calls, as it is reflected in the average unit revenue, roughly in line with the decrease of IOT, retaining its profitability.

240.2 When assessing total revenues, the highest amounts correspond to the period 2010-2012, when traffic volumes had already reached considerable high levels (for instance, in the year 2011, traffic volumes already represented a [redacted]% of volumes in the year 2016).

241. The CRA notes that the above comments have been developed based on the information provided by Ooredoo. However, Vodafone has not provided any information regarding its incoming and outgoing international traffic and prices trends which could help this Authority to validate its conclusions.

242. On Ooredoo calculation exercise on the impact that the regulation of the international service might have in the credit rating, CRA outlines the following:

242.1 The high number of variables at play and the uncertainties associated make difficult to accurately estimate the impact that such decision could have, first, on the traffic and revenues of international calls, and second, on the credit rating.

242.2 After having reviewed the calculation exercise, the CRA considers that this exercise presents a number of simplistic assumptions, such as:

i. No traffic forecasts have been applied to international call services over the period 2018-2020, assuming the same levels of traffic as in 2017 for all these years. Thus, the decline in traffic that OTT services will likely provoke has not been considered. Indeed, this overestimates the impact on revenues lost.

ii. Ooredoo has assumed that the international termination would be set at the same level as the national termination. This is the "worst case scenario". However, in the first Consultation Document, such assumption was not stated by CRA. In fact, no specific value was indicated.

iii. The operator has also assumed that, after the introduction of the regulation, a 40% of international calls currently originated in Qatar will be originated from other countries (and terminated in Qatar). This percentage is drastically applied to all years in the period 2018-2020, without any kind of evolution. This aggressive assumption is not supported by evidences. The 40% percentage seems arbitrary.

In light of the above, CRA considers the Ooredoo's calculated impact is very overestimated and not fully supported by evidences.

243. From paragraphs above, it can be concluded that Qatari operators would be well positioned in terms of revenues generated thanks to the relative high termination rates received for international calls terminated in their networks when compared to those paid for outgoing international calls. At the same time, this situation would have been reached due to Qatari operators' efforts in offering low retail prices to their customers, what would explain the increase in outgoing international traffic over the last years.

244. The CRA also recognizes the relevance that OTT services are acquiring in Qatar in the last years as alternative product for international voice calls. This alternative option

available to Qatari customers reduces the risk that Qatari operators use their market power to unreasonably increase retail tariffs, against customers' interests.

Proposed Decision

245. The CRA is of the view that 4 Options are available to regulate this service:

245.1 **Option 1**. International termination set at the **same level** as national termination. Under this option, national regulators impose the same wholesale charges for all termination voice calls, irrespective of the origin.

245.2 **Option 2**. International termination calculated as the **national termination plus a mark-up**, due to differences in costs. In some cases, regulators may opt for adding extra-rates on top of the national terminations, whose main objective is to reflect existing differences in terms of provision between the national and the international service (e.g. use of international gateways or specific links that may increase the cost).

245.3 **Option 3**. International termination based on **specific policy strategies**. In some jurisdictions, political decisions have led to the setting of rates above the national terminations, generally addressed to revenue generation. These rates would have not been set based on cost-oriented scenarios.

245.4 **Option 4**. **Non-regulation**. Service providers are free to negotiate applicable charges, based on commercial agreements reached with service providers from other jurisdictions.

246. The CRA sees merits in any of the above Options.

Whilst the CRA is in principle not opposed to stay with the current option, the CRA is also first of all cognizant of the various unwanted effects high and imbalanced IOTs bring (see e.g. point 236 above).

Whilst the CRA recognizes the benefit of the strong position of the Qatari SPs vis a vis their international counter parts, the CRA must also strike a balance between the interests of the industry and the interests of the consumers. OTTs are integral component of the information society, widely adopted by the consumers and exert a positive influence on the competiveness of the wider ICT eco system.

247. If the CRA would continue not to regulate the Charges of Inbound International Termination this would be under the obligation that OTT services remain unimpeded by Qatari service operators. The CRA will continue to monitor the market and may issue a regulatory instrument to detail this subject matter in future.

Question 3	Inbound International Termination: Please provided your reasoned responses. Which of the above proposed Options is the most beneficial for the State of Qatar for the coming period?

4.3.5 Termination Emergency Services

Question 14: Do stakeholders agree to set the charge for the "Termination Emergency Services" at the same level of the FTR?

4.3.5.1 CRA's position in the first Consultation Document

248. The CRA informed that it expected to regulate "Termination Emergency Services" at the same level as the FTR (see section 4.3.1.4).

4.3.5.2 Ooredoo's response to the first Consultation Document

249. "*Ooredoo agrees with this proposal provided the CRA accepts Ooredoo's position on FTR*."

4.3.5.3 Vodafone's response to the first Consultation Document

250. "*In so far as the underlying costs of termination for emergency services are comparable to the cost of FTR, Vodafone Qatar has no objection to the proposal of the CRA to apply the same rate*."

4.3.5.4 CRA's finding and proposed decision

On Ooredoo's comments

251. Please refer to CRA's position about the FTR, given in section 4.3.1.4.

Proposed Decision

252. The CRA notes that Ooredoo and Vodafone agree on the approach proposed in the First CD for the "Termination Emergency Services".

253. In conclusion, the CRA will set the charge of the "Termination Emergency Services" at the same level as the FTR (see section 4.3.1.4)

4.3.6 SMS Termination

Question 15: Do stakeholders agree with the CRA's proposed Wholesale Charge for the SMS Termination?

4.3.6.1 CRA's position in the first Consultation Document

254. CRA consulted on the following proposed Wholesale Charges for the regulation of the "SMS Termination" service:

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
SMS Termination	QAR/SMS	0.0130	0.0091	0.0052	0.0013
Change to previous year			-30%	-43%	-75%

Table 7 SMS Termination – Wholesale Charges for consultation [CRA calculation]

4.3.6.2 Ooredoo's response to the first Consultation Document

255. "*Ooredoo notes that the current SMS and MMS termination rates pass the PMS test. Although we do not agree that minimum retail price for a service provider should be used to perform the PMS test as per the CRA's methodology. Instead, the average retail revenue per unit of a service set by Ooredoo should be used as per the definition of the PMS test and international practice. Hence, Ooredoo see no need to reduce the SMS termination charge any further*."

256. "*Ooredoo notes that EU average termination rate for the SMS service is 2.2 Euro cents (i.e. 0.1 QAR) and that the CRA's target proposed rate for 2020 is way out of this international benchmark figure. The MMS termination charge is not being regulated by EU regulatory authorities at all. Moreover both SMS and MMS service has declined in total volumes over time being effectively replaced by OTT messaging services*".

257. "*Ooredoo considers in general that the definition of the relevant markets for the SMS and MMS termination services to be obsolete and not reflecting the market reality. Since the OTT services are not regulated by the CRA and since they represent effective substitute for these services, Ooredoo proposes that the CRA deregulates the termination services for SMS and MMS and allows service providers to agree the termination rates for these services on a commercial basis. While not a major source of the wholesale revenues, the dramatic reduction in the wholesale termination rates for these services as proposed by the CRA are not supported be international practice and will contribute to a drop of the wholesale revenues for both service providers with its consequent negative implications*"

4.3.6.3 Vodafone's response to the first Consultation Document

258. "*While SMS traffic is declining at fast pace driven by OTT alternatives, Vodafone Qatar does not support such a drastic cut. They would set Qatar further out of line with benchmarks*:"

4.3.6.4 CRA's finding and proposed decision

On Ooredoo's comments:

259. On the use of the minimum retail price for the PMS test, the CRA would like to note that the operator's statement is erroneous. In fact, the average retail revenue is the parameter used for performing the test, while no minimum retail price has been considered. Please see further details on the methodology applied for the PMS test in section 4.1.3.4.

260. On the proposed rates, the CRA indicates that the cost orientation is an obligation imposed by the Qatari Telecommunication's Law in Articles 19 and 29 respectively.

While the CRA is aware that proposed rates are not aligned with those currently applied in other countries, the regulator considers that such proposed rates do not carry any risk of distorting the market because of the following reasons:

260.1 SMS termination services presents a low weight on revenues of Qatari operators. Based on information submitted by Ooredoo, the impact of the SMS termination reduction would be ✂million QAR for the period of 2018-2020. Taking into account that total revenues expected for the operator in that same period amount to ✂million QAR, this impact represents less than 0.1%.

260.2 Additionally, as already recognized by both Ooredoo and Vodafone, SMS services are being substituted by OTT services, indicating that the weight of these services will further decrease in the coming years.

On Vodafone's comments:

261. The CRA refers Vodafone to the comments above.

Proposed Decision

262. None of the Respondents have neither provided amended figures for CRA's to review its estimates nor any legal rational of why SMS should be out of regulation.

263. In conclusion, the CRA expects to regulate "SMS Termination" based on the approach proposed in the First Consultation Document.

264. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
SMS Termination	QAR/SMS	0.0130	0.0091	0.0052	0.0013
Change to previous year			-30%	-43%	-75%

Table 8 SMS Termination – Wholesale Charges for consultation [CRA calculation]

Question 4 SMS termination: Do stakeholders have further comments or alternative suggestion? Do stakeholders have a legal rationale to not regulate the charge of this product?

4.3.7 MMS Termination (Picture and Video)

Question 16: Do stakeholders agree with the CRA's proposed Wholesale Charge for the MMS Termination (Picture and Video)?

4.3.7.1 CRA's position in the first Consultation Document

265. CRA consulted on the following proposed Wholesale Charges for the regulation of the "MMS Termination (Picture and Video)" service:

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
MMS Termination (Picture and Video)	QAR/MMS	0.4300	0.2936	0.1572	0.0208
Change to previous year			-32%	-46%	-87%

Table 9 MMS Termination (Picture and Video) – Wholesale Charges for consultation [CRA calculation]

4.3.7.2 Ooredoo's response to the first Consultation Document

266. Please refer to responses given in section 4.3.6.4 together with the SMS Termination service.

4.3.7.3 Vodafone's response to the first Consultation Document

267. "*While MMS traffic is largely immaterial, Vodafone Qatar does not support such drastic cut*".

4.3.7.4 CRA's finding and proposed decision

Proposed Decision:

268. None of the Respondents have neither provided amended figures for CRA's to review its estimates nor any legal rational of why MMS should be out of regulation.
269. Considerations made for the SMS Termination are also applicable (please refer to section 4.3.6.4) to the MMS Termination.
270. In conclusion, the CRA expects to regulate "MMS Termination" based on the approach proposed in the First Consultation Document.
271. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
MMS Termination (Picture and Video)	QAR/MMS	0.4300	0.2936	0.1572	0.0208
Change to previous year			-32%	-46%	-87%

Table 10 MMS Termination – Wholesale Charges for consultation [CRA Calculation]

Question 5	MMS Termination: Do stakeholders have further comments or alternative suggestion? Do stakeholders have a legal rationale to not regulate the charge of this product?

4.3.8 Outgoing International Call Conveyance

Question 17: Do stakeholders agree with the above Option for the Outgoing International Call Conveyance?

4.3.8.1 CRA's position in the first Consultation Document

272. The "Outgoing International Call Conveyance" service is not used, since Ooredoo and Vodafone have their own network connections.

273. If this product is used in future, the CRA expects the Access Provider and the Access Seeker to agree on the various charges as per country destination.

274. In case no agreement can be reached, the Access Provider and/or the Access Seeker can bring the case in front of the CRA.

4.3.8.2 Ooredoo's response to the first Consultation Document

275. "*Ooredoo agree with the CRA that regulation of this service is irrelevant*."

4.3.8.3 Vodafone's response to the first Consultation Document

276. "*Vodafone Qatar agrees with the CRA's proposal*."

4.3.8.4 CRA's finding and proposed decision

Proposed Decision:

277. The CRA notes that Ooredoo and Vodafone agree with the approach proposed by the CRA for the "Outgoing International Call Conveyance".

278. In conclusion, the "Outgoing International Call Conveyance" service is not used, since Ooredoo and Vodafone have their own network connections. If this product is used in future, the CRA expects the Access Provider and the Access Seeker to agree on the various charges as per country destination. In case no agreement can be reached, the Access Provider and/or the Access Seeker can bring the case in front of the CRA.

4.4 Interconnection Links

4.4.1 Interconnection Links (charges and fees)

4.4.1.1 CRA's position in the First Consultation Document

279. Following points summarize how costs were estimated for the different components of interconnection links services:

279.1 Service E1 (capacity - distance independent) – recurring cost:

i. CRA has forecasted the total Network Costs for the years 2016-2018, assuming that the cost will decrease -24% per year as per the average of the annual growths of the years 2014 and 2015.

ii. The volume is left stable, as confirmed by Ooredoo's and Vodafone's forecast.

iii. The trend to establish the forecast cost per unit for the years 2019 and 2020 was prudently assumed equal to -10% per year.

279.2 Service km (distance dependent) – recurring cost

i. In reviewing the RAS 2015, the CRA did not accept the cost of the distance component of the Interconnection Links (DWNR15) because the cost driver used to attribute the cost of the SDH Rings to this product was not reliable.

ii. Therefore, CRA has relied on the average cost per unit per km of the wholesale SDH Rings, sourced from the RAS 2015. This network component has been deemed reliable after the review of the RAS 2015. CRA has forecasted the total Network Costs for the years 2016-2018, assuming that the cost will decrease -45% per year as per the average of the annual growths of the years 2014 and 2015.

iii. The volume is left stable, as confirmed by Ooredoo's and Vodafone's forecast.

iv. The trend to establish the cost per unit for the years 2019 and 2020 was prudently assumed equal to -20% per year.

v. The CRA may review the margin of this product as reported in RAS 2016, after Ooredoo has changed the driver to attribute the cost of the SDH Rings.

279.3 Connection Fees

i. The CRA is not immediately concerned with the Connection Fees, given that both Vodafone and Ooredoo do not foresee changes in the Interconnection Links in the period 2018 – 2020.

ii. As such, the current applicable rates are proposed also for the future period.

280. Accordingly, the CRA consulted on the following charges.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
E1 (distance independent)	QAR/E1/month	326	230	133	37
Change to previous year			-30%	-42%	-72%
Km (distance dependent)	QAR/E1/km/month	64	54	43	32
Change to previous year			-17%	-20%	-25%
Connection Fee	QAR/link	5,000	5,000	5,000	5,000
Change to previous year			0%	0%	0%
Disconnection/reconfiguration Fee	QAR/link	950	950	950	950
Change to previous year			0%	0%	0%

Table 11 Interconnection Links – Wholesale Charges [CRA calculation]

Question 18: Do stakeholders agree with the CRA's proposed Wholesale Charge for Interconnection Links?

4.4.1.2 Ooredoo's response to the first Consultation Document

281. "*RAS unit capacity costs have increased between 2014 and 2015 because of a total decline in the volume of the capacities sold / deployed in Ooredoo's network. This fact does not support the CRA's declining trend used for the proposed wholesale charges and as an outcome, cost recovery would be questionable for Ooredoo*."

282. "*The 2014 and 2015 RAS distance related network costs were QAR ✂ and ✂ /km/month respectively. The year over year decrease is a result of rapid increase in the use of longer distance low capacity SDH E1 leased lines to connect Ooredoo's base stations. SDH leased line distance related unit costs for 2016 and going forward are projected to increase as a result of this SDH capacity being replaced by MPLS technology. This fact does not support the CRA's declining trend used for the proposed wholesale charges and as an outcome Ooredoo cost recovery may be at risk*."

283. "*Ooredoo also notes serious inconsistency in the CRA's approach to the use of the RAS costs in setting wholesale charges for interconnection links and SDH leased lines. In the section 6.2 of the consultation document, the CRA states: "…The CRA relies on the average cost per unit per km of the wholesale SDH Rings, sourced from RAS 2015. This network component has been deemed reliable after the review of the RAS 2015." Yet in the section 6.3 of the same document discussing the wholesale charges for SDH leased lines, the CRA states: "Due to lack of information to be able to obtain reasonably accurate pricing (for SDH leased lines), the CRA believes that it is appropriate to apply the benchmark methodology used to set the wholesale charges for 2017." If the CRA does not consider the RAS costs for SDH network to be reliable and detailed enough to support setting wholesale charges for SDH leased lines and relies on benchmark information instead, then to ensure consistency in setting the*

wholesale charges, the CRA should use the very same cost benchmarks also to set the wholesale charges for the interconnection links."

284. "*For the reasons explained above, given the past and expected future decline in the volume of sold / deployed SDH leased lines, Ooredoo expects that unit costs for the SDH based services will increase within the regulatory period of 2018-2020. In order to avoid setting the wholesale charges below costs, Ooredoo recommends the CRA does not reduce the current wholesale charges for interconnection links and SDH leased lines any further. Meanwhile, Ooredoo is enhancing the robustness and details of the cost information for the SDH based services. The interconnection and SDH leased lines wholesale charges can be reviewed once the CRA's gains confidence in the related RAS cost information*."

4.4.1.3 Vodafone's response to the first Consultation Document

285. "*Vodafone Qatar supports the proposals of the CRA for this product for which there is limited scope for competitive pressure and is the straight input cost for competitors to Ooredoo. We note that one-off charges do not appear to bear any relation with underlying cost: for an STM1 the connection charge amount to QAR* ✂."

4.4.1.4 CRA's finding and proposed decision

On Ooredoo's comments

286. Ooredoo is concerned with cost trends applied by CRA to Interconnection Links services. However, the CRA notes that the operator has not provided supporting information accompanied by strong evidences that allow the review of the cost trends calculated by the CRA. This impedes the CRA to evaluate potential alternative scenarios.

Hence, Ooredoo's proposal for keeping the currently applicable charges cannot be considered as viable by the CRA.

Nevertheless, in the hypothetical case that the evolution observed in the future leads to wholesale charges set below costs, the CRA would be pleased to modify applicable wholesale charges by making use of the review clause proposed in this Document (ref. section 5.1).

287. Ooredoo also states that for consistency, the CRA should use the same cost benchmarks for the setting of wholesale charges related to both Interconnection Links services and Transmission Links services. The CRA is not fully convinced that the values extrapolated from the benchmark are suitable for Interconnection Links.

Hence, the CRA deems more appropriate to continue using the RAS data, ensuring consistency with approach already used for Setting the Wholesale Charges for the period 2015-2017 (ref. CRA Order 2015/31/05F).

On Vodafone's comments

288. The CRA acknowledges Vodafone's support for CRA proposed approach.

289. On the comment on the one-off charges, the CRA asks Vodafone to clarify its position.

Proposed Decision

290. The CRA expects to regulate the Wholesale Charges following the approach proposed in the First Consultation Document, i.e. charges oriented to RAS costs.

291. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
E1 (distance independent)	QAR/E1/month	326	229	133	37
Change to previous year			-30%	-42%	-72%
Km (distance dependent)	QAR/E1/km/month	64	54	43	32
Change to previous year			-17%	-20%	-25%
Connection Fee	QAR/link	5,000	5,000	5,000	5,000
Change to previous year			0%	0%	0%
Disconnection/reconfiguration Fee	QAR/link	950	950	950	950
Change to previous year			0%	0%	0%

Table 12 Interconnection Links – Wholesale Charges [CRA calculation]

Question 6	Do stakeholders agree with the CRA's proposed Wholesale Charges for the Interconnection Links?

4.5 Transmission Links

4.5.1 Transmission Links based on SDH

Question 19: Do stakeholders agree with the CRA's proposed Wholesale Charge for recurrent charges of SDH Transmission Links, i.e. to continue to use the Benchmark?

4.5.1.1 CRA's position in the first Consultation Document

292. Due to the lack of reasonable information to obtain accurate pricing from the RAS of Ooredoo, the CRA considered that it was appropriate to apply the benchmark methodology used to set the Wholesale Charges for 2017 (ref. Order and Economic Analysis for setting the Wholesale Charges 2015 – 2017 for a detailed explanation of this approach).

293. As such, the CRA consulted on the following proposed Wholesale Charges for the regulation of the "Transmission Links based on SDH" services:

	Transmission Link SDH	Current wholesale charge (CY 2017) BM based	Benchmark		
1					
2	Nominal Distance	Current Wholesale Charge	2018	2019	2020
3	km	QAR/month	QAR/month	QAR/month	QAR/month
4					
5	**for E1 (no differentation for SLAs)**				
7	00-10	1,418	1,240	1,158	1,081
8	11-20	1,478	1,314	1,226	1,145
9	21-30	1,538	1,387	1,295	1,209
10	31-40	1,598	1,460	1,363	1,273
11	41-50	1,658	1,534	1,432	1,336
12	50 and above	1,868	1,790	1,671	1,560
13	**for E3 (no differentation for SLAs)**				
15	00-10	8,164	7,089	6,617	6,177
16	11-20	8,224	7,162	6,686	6,241
17	21-30	8,284	7,235	6,754	6,305
18	31-40	8,344	7,309	6,823	6,369
19	41-50	8,404	7,382	6,891	6,433
20	50 and above	8,614	7,639	7,131	6,657
21	**for STM1 (no differentation for SLAs)**				
23	00-10	12,438	10,794	10,076	9,406
24	11-20	12,498	10,867	10,145	9,470
25	21-30	12,558	10,941	10,213	9,534
26	31-40	12,618	11,014	10,282	9,598
27	41-50	12,678	11,087	10,350	9,662
28	50 and above	12,888	11,344	10,590	9,886
29	**for STM4 (no differentation for SLAs)**				
31	00-10	20,645	17,910	16,719	15,607
32	11-20	20,705	17,984	16,788	15,671
33	21-30	20,765	18,057	16,856	15,735
34	31-40	20,825	18,130	16,925	15,799
35	41-50	20,885	18,204	16,993	15,863
36	50 and above	21,095	18,460	17,233	16,087
37	**for STM16 (no differentation for SLAs)**				
39	00-10	36,881	31,987	29,860	27,874
40	11-20	36,941	32,060	29,928	27,938
41	21-30	37,001	32,134	29,997	28,002
42	31-40	37,061	32,207	30,065	28,066
43	41-50	37,121	32,280	30,134	28,130
44	50 and above	37,331	32,537	30,373	28,353

Table 13 SDH Transmission Links – Recurring Wholesale Charges [TRPC PTE Limited Benchmark and CRA calculation]

4.5.1.2 Ooredoo's response to the first Consultation Document

294. "*Ooredoo agrees with the use of benchmark for setting wholesale charges for the SDH leased lines. Also for the reasons explained in the response to the previous question, the actual unit costs of SDH lines are expected to be at the level recorded in 2015 during the 2018-2020 time period. This fact does not support the CRA's trend used for proposed charges and as an outcome the future wholesale charges risk being set below cost. Ooredoo recommend the CRA does not reduce the current wholesale charges for SDH leased lines any further*."

295. "*Ooredoo is working on improving the robustness of the cost calculation for these services and when available will propose to replace current benchmark with actual costs*."

4.5.1.3 Vodafone's response to the first Consultation Document

296. "*The CRA proposes to continue to use the benchmarking approach and dataset used in the previous proceedings with a forecast of 6.6% annual decline in cost. Vodafone Qatar notes with some concern that the RAS of Ooredoo is still not reliable enough for the CRA to derive robust cost estimate of transmission and leased lines. We are also surprised to note that the CRA has not been able to update its benchmark. Overall the reductions appear on the low side especially when compared the X factor set by Ofcom*

for leased lines.[30]"

4.5.1.4 CRA's finding and proposed decision

On Ooredoo's comments

297. The CRA acknowledges that Ooredoo agrees with the use of benchmark for setting the wholesale charges for the SDH leased lines.

298. On Ooredoo's comment that the actual unit costs of SDH lines are expected to be at the level recorded in 2015 during the 2018-2020 time period, the CRA notes that this statement is not supported by fact based evidences.

     The CRA also notes that the annual trend of -6.6% proposed by the CRA is seen as a conservative scenario. In the hypothetical case that the evolution observed in the future leads to wholesale charges below costs, the CRA would be pleased to modify applicable wholesale charges by making use of the review clause proposed in this Document (ref. section 5.1).

On Vodafone's comments

299. On Vodafone's concern about Ooredoo's RAS, the CRA notes that the regulator is making all necessary efforts - together with Ooredoo and the auditors - for solving issues related to leased lines services identified in previous audit reviews.

300. On the magnitude of the reduction proposed by the CRA compared to that approved in U.K., the CRA highlights that only one country cannot be considered as relevant benchmark.

Proposed Decision

301. In conclusion, the CRA confirms the Wholesale Charges as proposed in the First Consultation Document.

302. The table below shows the Wholesale Charges that the CRA shall approve.

[30] See https://www.ofcom.org.uk/__data/assets/pdf_file/0015/72303/bcmr-final-statement-volume-one.pdf.

1	**Transmission Link SDH**	**Current wholesale charge (CY 2017) BM based**	**Benchmark**		
2	Nominal Distance	Current Wholesale Charge	2018	2019	2020
3	km	QAR/month	QAR/month	QAR/month	QAR/month
4					
5	**for E1 (no differentation for SLAs)**				
7	00-10	1,418	1,240	1,158	1,081
8	11-20	1,478	1,314	1,226	1,145
9	21-30	1,538	1,387	1,295	1,209
10	31-40	1,598	1,460	1,363	1,273
11	41-50	1,658	1,534	1,432	1,336
12	50 and above	1,868	1,790	1,671	1,560
13	**for E3 (no differentation for SLAs)**				
15	00-10	8,164	7,089	6,617	6,177
16	11-20	8,224	7,162	6,686	6,241
17	21-30	8,284	7,235	6,754	6,305
18	31-40	8,344	7,309	6,823	6,369
19	41-50	8,404	7,382	6,891	6,433
20	50 and above	8,614	7,639	7,131	6,657
21	**for STM1 (no differentation for SLAs)**				
23	00-10	12,438	10,794	10,076	9,406
24	11-20	12,498	10,867	10,145	9,470
25	21-30	12,558	10,941	10,213	9,534
26	31-40	12,618	11,014	10,282	9,598
27	41-50	12,678	11,087	10,350	9,662
28	50 and above	12,888	11,344	10,590	9,886
29	**for STM4 (no differentation for SLAs)**				
31	00-10	20,645	17,910	16,719	15,607
32	11-20	20,705	17,984	16,788	15,671
33	21-30	20,765	18,057	16,856	15,735
34	31-40	20,825	18,130	16,925	15,799
35	41-50	20,885	18,204	16,993	15,863
36	50 and above	21,095	18,460	17,233	16,087
37	**for STM16 (no differentation for SLAs)**				
39	00-10	36,881	31,987	29,860	27,874
40	11-20	36,941	32,060	29,928	27,938
41	21-30	37,001	32,134	29,997	28,002
42	31-40	37,061	32,207	30,065	28,066
43	41-50	37,121	32,280	30,134	28,130
44	50 and above	37,331	32,537	30,373	28,353

Table 14 SDH Transmission Links – Recurring Wholesale Charges approved by the CRA

Question 7	Do stakeholders agree with the CRA's proposed Wholesale Charges for the SDH Transmission Links?

4.5.2 Transmission Links based on Ethernet technology

Question 20: Are stakeholders interested in Transmission Links based on Ethernet Technology? Do you find the potential charges calculated by the CRA acceptable? Please provide cost information to calculate a cost oriented charge for this product.

4.5.2.1 CRA's position in the first Consultation Document

303. The CRA welcomed the introduction of Transmission Links based on Ethernet Technology and CRA consulted on following proposed Wholesale Charges, which were estimated based on the same benchmark used to calculate the cost of the Transmission Links – SDH (see section 4.5.1)

	[A]	[B]	[E]		
1	Transmission Link Ethernet		Benchmark (Average distance of 15km) Monthly Rental		
2	speed	speed	2018	2019	2020
3			QAR/month		
4	speed				
5	256 KB	256	722	684	648
6	512 KB	512	891	844	799
7	1 MB	1,000	1,098	1,040	985
8	2 MB	2,000	1,267	1,200	1,136
9	4 MB	4,000	1,717	1,626	1,540
10	8 MB	8,000	2,159	2,045	1,937
11	16 MB	16,000	2,724	2,580	2,443
12	24 MB	24,000	3,124	2,958	2,802
13	32 MB	32,000	3,444	3,262	3,089
14	50 MB	50,000	4,340	4,110	3,893
15	100 MB	100,000	6,891	6,526	6,181
16	200 MB	200,000	7,875	7,458	7,064
17	500 MB	500,000	8,859	8,390	7,946
18	1 G	1,000,000	9,127	8,644	8,186

Table 15 Ethernet Transmission Links– Recurring Wholesale Charges [TRPC PTE Limited Benchmark and CRA calculation]

4.5.2.2 Ooredoo's response to the first Consultation Document

304. "*Ooredoo considers the discussion of the wholesale charges for transmission links based on Ethernet premature. As highlighted by Ooredoo's letter to the CRA and to MOTC, a number of policy issues have to be addressed at a government level before further access obligations are imposed on Ooredoo. To the best of Ooredoo's knowledge, this has not happened yet. In addition, as highlighted to Ooredoo and the CRA, the question regarding the role for the QNBN within the market structure remains unanswered and poses specific additional risks to Ooredoo's return on investment. Instead of the CRA trying to estimate the cost of the Ethernet leased lines, the CRA should take a more proactive role in engaging with government to initiate and progress discussions and clarify the future vision for the sector and the role QNBN should play within that vision, if at all*."

4.5.2.3 Vodafone's response to the first Consultation Document

305. "*Vodafone Qatar supports the introduction of Ethernet based transmission links*."

306. "*Regarding the pricing approach of the CRA it is not clear why the cost of a completely different and higher cost technology (SDH), should be used to calculate the cost of Ethernet based transmission. Based on the RAS, the CRA should be able to build the cost stack of Ethernet based transmission. It should also have visibility of the cost stack when approving retail price changes for Ethernet based retail services*."

4.5.2.4 CRA's finding and proposed decision

On Ooredoo's comments

307. The CRA notes that, according to the Regulatory Framework and the Market Definition Designation and Dominance (MDDD) currently applicable in Qatar, Ooredoo is obliged to offer Transmission Links services regardless the technology used for their provision, provided that any of the Licensed Operators requires them. Based on this, the CRA considers that the introduction of Ethernet services shall be effective and not subject to discussion.

On Vodafone's comments

308. The CRA acknowledges Vodafone's comment on the introduction of Ethernet based transmission links.

309. On the benchmark used to set the charges, the CRA notes that the benchmark used

by the CRA included specific information on Ethernet. This specific information on Ethernet has been used to derive the proposed charges.

310. On the use of the RAS, this has not been considered for keeping consistency with SDH products.

Proposed Decision

311. The CRA is of the view that the Ooredoo is obliged to offer Transmission Links based on Ethernet Technology, if this service is required by any Licensed Operators.

312. This is consistent with CRA's request to Ooredoo for putting forward a Wholesale Reference Offer for Leased Lines (any-to-any, not only site-to-site) (ref. CRARAC 2016/06/30, dated June 30, 2016). Ooredoo did not comply with CRA's request.

313. The CRA confirms the Wholesale Charges as proposed in the First Consultation Document are deemed applicable.

314. The table below shows the Wholesale Charges that the CRA shall approve.

	[A]	[B]	[E]		
1	Transmission Link Ethernet		Benchmark (Average distance of 15km) Monthly Rental		
2	speed	speed	2018	2019	2020
3			QAR/month		
4	speed				
5	256 KB	256	722	684	648
6	512 KB	512	891	844	799
7	1 MB	1,000	1,098	1,040	985
8	2 MB	2,000	1,267	1,200	1,136
9	4 MB	4,000	1,717	1,626	1,540
10	8 MB	8,000	2,159	2,045	1,937
11	16 MB	16,000	2,724	2,580	2,443
12	24 MB	24,000	3,124	2,958	2,802
13	32 MB	32,000	3,444	3,262	3,089
14	50 MB	50,000	4,340	4,110	3,893
15	100 MB	100,000	6,891	6,526	6,181
16	200 MB	200,000	7,875	7,458	7,064
17	500 MB	500,000	8,859	8,390	7,946
18	1 G	1,000,000	9,127	8,644	8,186

Table 16 Ethernet Transmission Links– Recurring Wholesale Charges approved by the CRA

Question 8	Do stakeholders agree with the CRA's proposed Wholesale Charges for Ethernet based Transmission Links?

4.5.3 Transmission Links: connection fees

Question 21: Do stakeholders agree with the CRA's proposed Wholesale Charge for the Transmission Links connection fees?

4.5.3.1 CRA's position in the first Consultation Document

315. The CRA proposed to rely on currently applicable Wholesale Charges, reduced consistently with the cost trend applied for setting the recurring Wholesale Charges.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Connection, disconnection - For all speeds and distance	QAR/connection or disconnection	3,036	2,672	2,511	2,361
Change to previous year			-12%	-6%	-6%

Table 17 Transmission Links – One Time fees Charges for consultation [CRA calculation]

4.5.3.2 Ooredoo's response to the first Consultation Document

316. "*The RAS 2015 wholesale national leased circuits installation cost is QR ✂ / E1. The CRA's proposed 2018-2020 rates trend will thus likely cause wholesale charges for connection fees to be below cost in the future. Ooredoo's recommendation is to maintain the current wholesale price or apply a 3% increase per annum to ensure cost recovery in the face of expected inflationary costs going forward*."

4.5.3.3 Vodafone's response to the first Consultation Document

317. "*Connection fees should be looked at as and when the service description is modified to ensure that they do not create a barrier to entry*."

4.5.3.4 CRA's finding and proposed decision

On Ooredoo's comments

318. On the use of the RAS information, the CRA indicates that due the reduced number of activations carried out in 2015 by Ooredoo, the cost produced by the RAS cannot be considered as representative. However, CRA recognizes that the trend applied for recurring cost would not be necessarily applicable to non-recurring cost, because of their different nature. As such, the CRA has opted for maintaining stable the currently applicable wholesale prices for connection fees of transmission links services.

On Vodafone's comments

319. The level of the one time fee does not seem capable to constitute a barrier to entry, compared to the revenues generated by this product (i.e. mobile national calls).

Proposed Decision

320. The CRA consults on keeping the one-time fees stable at the 2017 level.

321. The table below shows the Wholesale Charges proposed by the CRA.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Connection, disconnection - For all speeds and distance	QAR/connection or disconnection	3,036	3,036	3,036	3,036
Change to previous year			0%	0%	0%

Table 18 Transmission Links – One Time fees Charges for consultation [CRA calculation]

322. CRA also notes that alternative costing information (for instance, bottom-up calculations) is welcomed from SPs provided that it is specific, fully justified and accompanied by strong evidences and supporting information/calculations.

Question 9 Do stakeholders agree with the CRA's proposed connection fees?

4.6 Duct Products

4.6.1 Duct Access Product

Question 22: Do stakeholders agree with the CRA's proposed Wholesale Charge for the Duct Access product?

4.6.1.1 CRA's position in the first Consultation Document

323. CRA consulted on the following proposed Wholesale Charges for the regulation of the "Duct Access Product":

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Duct Access	QAR/cm2/meter/month	0.1200	0.1174	0.1147	0.1121
Change to previous year			-2%	-2%	-2%

Table 19 Duct Access – Wholesale Charges for consultation [CRA calculation]

4.6.1.2 Ooredoo's response to the first Consultation Document

324. "*The CRA in the presented benchmark analysis portrays current wholesale charges for access to duct in Qatar as being one of the highest in the world. There are number of problems with these benchmarks, which lead to an exaggeration of duct charges in Qatar by international comparison, simply because the CRA are not comparing apples to apples*."

325. "*As each country in the CRA's benchmark sample uses different charging units, the CRA had to translate these various charges into a common unit measure. In their calculations of unit costs, the CRA had to make a large set of assumptions, which as explained below skew the benchmark results against Qatar significantly*."

326. [Ooredoo has provided further explanations on the assumptions used by the CRA in the comparative exercise mentioned above].

327. "*In summary, due to the assumptions used by the CRA in their benchmark calculations, the cost / charges for duct access is artificially inflated for Qatar in the international comparison as presented by the CRA. This is explained by: i) The major part of the duct infrastructure in Qatar is built in dense areas with more expensive surface; ii) The duct assets are depreciated by Ooredoo over ✂ years, whereas many other jurisdictions have 20-25 years; iii) The Ooredoo duct infrastructure is relatively new and occupancy is likely lower in Qatar than in some other countries (with more service providers sharing ducts).The cost resulting from FAC/HCA model may be higher in Qatar than in some of the other countries. However, definitely the duct cost / charge for Qatar would not be as large relative to other countries as CRA portrays in their benchmark if correct comparison methodology was used*."

328. "*The actual 2015 RAS network costs alone for duct service are QAR ✂/m2/m/month. The 2015 RAS network cost plus wholesale costs are QAR ✂/m2/m/month. The same RAS costs for 2014 was QAR ✂/m2/m/month. Ooredoo therefore considers the proposed CRA's charges for duct access to be below RAS costs*."

329. "*Ooredoo's recommendation is to increase the wholesale charge for duct access to ensure costs recovery going forward*."

4.6.1.3 Vodafone's response to the first Consultation Document

330. "*Proposed charges for monthly rental by the CRA are clearly out of steps with benchmarks: Ooredoo's wholesale charges are 2 to 5 times more expensive that Spain and Portugal, two best-in-class countries in Europe for duct access where Vodafone has deployed extensively using ducts. The annual trend proposed (-2%) does not seem correct: year on year one would expect a steeper decline given the capital intensity of duct. Through the normal depreciation process the capital employed and return on capital should decline. In turn, this should lead to a reduction in the annual cost of a larger magnitude than the proposed 2%*."

4.6.1.4 Qnbn's response to the first Consultation Document

331. "*Qnbn agrees with the CRA's proposed Wholesale Charge for the Duct Access product provided that there is no minimum space leased. As noted above, the current minimum 3cm2 should not apply but rather reference should be to the actual utilized space*."

332. "*Qnbn does wish to add some precision to the duct access charge stated by the CRA, at pages 47-48, as applicable for the State of Qatar. The duct access charge in Qatar is 0.12 QAR/m/cm2. However, it is more precise to state that the minimum charge is*

0.36 QAR/m as the minimum leased space is 3 cm2."

4.6.1.5 CRA's finding and proposed decision

On Ooredoo's comments:

333. The benchmark has been used as additional information to cross-check the proposed charges with the international practice. The wholesale charges proposed in the Consultation Document are cost-oriented, based on the outcomes of Ooredoo's RAS and cost trends defined by the CRA. The CRA notes that Ooredoo has only criticized CRA's benchmark, without providing any alternative benchmark. This does not help the CRA to review its position.

334. Regarding Ooredoo's claims that the proposed charge is below cost, the CRA notes that Ooredoo refers to the total cost per unit as per RAS 2015, including both the network and the wholesale costs. This approach leads Ooredoo to calculate a total cost per unit higher than the wholesale charge proposed by the CRA.

However, as explained in the first Consultation Document (ref. section 4.1.1 above), the CRA has never accepted the wholesale cost included in the RAS. In absence of robust RAS data, for setting the wholesale charges the CRA relies on a percentage value to calculate the wholesale cost, extracted by means of a benchmark exercise. Hence, Ooredoo's claims that the wholesale charge is below cost cannot be verified until Ooredoo improves the attribution of the wholesale cost. In addition, to avoid non-discrimination issues, the network cost per unit is calculated by the CRA at network component level (but not at product level), where the cost per unit attributed to the OLOs is equal to the cost per unit attributed to the Retail Arms of Ooredoo.

According to the above, Ooredoo's request to increase the wholesale charge is not viable.

On Vodafone's comments

335. On the annual trend of -2%, the CRA notes that from the RAS there is not a clear trend in cost decline. As consequence, the CRA has assumed the costs to stay stable in the period of the analysis. Hence, the trend (-2%) is not reflecting an evolution in costs but, instead, it is a consequence of the glidepath applied between the initial and end year of the period.

On Qnbn's comments

336. Regarding the minimum charge, this topic was discussed in the consultation for setting the Wholesale Charges for the years 2015, 2016 and 2017. The minimum charge was agreed at that time between Ooredoo and Qnbn.

Options

337. The table below shows the Wholesale Charges as calculated by the CRA, including the new cost of capital (10.45%):

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Duct Access	QAR/cm2/meter/month	0.1200	0.1170	0.1139	0.1109
Change to previous year			-3%	-3%	-3%

Table 20 Duct Access – Wholesale Charges for consultation [CRA calculation]

338. The CRA is cognizant of the major construction works, for e.g. the World Cup are ongoing. This and the related duct re-routings might have some influence on the cost. Also various changes in duct managers might have a cost impact. Hence, the CRA is minded to keep this charge at the current level (0.12 QAR/cm2/meter/month).

Question 10	Do stakeholders agree with the CRA's proposed charge for the Duct Access Product?

4.6.2 Duct Access Product – Alternative charging mechanism

Question 23: Stakeholders are invited to provide their view on alternative mechanism for charging Duct Access, with particular reference to the introduction of lump-sums upfront to the commitment for buying a certain maximum amount of volume

4.6.2.1 CRA's position in the first Consultation Document

339. The CRA consulted about alternative methods of charging this product, e.g. a lump-sum payment.

340. In particular, the CRA was interested in evaluating the introduction of medium-long term commitment for the OLOs, including the right/obligation to rent a maximum volume of duct with an upfront payment (lump-sum).

4.6.2.2 Ooredoo's response to the first Consultation Document

341. "*Ooredoo has no alternative suggestions at this point of time*."

4.6.2.3 Vodafone's response to the first Consultation Document

342. "*Vodafone Qatar does not object to lump-sums payment but these should be designed very carefully to ensure that they are not discriminatory and do not create barriers to entry. Link to it is the issue of one-off charges. However we note that at this point there is no information readily available on duct controlled by Ooredoo or effective access to those ducts*."

4.6.2.4 Qnbn's response to the first Consultation Document

343. "*Lump sum payments based on volume commitments are a non-starter for new fixed (passive) market entrants such as Qnbn. Qnbn does not have a universal service obligation and, to be fiscally responsible, it deploys fiber based upon customer demand. Qnbn has been painstaking in communicating this strategic reality to the CRA. It is Qnbn's customers who determine active service requirements and request fiber from Qnbn. It is fiscally impossible for Qnbn to be in a position to agree volume commitments in any given Zone or development within the State of Qatar*."

4.6.2.5 CRA's finding and proposed decision

344. The CRA notes the contributions received by the SPs.

4.6.3 Facility Hosting

Question 24: Do stakeholders agree with the CRA's proposed Wholesale Charge for "Facility Hosting"?

345. CRA consulted Qatari SPs on the following proposed Wholesale Charges for the regulation of the "Facility Hosting ":

		Approved Charge	Charges for consultation		
Facility Hosting	n.b. First 20 liters of facility space per linear kilometer of route distance: no charge	2017	2018	2019	2020
Duct Access	(QAR/Liter)	1.0000	0.7950	0.5901	0.3851
Change to previous year			-20%	-26%	-35%

Table 21 Facility Hosting – Wholesale Charges for consultation [CRA calculation]

4.6.3.1 Ooredoo's response to the first Consultation Document

346. "*The 2015 RAS network costs are QAR ✂/liter/month. If the RAS wholesale costs are*

included, the proposed CRA pricing is below the total RAS costs."

4.6.3.2 Vodafone's response to the first Consultation Document

347. "*Vodafone Qatar is not in a position to comment on this charge given the information provided in the CD*".

4.6.3.3 Qnbn's response to the first Consultation Document

348. "*Qnbn is in full agreement with the CRA's proposed Wholesale Charge for Facility Hosting*."

4.6.3.4 CRA's finding and proposed decision

On Ooredoo's comments:

349. Regarding Ooredoo's claims that the proposed charge is below cost, please see CRA's position on paragraph 334 above.

On Vodafone's and Qnbn's comments:

350. CRA acknowledges SPs' comments.

Proposed Decision:

351. The CRA expects to regulate the Wholesale Charges following the approach proposed in the First Consultation Document;

352. The table below shows the Wholesale Charges proposed by the CRA:

		Approved Charge	Charges for consultation		
Facility Hosting		**2017**	**2018**	**2019**	**2020**
Duct Access	(QAR/Liter)	1.0000	0.7938	0.5877	0.3815
Change to previous year			-21%	-26%	-35%

Table 22 Facility Hosting – Wholesale Charges for consultation [CRA calculation]

Question 11 Do stakeholders agree with the CRA's proposed charge for the Facility Hosting Product?

4.6.4 Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products – Cost per hour

Question 25: Do stakeholders agree with the CRA's proposed cost per hour applicable to "Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products?" Stakeholders are explicitly invited to submit evidence of the cost per hour applicable for these products. Evidence could include invoices paid to external companies for comparable services or salaries of the employees involved in comparable activities.

4.6.4.1 CRA's position in the first Consultation Document

353. The CRA consulted on the following proposed Wholesale Charges for the regulation of services based on hourly cost:

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Cost per Hour applicable to Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products	QAR/hour	375	166	166	166
Change to previous year			-56%	0%	0%

Table 23 Cost per hour – Wholesale Charges for consultation [CRA calculation]

4.6.4.2 Ooredoo's response to the first Consultation Document

354. "*Ooredoo notes that the CRA calculation of labor cost per hour significantly underestimates the total labor related costs actually incurred by Ooredoo. The CRA's calculation fully neglects a number of other labor cost categories such as for example annual bonus, cost of long term incentive scheme (costs of shadow shares allocated and paid to employees), medical costs, children education costs, training costs, travel costs, service gratuity costs and pension contribution costs. These costs represent on average ✂% of total labor costs of Ooredoo's employees*."

355. "*Hence, the CRA's derived cost per hour is simply not acceptable as it grossly underestimates the actual cost per hour incurred by Ooredoo and would not allow for cost recovery*."

356. "*The AAR and RAR cost models including the Ooredoo's derivation of labor cost per hour are currently undergoing independent audit review. To ensure recovery of the costs incurred by Ooredoo, we insist that the cost figures confirmed by the audit are used as a basis for setting relevant wholesale charges related to duct access service activities*."

4.6.4.3 Vodafone's response to the first Consultation Document

357. "*Vodafone Qatar supports the use of bottom-up modelling for supervision charges which should be capped on a per km basis to provide the right incentive for Ooredoo to be efficient and avoid penalisation of access seekers due to the lack of accurate records/tools. One-offs charges constitute a significant barrier to entry for duct access which is magnified in the context of Ooredoo where there is no on-line system for access request with up-to-date information on duct locations and availability. The availability of such tool has proven to be a key driver for the uptake of duct access in Spain and Portugal. It has enable Vodafone to deploy fibre in an efficient way. Normally site survey should be optional and considered only where the access seeker finds that the status on the ground does not match the database.*"

358. *"Regarding supervision consisting of a dedicated Ooredoo resource attending all the work), Vodafone Qatar does not consider it to be necessary for all installation activities. Instead some random visit of say 5% of installation work and after work completion could be undertaken*."

4.6.4.4 Qnbn's response to the first Consultation Document

359. "*Qnbn could agree to the proposed charge (166 QAR/hour) subject to the following conditions: the charges will be applicable for field activities only, Any office activities (including desktop activities, GIS update, etc.) should be excluded; and Such charges should be capped at 166,000 QAR per quarter*".

4.6.4.5 CRA's finding and proposed decision

On Ooredoo's comments:

360. Regarding Ooredoo's contribution, the CRA notes that cost categories indicated by the operator have already been considered as "housing and other allowances". In fact, these costs represent ✂% of the total labor costs, in line with the average percentage reported by the operator for these additional costs.

On Vodafone's comments:

361. The CRA appreciates and takes note of Vodafone's contributions on the one-off activities for ducts services.

On Qnbn's comments:

362. The CRA clarifies that the cost per hour is applicable to products as defined in the IAA and in the RIAO.

363. On capping the charge for the Supervision, the CRA requires Qnbn to provide more

information on both the reasons supporting the proposal and on how this amount has been calculated, allowing the CRA to take an informed decision.

Proposed Decision:

364. In September 2017 (ref. CRA/RAC-E/097/2017), CRA required Ooredoo to:

364.1 To deliver an Audit Review the Cost per man-hour.

364.2 To demonstrate a "live process" of managing the Access requests to the CRA.

365. Pending the outcomes of Ooredoo Audit Review and the above information requested to Qnbn, the CRA confirms the approach proposed in the First Consultation Document. In absence of the above deliverables, the CRA will use its own calculations.

366. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Cost per Hour applicable to Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products	QAR/hour	375	166	166	166
Change to previous year			-56%	0%	0%

Table 24 Cost per hour – Wholesale Charges for consultation [CRA calculation]

367. The CRA is also considering the possibility of implementing a glidepath for the wholesale charges of the cost per hour proposed above. Consistently with other services' glidepaths, cost per hour glidepath would be gradually applied from the approved charge in 2017 (375 QAR/hour) to the new proposed charge for 2020 (166 QAR/hour).

Question 12	Do stakeholders agree with the CRA's proposed Wholesale Charges for the cost per hour? Additionally, stakeholders are invited to provide their views with regards to the possibility of implementing a glidepath for Wholesale Charges proposed for the cost per hour.

4.6.5 Access Area Request (AAR) and Route Access Request (RAR) for the RIAO

Question 26: Do stakeholders agree with the CRA's proposed Wholesale Charge for "Access Area Request", i.e. using the man-hour cost as per CRA's calculation and a charge for an average number of duct segments?

Question 27: Do stakeholders agree with the CRA's proposed Wholesale Charges for "Route Access Request", i.e. using the man-hour cost as per CRA's calculation and a charge for an average number of duct segments?

4.6.5.1 CRA's position in the first Consultation Document

368. The CRA consulted Qatari SPs on the following proposed Wholesale Charges for the regulation of "Access Area Request (AAR)" and "Route Access Request (RAR)" services:

	Cost per manhour	Scenario A) Cost regardless of number of duct		Scenario B) Cost per 100 duct segments			
		All segments		First 100 segments		additional 100 segments	
		time	cost	time	cost	time	cost
	QAR/h	h	QAR	h	QAR	h	QAR
Ooredoo	667	11.86	6,005	4.56	3,041	1.70	690
Qnbn	115	10.81	1,243	3.51	404	1.70	196
CRA	166	11.34	1,884	4.04	671	1.70	283

Table 25 Access Area Request - Costing Summary [CRA calculation]

	Cost per manhour	Scenario A) Cost regardless of number of duct		Scenario B) Cost per 100 duct segments			
		All segments		First 100 segments		additional 10 segments	
		time	cost	time	cost	time	cost
	QAR/h	h	QAR	h	QAR	h	QAR
Ooredoo	404	7.67	3,098	15.14	6,119	1.35	547
Qnbn	115	19.25	2,214	20.79	2,391	1.06	122
CRA	166	13.46	2,237	17.96	2,986	1.21	201

Table 26 Route Access Request Costing – Summary [CRA calculation]

369. Whether to charge per 100 duct segments or to use a figure for an average request, CRA prefers a charge on an average basis. This will ease the burden of administration and increase the predictability of the revenues for Ooredoo and of the costs for the OLOs.

4.6.5.2 Ooredoo’s response to the first Consultation Document

370. “*The cost of the AAR / RAR depends on the number of duct segments. In the absence of the relevant data (there was only one wide ranging Access Request performed by QNBN under IAA), it is impossible to estimate number of segments per “average request”. To ensure cost recovery, Ooredoo proposes the AAR charge to reflect actual number of duct segments per each AAR / RAR. Once reliable data sample is amassed for AAR’s / RAR’s allowing for cost estimate of average request, the option proposed by the CRA can be reconsidered*.”

371. “*Man-hour cost should reflect the cost actually incurred by Ooredoo as verified by independent audit to ensure relevant cost recovery, which is key principle of the Telecommunications Law. As explained above, the CRA derived man-hour costs grossly underestimate the actual labor costs incurred by Ooredoo and it is simply not acceptable*.”

4.6.5.3 Vodafone’s response to the first Consultation Document

372. “*This charge is yet another barrier to entry and a discriminatory charges caused by Ooredoo’s lack of accurate records regarding its duct infrastructure. Accordingly, this charge should reflect efficient cost and not be based on the time it takes Ooredoo to update its records*.”

373. “*Our key proposal here would be that for all processing activities (e.g. preparation and sending GIS information, maps and network data including XML files and shape files), there should be a software management tool similar to the CRA web tool from Ericson to automate all back-office activities an online tool. This would be a win-win for all stakeholders: i) For Ooredoo: automated tool replacing the database and manual*

processes will lead to cost savings, efficient processes and secure accurate tracking for all of Ooredoo's assets and changes (e.g. utilised space, Vodafone Qatar / Ooredoo cables). ii) For access seekers: faster request processing and cost savings, enabling faster roll-out. iii) For the CRA: tool will support CRA's objective to foster efficient investment and will provide full visibility on requests status. Tool could be used when/if conflicts arise between Ooredoo and access seekers."

374. "*Having an on-line tool is an essential element to level the playing field. To save cost, Ooredoo could use the tool already purchased by the CRA*."

4.6.5.4 Qnbn's response to the first Consultation Document

375. "*At the outset Qnbn wishes to note, given its actual experience, its interest in any audit undertaken of Ooredoo man hour costs. The CRA is invited to discuss with Qnbn, as a sanity check, its own per man hour costs. Qnbn favors costs arrived at regardless of the number of ducts (the proposal given in Scenario A)*."

376. "*Qnbn favors costs arrived at regardless of the number of ducts (the proposal given in Scenario A*)."

4.6.5.5 CRA's finding and proposed decision

On Ooredoo's comments:

377. The CRA has been unsuccessfully asking Ooredoo to visit its premises and have a demonstration of the process followed to handle the AAR/RAR since September 2017. In absence of this demonstration, the CRA is not in the position to conclude that the cost of the AAR/RAR depends on the number of segments.

On Vodafone's comments:

378. The CRA acknowledges Vodafone's comments.

On Qnbn's comments:

379. The CRA acknowledges Qnbn's comments.

Proposed Decision:

380. The CRA maintains its preference for fees arrived at regardless of the number of ducts and intends to regulate the Wholesale Charges following the approach proposed in the First Consultation Document.

381. The fee depends on both the cost per manhour (ref. section 4.6.4 above) and the time needed to perform the activities.

382. Pending the outcomes of Ooredoo Audit Review and the site visit to Ooredoo's premises to follow live the access requests (ref. section 4.6.4 above), the CRA confirms the approach proposed in the First Consultation Document. In absence of the above deliverables, the CRA will use its own calculations.

383. Tables below show the Wholesale Charges proposed by the CRA.

	Cost per manhour	Scenario A) Cost regardless of number of duct	
		All segments	
		time	cost
	QAR/h	h	QAR
CRA	166	11.34	1,884

Table 27 Access Area Request - Costing Summary [CRA calculation]

	Cost per manhour	Scenario A) Cost regardless of number of duct	
		All segments	
		time	cost
	QAR/h	h	QAR
CRA	166	13.46	2,237

Table 28 Route Access Request Costing – Summary [CRA calculation]

384. The CRA also notes that the above charges shall be subject to the decision finally adopted with regards to the possibility of implementing a glidepath for the wholesale charges proposed for the cost per hour, as already anticipated in section 4.6.4.5.

Question 13	Do stakeholders agree with the CRA's proposed Wholesale Charges for the AAR and RAR?

4.6.6 Access Request (AR) for the IAA

Question 28: Do stakeholders agree with the CRA's proposed Wholesale Charges for "Access Request", i.e. calculation of the AR as a sum of AAR and RAR, using the man-hour cost as per CRA's calculation and a charge for an average number of duct segments?

4.6.6.1 CRA's position in the first Consultation Document

385. The CRA consulted on the following proposed Wholesale Charges for the regulation of "Access Request (AR) for the IAA":

	Cost per manhour	Scenario A) Cost regardless of number of duct		Scenario B) Cost per 100 duct segments			
		All segments		First 100 segments		additional 100 segments	
		time	cost	time	cost	time	cost
	QAR/h	h	QAR	h	QAR	h	QAR
Ooredoo	466	19.53	9,103	19.70	9,160	15.24	4,994
Qnbn	115	30.06	3,457	24.30	2,795	12.30	1,415
CRA	166	24.79	4,121	22.00	3,657	12.30	2,044

Table 29 Access Request Costing – Summary [CRA calculation]

386. Whether to charge per 100 duct segments or to use a figure for an average request, CRA prefers a charge on an average basis. This will ease the burden of administration and increase the predictability of the revenues for Ooredoo and of the costs for the OLOs.

4.6.6.2 Ooredoo's response to the first Consultation Document

387. "*It is not clear to Ooredoo what the CRA seeks to achieve at Question 28*".

388. "*The terminology of AAR and RAR has been introduced as part of the CRA request for a reference offer for duct access from Ooredoo. The terminology RAR does not exist within the IAA. The IAA includes terminology that includes area access request and provisioning requests*."

389. "*The CRA is aware that the IAA has been a commercially negotiated agreement between Ooredoo and QNBN, and has been in operation since 2012. That agreement*

was arrived at by both parties without regulatory direction, although the CRA has been fully cognizant of and integral to that agreement. The rates within that agreement were not reflective of actual costs, again something the CRA has not been concerned with since 2012."

390. "*If the task at hand is to determine regulated rates for the reference duct offer, it is unclear why the CRA seeks to aggregate the AAR and RAR, rather than keep those items separate as stated within the reference offer. Ooredoo would contend that the CRA should not be seeking to impose regulated rates on what are commercial agreements between two licenses. The only mechanism to do so is through the reference offers*."

4.6.6.3 Vodafone's response to the first Consultation Document

391. "*Vodafone Qatar strongly objects to this charge. Vodafone Qatar cannot understand why the CRA is proposing to re-introduce a charge which the CRA itself has removed as part of the RIAO proceedings in 2015 and 2016 after various consultation rounds*."

4.6.6.4 Qnbn's response to the first Consultation Document

392. "*Qnbn disagrees with the introduction of the concept of the AR and the proposed charge associated with it. The CRA itself, in the RIAO proceeding and resulting agreement for the marketplace, did away with the AR and replaced it with the AAR and the RAR. There is no valid point in reconsidering the AR once again*."

4.6.6.5 CRA's finding and proposed decision

On Ooredoo's comments:

393. The CRA has the power to amend Wholesale Charges included in wholesale commercial agreements signed between Service Providers. Hence, the fee for the Access Request under the IAA will also be approved in this proceeding for setting the Wholesale Charges.

On Vodafone's comments:

394. The CRA clarifies that the IAA is still in force. The IAA includes the AR, whose fee shall be set by the CRA. The RIAO does not include the AR but different services (i.e. the AAR and the RAR) whose fees will be also set by the CRA.

On Qnbn's comments:

395. The CRA refers Qnbn to the above comment. Until Qnbn stays with the IAA the AR is applicable.

Proposed Decision:

396. This fee is needed for the IAA where processes are different from those approved by the CRA for the RIAO;

397. The fee depends on both the cost per manhour (ref. section 4.6.4 above) and the time needed to perform the activities.

398. Pending the outcomes of Ooredoo Audit Review and the site visit to Ooredoo's premises to follow live the access requests (ref. section 4.6.4 above), the CRA confirms the approach proposed in the First Consultation Document. In absence of the above deliverables, the CRA will use its own calculations.

399. The table below shows the Wholesale Charges proposed by the CRA.

	Cost per manhour	Scenario A) Cost regardless of number of duct	
		All segments	
		time	cost
	QAR/h	h	QAR
CRA	166	24.79	4,121

Table 30 Access Request Costing – Summary [CRA calculation]

400. The CRA also notes that the above charges shall be subject to the decision finally adopted with regards to the possibility of implementing a glidepath for the wholesale charges proposed for the cost per hour, as already anticipated in section 4.6.4.5.

Question 14	Do stakeholders agree with the CRA's proposed Wholesale Charges for the AR?

4.6.7 Successful and Unsuccessful Blockage Clearance products

Question 29: Do stakeholders agree with the CRA's proposed approach for the Successful and Unsuccessful Blockage Clearance products?

4.6.7.1 CRA's position in the first Consultation Document

401. CRA proposed to charge these products "at documented cost incurred by Ooredoo", based on the currently applicable approach.

4.6.7.2 Ooredoo's response to the first Consultation Document

402. "*Ooredoo agrees*."

4.6.7.3 Vodafone's response to the first Consultation Document

403. "*Vodafone Qatar has no objection to a time and material approach with documented cost, although we are concerned that they may not be reflective of an efficient operation and hence could lead to inefficiencies being passed on to competitors by Ooredoo*."

4.6.7.4 Qnbn's response to the first Consultation Document

404. "*Qnbn agrees with the CRA proposal for the "Documented cost incurred by Ooredoo" PROVIDED such cost do not exceed the duct blockage fees given in the IAA for clearing blockages in the different types of roads (see IAA schedule 4 clause 7*)."

4.6.7.5 CRA's finding and proposed decision

On Vodafone's comments

405. The CRA notes that it will be at the SPs' disposal to solve any issue that may arise in case any inefficiency is identified by the seeking operator during the provision of these services.

Proposed Decision

406. The CRA notes that the three stakeholders agree on the proposed approach by the CRA for the Successful and Unsuccessful Blockage Clearance products.

407. In conclusion, the CRA shall decides to keep the approach proposed in the First Consultation Document for "Successful and Unsuccessful Blockage Clearance products" services, which is "at documented cost incurred by Ooredoo".

4.6.8 Transportation charge product

Question 30: Do stakeholders agree with the CRA's proposed approach for Transportation charge product?

4.6.8.1 CRA's position in the first Consultation Document

408. CRA proposed to keep the currently applicable charge of 150 QAR/vehicle/day (or part thereof) for this service.

4.6.8.2 Ooredoo's response to the first Consultation Document

409. "*Ooredoo agrees*."

4.6.8.3 Vodafone's response to the first Consultation Document

410. "*Vodafone Qatar does not have strong objection with this charge*."

4.6.8.4 Qnbn's response to the first Consultation Document

411. "*Qnbn agree with the CRA's proposed approach for the Transportation charge product*."

4.6.8.5 CRA's finding and proposed decision

Proposed Decision

412. The CRA notes that the three stakeholders agree on the approach proposed by the CRA for the "Transportation charge product".
413. In conclusion, CRA shall approve the charge proposed in the First Consultation Document for "Transportation charge product", which is 150 QAR/vehicle/day or part thereof.

4.6.9 Miscellaneous Expenses product

Question 31: Do stakeholders agree with the CRA's proposed approach for the Miscellaneous Expenses product?

4.6.9.1 CRA's position in the first Consultation Document

414. CRA proposed to charge these products "at documented cost incurred by Ooredoo", based on the currently applicable approach.

4.6.9.2 Ooredoo's response to the first Consultation Document

415. "*Ooredoo agrees*."

4.6.9.3 Vodafone's response to the first Consultation Document

416. "*Vodafone Qatar has no objection to a time and material approach with documented cost, although we are concerned that they may not be reflective of an efficient operation and hence could lead to inefficiencies being passed on to competitors by Ooredoo*."

4.6.9.4 Qnbn's response to the first Consultation Document

417. "*Qnbn agree with the CRA 's proposed approach for the Miscellaneous Expenses product*."

4.6.9.5 CRA's finding and proposed decision

On Vodafone's comments

418. The CRA notes that it will be at the SPs' disposal to solve any issue that may arise in

case any inefficiency is identified by the seeking operator during the provision of these services.

Proposed Decision

419. The CRA notes that the three stakeholders agree on the approach proposed by the CRA for the “Miscellaneous Expenses product”.

420. In conclusion, CRA shall keep the approach proposed in the First Consultation Document for “Miscellaneous Expenses product”, which is “at documented cost incurred by Ooredoo”.

5 Review of the Wholesale Charges

5.1 Review Clause

Question 32: Do stakeholders agree with the CRA’s proposed review clause?

5.1.1 CRA's position in the first Consultation Document

421. CRA proposed to include in the Order approving the Wholesale Charges a review clause. This clause would allow SPs to request for a review of the Wholesale Charges subject to a material change in e.g. costs.

5.1.2 Ooredoo’s response to the first Consultation Document

422. “*There are number of uncertainties that may affect the economy of Qatar and the cost inputs for Ooredoo and other Service Providers within Qatar in the near future, e.g. inflationary uplifts, cost of capital increase etc. These events represent potential triggers for a review of wholesale charges. Ooredoo therefore reserves its right to review all wholesale charges as required by the evolving economic circumstances*.”

5.1.3 Vodafone’s response to the first Consultation Document

423. “*Vodafone Qatar agrees that a review clause could be warranted to accommodate material changes. However this should be on an exceptional basis and should not constitute a back door to permanent renegotiation of charges*.”

5.1.4 Qnbn’s response to the first Consultation Document

424. “*Qnbn agree with the CRA's proposed approach for a review clause provided any revision is mutually agreed to before being applicable. Further any review should be on the basis of 24 months as some period of certainty on charges is both required and beneficial*.”

5.1.5 CRA’s finding and proposed decision

On Ooredoo’s comments

425. The CRA confirms that the review clause shall provide the operator with the right to require a revision of the applicable charges. However, Ooredoo shall not be in position of introducing changes in the wholesale charges previously set, without the approval of the CRA.

On Vodafone’s comments

426. The CRA also confirms that this clause is expected to go into effect only in extraordinary situations and always that any required change is supported by an objective justification and relevant cost data. If deemed appropriate by the CRA, interactions with stakeholders may also be required.

On Qnbn’s comments

427. The CRA outlines that the revision of the wholesale charges shall not be subject to a mutual agreement between the requesting and the providing parts, and instead, the only approval by the CRA shall be sufficient.

Proposed Decision

428. The CRA appreciates Ooredoo's, Vodafone's and Qnbn's contributions and notes that the three stakeholders agree on the inclusion of a review clause.

429. In conclusion, in the Order approving the Wholesale Charges for the financial years 2018, 2019 and 2020, the CRA shall include a review clause stating "*Ooredoo, Vodafone or both may request for a review of the Wholesale Charges subject to a material change in network costs in relation to the relevant services which shall be no earlier than 12 months from the implementation date of this Order. Such a request shall be supported by an objective justification and relevant cost data. For clarification, principles which have been defined upon during the consultations stages will not be subject to review, for example, wholesale mark up, retail mark up, cost of capital etc*."

Annex I Consultation Questions

Annex II Tables and Figures

*** end of document ***

[CONFIDENTIAL]

Consultation on Setting Wholesale Charges for the years 2018-2020

CRA Reference: CRARAC 2017/12/13-A

Ooredoo reference: [OQ/Reg-5160/2018-2]

12 February 2018

Contents

1. Executive Summary

Introduction

1.1 Ooredoo hereby provides its response to the CRA's second consultation with regards to Setting Wholesale Charges for the years 2018-2020, issued on 13 December 2017 (Ref: CRA/RAC-T/164/2017 and CRARAC 2017/12/13-A) ('Consultation Document').

1.2 Ooredoo appreciates the CRA's transparent approach adopted in this consultation process by providing participating parties with the visibility on the comments (full citations) submitted by other SP's to individual questions raised by the CRA in the first consultation document.

1.3 However, Ooredoo is disappointed by the fact that the CRA has not reflected on Ooredoo's and Vodafone's concerns regarding the grave negative impact that the CRA's intended aggressive reduction in wholesale charges will have on the telecommunications sector, service providers and their shareholders and the long-term interest of end users in Qatar.

1.4 Ooredoo, in response to the CRA's first consultation document on Setting Wholesale Charges, provided an estimate of impact that the regulatory interventions proposed by the CRA would likely have on the total telecom market revenues and margins. Based on the partial clarifications of the objectives that the CRA aims to achieve with these regulations that the CRA provided as part of its second consultation document, Ooredoo has updated these estimates and submits the amended impact calculations in the accompanying excel file.

1.5 The updated calculations address the reservations raised by the CRA w.r.t. Ooredoo's earlier impact estimates and illustrate what would be the impact of the proposed regulatory interventions if the CRA succeeds in achieving its objectives as articulated in its second consultation document. In summary should the CRA succeed in achieving its objectives behind the proposed regulatory interventions, we estimate that total market revenues (wholesale and retail) would drop by 2.56 B QAR[1] in cumulative terms over the next three years. This revenue drop would translate to the cumulative cash flow reduction of 2.35 B QAR over the same time period. As shown in the attached excel file, the annual drop in cash flow induced by

[1] These calculations assume that the CRA will adopt Option 1 for regulation of termination rate for inbound international voice calls.

the proposed regulatory interventions would represent a significant portion of net cash flow from operating activities of both Ooredoo and Vodafone. This cash flow is used by SP's to expand their operations, invest in new products and technologies, pay dividends and meet debt repayment obligations and thus would no longer be available for these critical activities. As service providers strive to meet their debt payment obligations and shareholder expectations, the revenue drop induced reduction in cash flow will make a cost reduction imperative. Given that a large portion of operating costs represents non-discretionary expenditures in the reduction of capital expenditures (investments in future technologies) will have to be adopted by SP's as a mitigating measure. Hence, the proposed regulation is posed to substantially impair future investment capacity of SP's and related customer benefits and lead to the reduction in dynamic market efficiency. It is important to note that the negative impact is not limited to a time horizon of three years only and hence the above figures understate the value of the total detriment the proposed regulation will inflict on market participants.

1.6 The CRA's proposal thus continues to demonstrate CRA's detachment from the realities of the telecommunications market in Qatar as the proposed regulation largely ignores its responsibility to deliver on the objective of ensuring the orderly development and regulation of the telecommunications sector.

1.7 The CRA's heavy weight reliance on legal powers and arguments to impose proposed regulation does not diminish the negative consequences that this regulation will ultimately yield for service providers, customers, and the wider economy in Qatar.

1.8 Implementation of any regulation should be preceded by the clear articulation of the objectives it aims to achieve and the identification of the market failure it aims to address. Moreover, it is a regulator's obligation to demonstrate in a robust fashion that a proposed remedy is a necessary and effective instrument required to achieve predefined regulatory objectives and that benefits of such a remedy outweigh its costs. We note that first consultation on wholesale charges completely fails to meet these criteria. In the second consultation the CRA attempted to provide some justifications for the proposed regulatory interventions. However, as this comes only after well-reasoned challenge from service providers, this attempt serves more as an excuse for contemplated regulatory intervention rather than as a well-articulated and thought through strategic objective. As demonstrated below CRA's attempt to justify proposed regulatory measures fails to provide robust evidence that these interventions will indeed result in net positive benefits for market participants.

1.9 Given that there is no market failure at the retail level for mobile services, the reason for wholesale regulation is unclear and is contrary to stated CRA policy. Furthermore, the CRA's use of Article 29 of the Law as means to justify its intervention is an incorrect application of the law as this article concerns the regulation of retail tariffs – not wholesale charges. Whilst higher wholesale rates can feed into retail rates – there is no evidence that the mobile retail prices in Qatar are excessive. Article 50 of the By-law requires interconnection and facilities access charges of Dominant Service Providers to be cost-based and in accordance with rules or standards determined by the General Secretariat. This allows the CRA some flexibility to amend what is meant by cost based, so that it can meet the broader aims of the Law. The question is really about what is the CRA seeking to achieve from this regulatory instrument? What market failure is it seeking to address? And will it, seeking to address that market failure, help meet the broader aims of the Law? It is Ooredoo's view that the CRA has not determined the market failure it seeks to address in this case or, if the regulatory remedy it proposes is the most optimum, and whether blindly following a uniform cost based formulae helps achieve the broader aims of the Law.

1.10 As explained and substantiated by detailed data evidence in below, the proposed reductions in termination rates will have an immediate negative impact on service providers, which will result in a negative impact on customers (in terms of higher prices for international calls) and the wider economy (in terms of reduced investment levels and reduction of benefits that unimpaired levels of investment would yield otherwise in the absence of this regulation) in the medium and longer term. Despite having access to the relevant data, the CRA has failed to recognize the negative impact that the proposed reduction in termination rates will have and has provided no ascertaining assessment that this negative impact will not outweigh the benefits this regulation aims to bring, which we note the CRA has failed to quantify.

1.11 Ooredoo believes the CRA regulation is ill thought out and ill timed. The economic blockade has already negatively affected the sector, with service providers suffering from reduced roaming and international calling revenues. Ongoing blockade continues to pose specific economic challenges for the country, which translate into uncertainty of future development of telecom market in Qatar characterized by highly transitory nature of customer base.

1.12 In the absence of the certainty regarding the (net) positive benefits of the proposed regulation and given the substantial risk of the tangible negative consequences demonstrated by Ooredoo below, the CRA should refrain from the implementation of the steep reductions in termination rates in order to prevent the harm this can cause to the sector and the government's aspirations of socioeconomic development derived from continued investment in broadband infrastructure.2. As highlighted above and further demonstrated below, imposing the proposed steep reductions in termination rates will reduce the total value of telecoms sector in Qatar, its contribution to GDP, the state budget (industry and license fee, dividends paid to shareholders), and will restrict future sector investments.

2. General observations

Guiding Principles to set Wholesale Charges

2.1 The Consultation Document's section titled "Guiding Principles to set Wholesale Charges" commences with the Question 1: "*Do stakeholders agree with the CRA's view and methodology for cost estimation?."* Instead of commencing the principle discussion directly with the review of the costing methodology the CRA should first address the following questions: *"Do stakeholders agree with the identified market failures the CRA aims to address? Do stakeholders agree with the methodology used to assess the proportionality (i.e. quantifying the costs and benefits) of the proposed regulatory interventions?" What is the most appropriate method of incorporating the CRA's prospective pricing regulations into the commercial agreements between the SP's and between the SP's and their international partners?"*

2.2 Ooredoo notes that the CRA has presented an exhaustive recitation of its power to intervene in respect of the prices for telecommunications services. However, Ooredoo believes that the actual application of such powers requires a degree of procedural rigor. Specifically, Ooredoo considers that any interconnection and/or access agreement executed between SP's is a commercially negotiated and legally binding contract, which reflects the agreement of the parties, thereto. Whereas the CRA may have the authority to instruct the SP's to ensure that certain terms and conditions are contained within the agreements, the validity of the contracts is premised on the bilateral agreement (i.e. the signatories) to the documents **in their entirety.** Therefore, this would require formal amendment to the contracts.

2.3 Furthermore, Ooredoo considers that this matter is compounded in the context of the SP's contracts with foreign operators for the exchange of international traffic. This is because the foreign counter-parties to the relevant traffic exchange

[2] I.e. world-class infrastructural backbone to support knowledge based economy – as per Qatar National Vision 2030.

agreements are not subject to CRA's ARF. .As such the proposed regulation could put licensed service providers in Qatar at a disadvantage vis-à-vis their international counterparts. Additionally, there is the pragmatic dilemma of a regulatory directive, which compels the SP's to demand renegotiation of executed contracts with counter-parties who are not objecting to the current terms and conditions of those agreements. While it is impossible to predict how our foreign partners would react to such a proposition, Ooredoo considers that the CRA has failed to adequately contemplate the "real-life" legal implications of its proposed interventions.

2.4 Furthermore, the definition of sound regulatory remedy should be based on the principle of proportionality. As stated in the Accounting Separation Framework document published by Saudi Arabia regulator referenced by the CRA's Consultation Document: *"**Principle of Proportionality** shall mean that the [regulatory] measures applied in a decision are appropriate and limited to what is necessary to achieve the pursued regulatory objective."* This sentence captures two elementary requirements of sound regulatory practice:

1) Implementation of any regulation should be preceded by a) the clear articulation of the objectives it aims to achieve and the identification of the market failure it aims to address and b) by a regulatory impact assessment performed by regulator, which would ascertain that the benefits of the proposed regulation will outweigh the costs and other adverse impacts that may result as an outcome of regulatory intervention.

2) Regulator has to demonstrate that the imposed regulation is indeed necessary minimum to achieve the well-articulated objective(s) and that there are no other means (e.g. natural market forces) that can without regulatory intervention produce sought market outcome.

We note that the CRA in its consultation process on Setting Wholesale Charges has failed to deliver either of the above elementary requirements of sound regulatory practice.

2.5 In its first consultation document, the CRA failed to identify the specific market failures it aims to address by the proposed steep reductions in termination rates and did not even attempt to quantify the costs and benefits of the proposed regulations. The CRA uses article No. 29 from the Law to justify its position that termination rates should be 'low cost' when in fact this article makes no reference to such a requirement. Furthermore, the application of this article is clearly intended for the retail market.

2.6 In the case of the mobile termination rate (MTR) reduction, the CRA, in the first consultation document, reduced the cost-benefit assessment to the simple assertion that MTR reduction will have no negative impact on an SP's profitability because mobile termination traffic volumes are balanced. In the second consultation document, the CRA, with the use of selective data evidence, suggests that the benefit of a reduced MTR is enhanced competitiveness (reduced HHI) and lower retail prices for mobile calls. As demonstrated below the alternative data evidence that we provide disproves the CRA's assertion of direct causality between MTR and HHI. Moreover, as shown by both international and national data for Qatar if we indeed accept the causality between MTR (reduction) and (reduction in) retail prices the outcome of the CRA's proposed dramatic MTR reduction will lead to the reduction in overall retail mobile revenues and profits negatively impacting the investment capacity of SPs and future customer and wider economic benefits due to impaired telecom infrastructure enhancements in Qatar. The attached excel file provides an estimate of the drop in retail mobile revenue that would result if the CRA succeeds in achieving its objective to reduce retail prices in line with the reduction of MTR's[3] in comparison with the outcome that would be achieved with sole reliance on market forces. We estimate the drop in the retail mobile market to be in excess of 200 M QAR in cumulative terms over the next three years. This figure understates the total revenue drop, as the effect would continue beyond 2020.

2.7 Additionally, as detailed further below, the already ongoing technological shifts are posed to substantially disrupt the existing business models of licensed mobile telecommunications SPs and invalidate the current view of relevant markets in the timeframe of the proposed review period for the next three years.

2.8 CRA's lack of a clear regulatory objective is particularly visible in the case of the contemplated reduction of termination rates for incoming international calls. Section 156 of the first consultation document creates an impression that the CRA's objective behind this regulatory remedy is the reduction in OTT voice traffic *"Therefore setting regulated rates for the product might be beneficial for the customer and reduce the drain of international calls to OTT providers*", but provides no quantification of related benefits and costs of this remedy. In the second consultation document, the CRA appears to assume the position to the contrary of

[3] The estimation of the revenue loss stems from the comparison of two scenarios: scenario in which retail prices are set based on underlying MTR (cost based pricing) and scenario in which the retail price follows the past declining trend resulting from the workings of the competitive mobile market.

the above objective as it states in section number 246 and 247: *"OTTs are integral component of the information society, widely adopted by the consumers and exert a positive influence on the competiveness of the wider ICT eco system". "If the CRA would continue not to regulate the Charges of Inbound International Termination this would be under the obligation that OTT services remain unimpeded by Qatari service operators."* While the CRA now appears to claim that OTT services are beneficial to customers, it ignores the fact that they are not beneficial for the nation – no license fees, no taxes, no control, no customer protection, and no security requirements apply to these services.

2.9 We appreciate the fact that as a reflection of the evidence submitted by Ooredoo in its response to the first consultation, the CRA in the second consultation document appears to recognize the complexity of international call termination rate regulation. However, we note that the CRA has failed to demonstrate any cost-benefit assessment for any of the four remedy alternatives it proposes in section 245 for international call termination rate regulation. As elaborated below in the case where the CRA lacks regulatory control over termination rates outside of Qatar, the reduction in termination rates for incoming international calls to Qatar will more likely result in harm to the Qatari telecommunications market (both consumers and SPs), which we believe is not the CRA's intention with the proposed regulation. As such, we strongly encourage the CRA to refrain from regulating termination rates for incoming international calls. This fact has been clearly recognized by the EU, where the termination rates for international calls exchanged within EU are symmetrically regulated but where SP's are free to set termination rates for international calls from non-EU countries. While reduction in termination rate can produce welfare enhancement when applied symmetrically in the given set of the countries (i.e. countries within EU area subject to the harmonized regulation) it is prone to reduce welfare in the country (like Qatar) that would be subject to asymmetrical rate regulation on a stand-alone basis.

2.10 This is the case for two simple reasons: 1) there is no guarantee that SP's abroad will reduce retail price in response to reduced termination rates in Qatar and hence will simply pocket higher profits to the detriment of SP's in Qatar and 2) there is no mechanism available that would ensure that SP's abroad would reduce their termination rate on reciprocal basis.

2.11 As explained previously, if SP's abroad do reduce their retail prices, it is more likely that termination rate abroad will actually increase (as a consequence of change in trade balance) causing the retail price for international calls in Qatar to go up to the detriment of Qatari customers. The outcome of this regulation would thus at least represent direct value transfer from Qatar to other countries and very likely lead to the increase in retail prices for international calls for retail customers in Qatar, contrary to the objective the CRA should aim to achieve for the sector. This remedy would thus simply reduce overall social welfare the international voice call services generate in Qatar, leading to reduction in Ooredoo's contribution to state budget both in the terms of License and Industry fee and in terms of dividends paid to shareholders (note that the state of Qatar is the majority Ooredoo shareholder) in the time of continued economic austerity. We believe that in this context the action of the CRA is counter-productive to Qatar's current national interest. Perversely, this remedy is likely to transfer wealth from Qatar to the blockading nations, who would be beneficiaries of the CRA's proposed action, rather than service providers or the people of Qatar.

2.12 With the respect to the fixed voice termination rate reduction and benefits this proposed drop shall deliver we note that the CRA has not attempted to define the specific market failure it aims to address nor has demonstrated any causal relationship between the proposed regulation and the ideal market outcome nor has it not provided any quantification of the benefits this regulation aims to deliver. As explained in more detail below this action is also not supported by the guiding principles the CRA has set to follow in setting wholesale charges as outlined in sections 45 and 46 of the first consultation document.

2.13 As shown below, following the mechanical approach to a reduction in termination rates akin to that adopted by the EU, the CRA puts the telecom sector in Qatar at risk of experiencing similar drops in investments as already seen in the EU. The CRA focus on regulation of "yesterdays" telecom services is thus likely to negatively impact SP investments into Qatar's backbone for "tomorrow's" telecom services and hence reduce the wider economic benefits these investments can generate. In the absence of a clear quantification of off-setting benefits, which the CRA failed to provide even in the second consultation document, the mechanical use of cost information to dramatically reduce wholesale rates should not be implemented as it is likely to result in a detrimental impact on the overall telecommunications sector both in short and long term contrary to sound regulatory practice. In the interest of the sustainable development of the telecoms sector, the CRA should recognize the risk of the negative impact its proposed termination rate reductions represent and refrain from implementing these highly intrusive remedies.

2.14 In the following section Ooredoo provides comments to each of the questions posed by the CRA.

3. Specific responses to CRA questions

Question 1: FTR: Which of the options proposed by the CRA (1 or 2) do you suggest to use and why?

3.1 As a matter of fact, Ooredoo sells the fixed voice calls at a zero marginal price and its access service for standalone voice lines is also priced below cost and is subsidized from other Ooredoo's services.

3.2 The CRA thus appears to be very selective in the implementation of the specific articles from Law No. 34. While the CRA is adamant about implementing Article 29 (Excessive fees) of the Law it continues to ignore Article 37 (Universal Service) of the Law and its responsibility to implement Universal Service Policy. The fact that the CRA decided to approve Ooredoo's fiber tariffs only under the condition that broadband data services from relevant market M1c generate enough margin to cover the Ooredoo's loss from standalone voice services cannot be considered a formal Universal Service Policy or adequate resolution of access deficit. Hence while the CRA ignores the fact that Ooredoo continues to provide standalone retail fixed voice services at a loss to the Qatari public, it insists on imposing cost based rate setting regulation on the upstream market for the very same service (fixed call termination rate reduction), which is an regulatory economic instrument aimed at achieving a competitive outcome on downstream retail markets.

3.3 Ooredoo thus in the case of fixed termination rate regulation observes striking misalignment between market reality and the guiding principles the CRA has set to follow in setting wholesale charges, and which it outlined in section 45 and 46 of the first consultation document: "*In a perfectly competitive market, prices should be naturally driven towards costs when meeting the demand… It is also often observed that competitive pressures alone are not sufficient to ensure that new entrant operators have access to interconnection services at a fair price that allows them to compete with the incumbent's operations*". "***Consequently, the regulation of Wholesale Charges is usually necessary in order to promote competition or to approximate it in the telecommunications sector.***" We note that Vodafone and Ooredoo have already established fixed network interconnection and are not disputing rates for fixed call termination services. There is also no need to further reduce retail prices for retail fixed voice services as these services are already sold below costs. The guiding principles hence do not require further reductions in fixed termination rates and hence the CRA should abstain from doing so until it adequately addresses the issue of access deficit through the development of a Universal Service Policy.

3.4 In case the CRA decides to regulate this service regardless of the above comments, Ooredoo's position is that the CRA should adopt Option 2 to enable Ooredoo to recover the cost of this service. The mobile switch is the only connection between Ooredoo and Vodafone, so the call has to be passed to the mobile network before being transferred to the Vodafone fixed network. For a direct connection to the Vodafone fixed network both companies would have to invest in additional connections, and as the volume of calls is expected to be low, the unit cost of this would be much higher than using the mobile switch. There are no plans to change this interconnection solution in the future.

Question 2: MTR: Do stakeholders agree with the CRA's proposed Wholesale Charge for Mobile Call and Video-Call Termination Service?

3.5 In response to the SP's comments regarding this mechanistic approach to rate setting and in absence of the quantification of benefits the proposed reduction in mobile termination is supposed to yield, the CRA in the section 4.2.2.4 of the second consultation document attempted to justify the proposed steep MTR reduction by asserting causality between MTR reduction and increase in competitiveness (measure by HHI) and pointing to the increase in customer benefits in terms of lower prices and the increased volume of mobile voice calls. It appears that the CRA with the reduction in MTR aims to achieve a reduction in the retail price for mobile calls with the application of the pass through mechanism of cost based retail pricing. We see major shortcomings in the CRA's conclusions stemming from the presented analytical framework and as a result we have to conclude that the CRA has failed to provide sound a regulatory and economic justification for this market intervention.

3.6 The CRA's role is to ensure that service providers have the ability to compete in the market. The CRA's role should not be about dictating operator strategies or consumer behavior through the manipulation of mobile (or fixed) termination rates. Regulation of MTRs is relevant when there is an asymmetry of mobile operator market shares and power – and there is concern that the dominant operator uses higher MTRs to accentuate club effects, which are to its advantage. In Qatar, the interconnection traffic between Ooredoo and VFQ is more or less balanced and by CRA order, there are no on-net and off-net retail price differentials that would allow for accentuation of network effect. Furthermore, both service providers have argued that the CRA should not interfere in this market. The same rational that existed in the EU does not exist in Qatar.

3.7 There does not seem to be any economic or social support for the CRA's desire to regulate these termination rates at this time. Furthermore, neither SP is complaining about the existing negotiated agreements. . It is important to note this this is a general best practice in numerous regulatory jurisdictions. For example in the US regulatory environment, it is expected that the termination rates be established via voluntary negotiation processes among service providers. It is only when service providers cannot agree on the terms and conditions that they seek regulatory intervention. We note that a similar process is followed in Kuwait and Bahrain and that the Telecommunications Law in Qatar foresees application of similar process (refer to the Law articles 18 and 20). We note that these cases apply where there is no SPs is designated as dominant, which is the case of mobile relevant market in Qatar.

3.8 In following paragraphs we address the shortcomings of the CRA's analytical framework and provide evidence that contradicts the CRA's conclusions and justifications used to support the proposed MTR reduction.

3.9 In Figure 2 on the page 18 of Consultation Document the CRA shows that the reduction in MTR is associated with an increase in competitiveness, captured by a decline in Herfindahl Hirschman Index (HHI), observed on the sample of OECD countries. The use of HHI in a duopoly market is not really appropriate. In any case there will be a host of factors that would determine the HHI, none of which may be related to the MTR. The influence of these additional factors will vary over time. So using examples of changes to MTR over time must first rule out changes to network coverage over time, must rule out distortionary regulatory instruments that may help increase the competitive ability of smaller entrants[4]; or other pro-consumer regulatory instruments, such as the introduction of MNP, shorter consumer contracts etc., which would all contribute to the ability of smaller operators to capture market share from the larger, more heavily regulated operator. The CRA must first remove these externalities before it can claim a causality link in the HHI from changes in MTR.

[4] Consider the following example of regulatory induced changes to HHI. In the UK, the regulator effectively gave EE a head start with rolling out 4G. This resulted in customers switching to EE, and its market share increasing relative to the other dominant operators. This kind of market intervention will increase the HHI – but has nothing to do with the MTR rates.

3.10 The data below demonstrates that there is no causal relationship between MTR and competitiveness. There is an important difference between causation and relationship. Causation, also known as cause and effect, is when an observed event or action has caused a second event or action. The CRA appears to suggest that a drop in termination rates is necessary to cause HHI to drop (i.e. competitiveness to increase). However, if we observe similar data for the mobile market in Qatar in the Figure 1 below, the correlation (as observed in the case of OECD countries) is not present and hence the hypothesis of a causal relationship between MTR and HHI has to be rejected based on this specific data set.

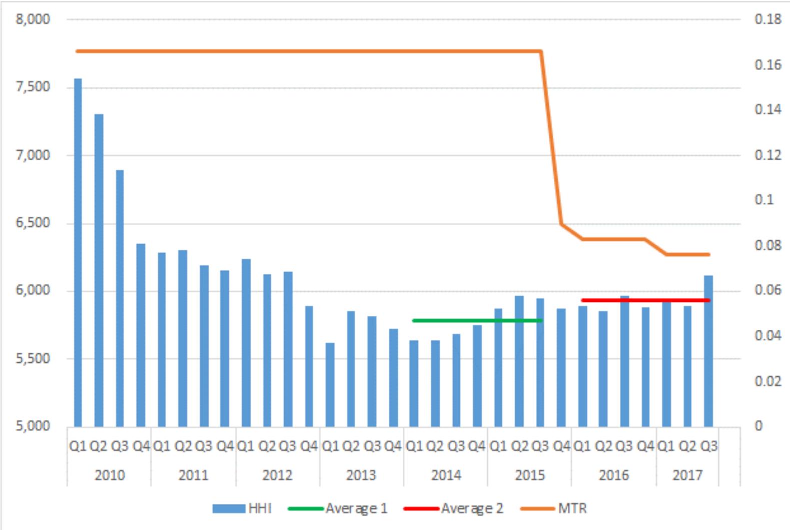

Figure 1: Lack of causality between MTR and HHI – Qatar

3.11 The HHI for mobile market in Qatar has declined significantly during the time period of stable MTR (Q1/2010 – Q3/2015). Moreover when comparing a period of seven quarters before and after the MTR was reduced in Qatar in October 2015, as an outcome of Wholesale Charges Regulation, we see that the average value of HHI has actually slightly increased after MTR declined (refer to the green and red lines in the Figure 1). This effectively disproves the hypothesis suggested by the CRA that the drop in MTR is required in order to increase competitiveness (i.e. decrease the value of HHI). As demonstrated by the Figure 1 above the drop in MTR is not required to increase competitiveness in the mobile telecom market as measured by the HHI and the MTR drop does not guarantee that HHI will drop as a consequence. We conclude (and further uphold below) that the MTR reduction is not required to increase competitiveness in Qatar's mobile market.

3.12 Furthermore, in Figure 2 of the CRA's consultation document, the HHI drops below the value of 2,500. As a matter of fact, the HHI (measured using market shares of licensed SP's) in Qatar cannot drop below 5,000 (even if MTR was set to zero) unless there is another licensed entrant introduced to the market. Another problem with HHI is that its value minimization does not automatically guarantee maximization of market efficiency. There is a host of theoretical and empirical economic studies indicating that the relationship between innovation / investment and competitive intensity follows an inverse U-shape curve. Economic research demonstrates that both markets with too little and markets with too much competition may generate weak innovation performance. Especially in industries with significant sunk costs (e.g. telecommunications), empirical studies have shown that loose oligopoly rather than perfect competition is most conductive to investment and innovation[5].

3.13 Ooredoo does not dispute the fact that a drop in MTR allows for further reductions in retail prices. However, Ooredoo cannot agree with the CRA's assertion in section 115.3 of the consultation document stating *"…the increase in traffic tends to compensate for reduction of retail prices*". This claim purports to suggest that retail revenues or profits do not decline as a consequence of retail price reduction and that this decline does not affect the investment capacity of SPs. This position is reiterated in the section 9 of consultation document: *"changes in Wholesale Charges are not expected to affect the overall industry's income, profitability and its investment capacity significantly"*, in section 122: "*Also, the impact on the Margins of the SPs is negligible, given that the traffic is almost balanced between Ooredoo and Vodafone"*, and in section 185: "*The CRA is of the view that this reduction is not likely to introduce any damage on the operator's performance."*

3.14 The CRA attempts to underscore the negative impact that the reduction in MTR and retail price for mobile voice calls can have by painting a false picture with selective use of Ooredoo mobile voice termination traffic data in Figure 6 of the Consultation Document. Based on a trend of MTR's and mobile termination voice volumes for time period of 2014-2017 the CRA aims to create an impression that the decline in MTR's has stimulated rapid increase in national mobile call traffic from Ooredoo to Vodafone Qatar as it has increased faster than population growth. First, we need to

[5] For the review of related theoretical concepts and empirical studies refer e.g. to the article by Bauer, J. M. (2010). "*Regulation, public policy, and investment in communications infrastructure."* Telecommunications Policy, 34(1), 65-79, available at: http://modir3-3.ir/article-english/article454.pdf

correct the 2017 traffic figure the CRA is using as that reflects the expected forecast value that was submitted to the CRA by Ooredoo in response to the initial CRA's information request issued by the CRA to SPs on 28 March 2017 (CRA/RAC-E/027/2017). The actual 2017 number is much lower than forecasted and it is correctly reflected in Figure 2 below. As Figure 2 below demonstrates, there has been significant increase in the volume of mobile termination call traffic even in the time period when the MTR has been constant. In fact, during the time period 2010-2014 (before MTR reduction) this volume increased on average by 73% per annum (much faster than population growth in Qatar). This annual growth has actually dropped to only 13% for the period 2015-2017, i.e. the period affected by the MTR reduction. This puts the CRA's selective data evidence into wider perspective, which shows that MTR reduction is not a main driver of the growth in inter-network voice traffic volumes and its influence is much smaller that of other factors (mainly growth in number of subscribers in individual mutually interconnected telecommunication networks).

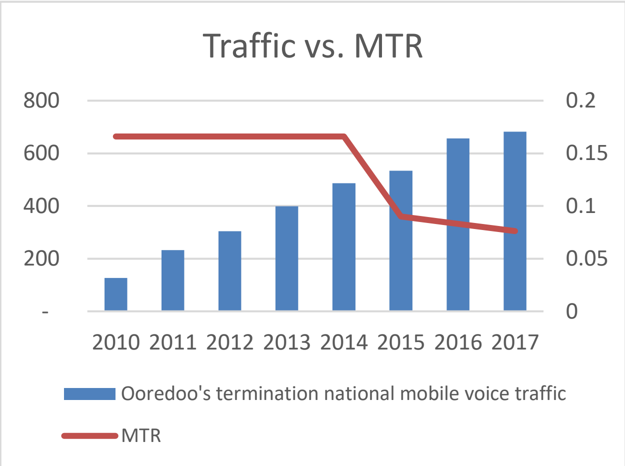

Figure 2: Comparison of Ooredoo mobile termination voice traffic vs. MTR 2010-2017

3.15 Moreover, as we demonstrate below, the above cited CRA's claims are not duly substantiated and ignore the available evidence demonstrating that MTR and retail price reduction for mobile calls are likely to cause tangible negative revenue and profit impact, which in turn will restrict the future investment capacity of SPs and related customer benefits and lead to the reduction in dynamic market efficiency. The CRA however opted to overlook this data evidence and in doing so fails to produce a robust assessment of the net impact that the proposed reduction of MTR will have on Qatar's mobile telecommunications market.[6].

3.16 The CRA's selective use of data that suggests that lower MTR's leads to higher usage is misleading. The whole premise is based on the price elasticity of demand. These price demand elasticities are not static – in the early days of market liberalization and competition reductions in retail rates may translate into higher revenues – however, as markets mature, the demand tends to be less responsive to price declines – this is especially the case today as consumers have alternative means of communication – OTT services. Reductions in MTRs in mature markets cannot automatically be assumed to result in higher volumes of usage – certainly not to the extent that the reductions offset the lost revenues.

3.17 As a matter of fact, available data from EU and Qatar demonstrate that retail price reductions in mobile voice calls lead to declines in retail mobile call revenues to the degree that even increasing retail revenues from mobile data service cannot prevent total telecommunication revenues (and margin) decline. Refer for example to page 4 of "EC – Europe Digital Progress Report 2017 - Broadband market developments in the EU"7 and to the Figures 3 and 4 below replicated from this report. The study concludes and Figures 3 and 4 demonstrate that, in the sample of benchmarked countries, EU countries subject to similar mobile termination rate regulation as the CRA aims to follow in Qatar, have seen the largest overall reduction in total telecommunications service revenues over the course of the past four years. This decline was driven by drop in revenue contribution of (mobile) voice call revenues. Moreover, as Figure 3 shows, the EU also lags significantly behind the US in terms of total telecom revenues even though its population is smaller than that of the EU. As demonstrated in Figure 5 below, during the same time period 2013-2017, the revenue drop in the EU has resulted in a significant decline in terms of both profitability (EBITA) and investments (CAPEX) and that the similar gap between EU and US as seen in terms of revenues can be observed as well in terms of profitability and investments. It is important to note that the US mobile markets operate under receiving party pay principle and hence the termination rates are not regulated, instead prices for incoming calls are freely set by SPs. As highlighted

[6] Ooredoo observes another concerning non-proportionality in CRA's regulatory practice, whereby SP's in Qatar have spent considerable resources to produce and deliver very extensive regulatory reports, which are then largely ignored by the CRA in formulating and assessing impact of such relevant and important regulatory decisions as is setting wholesale charges.

[7] Report is available at https://ec.europa.eu/digital-single-market/en/news/europes-digital-progress-report-2017

above the right to voluntarily negotiate interconnection contracts is essential premise in numerous regulatory jurisdictions.

3.18 We note that the historical gap in investment performance between the US and the EU has already translated to the current gap in related market outcome and customer benefits in the form of a much lower penetration of 4G service in EU compared to that of the US or Qatar[8]. Hence, if we assume the CRA's position that MTR reduction leads to corresponding reduction in retail prices, this market outcome demonstrates that MTR reduction can also lead to the reduction of future customer benefits via reduced investments in innovation and new technologies. We note that the CRA has failed to account for this important trade-off between static and dynamic efficiency in their simplified assessment of the MTR reduction impact. This is also contrary to the CRA claims in the consultation document that the CRA's focus is always the long-term benefit for the country and its citizens. Based on empirical evidence, the CRA's actions are posed to do long-term harm to consumer welfare.

3.19 The more general trade-off between higher prices (reduction in static efficiency) and higher investment (enhancement in dynamic efficiency) has also been confirmed in the empirical study by Christos Genakos, Tommaso Valletti, Frank Verboven "Evaluating market consolidation in mobile communications" CEPR Discussion Paper No. DP12054, 22 May 20179. Using mobile industry data from 33 countries between 2002 and 2014, the authors assess the impact of mergers (i.e. reduction in competitiveness) on market efficiency and confirm that mergers lead to increased firm level investments surpassing the increase in retail prices brought about by mergers. The authors stress that regulatory authorities should take seriously the potential trade-off between market power effects and efficiency gains in the form of higher investments stimulated by the merger activity and enabled by

[8] By the end of 2017, 4G penetration in EU stood at 43% while for USA at 75%. (*Source: Ovum WCIS World Cellular KPI's*. 4G penetration is measured in terms of 4G enabled devices on a 4G in service network.) Ooredoo internal data show that [redacted] of Ooredoo mobile subscriber actively used 4G services as of December 2017.

[9] The summary of this article can be found on: http://voxeu.org/article/investment-and-market-consolidation-telecoms

higher profitability.

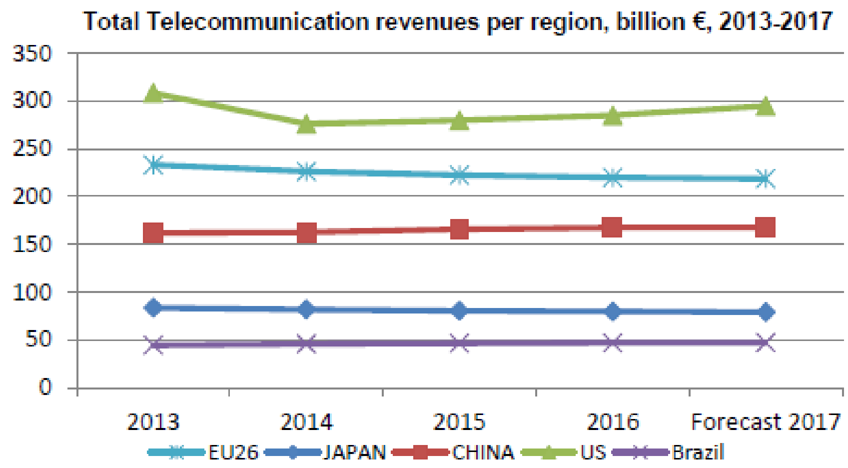

Figure 3: Telecommunication revenues decline fastest in the EU region despite increase in mobile data revenues

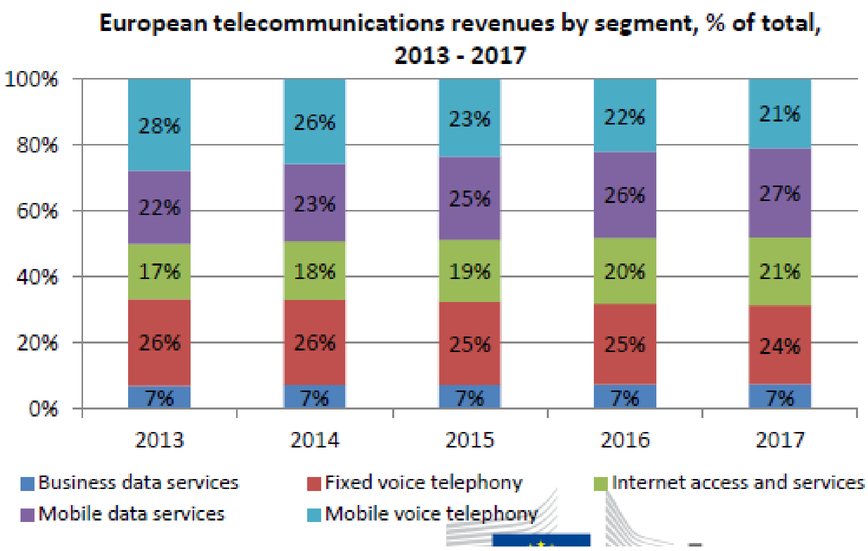

Figure 4: Share of Mobile Voice Revenue Declined from 28% to 21% in EU

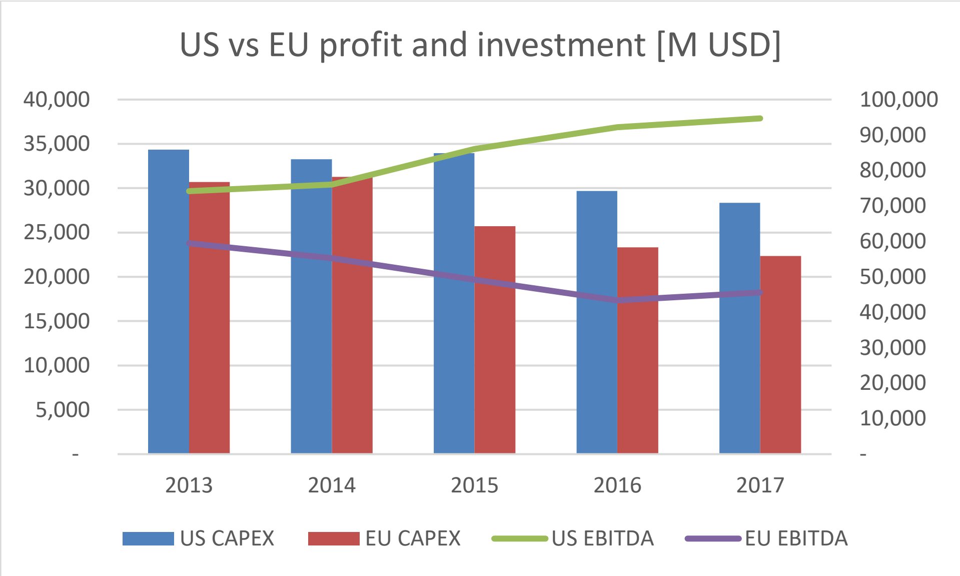

Figure 5: EU lags behind US in terms of telecom sector's profit and investments
Source: Ovum WCIS World Cellular KPI's

3.20 Moreover, the similar revenue trends seen in EU area can already be observed in Qatar as shown in Figures 6 and 7 below. While retail price reduction for national mobile voice calls has led to the increase in demand and hence in the volume of national mobile voice calls this increase has not been large enough to compensate for the decline in retail prices and has resulted in a decline in national mobile voice call revenues despite an increase in the number of mobile subscriptions on Ooredoo's network[10]. Furthermore as demonstrated by Figure 7 below, a drop in mobile termination rates in 2015 was followed by stagnation and a subsequent decline in total telecommunications service revenues. The drop in mobile voice revenues has thus resulted in overall decline in national mobile revenue (voice + data revenues for Ooredoo and Vodafone) as the increase in mobile data revenue has failed to compensate for a drop in mobile voice revenues. The CRA in their market assessment and substantiation of intrusive regulation in the form of dramatic MTR reduction completely overlooks these essential facts that must be taken into consideration as part of a holistic assessment of the costs and benefits of the proposed MTR regulation. It appears that the CRA for the sake of a relatively minor customer benefit (partial increase in volume of mobile calls) does not mind

[10] This data is specific to Ooredoo network and are available to the CRA via MDDD reports submitted to the CRA by Ooredoo on quarterly basis.

sacrificing a substantial loss of future revenues and margins and thus impairing the future investment capacity of the SPs in Qatar and related consumer benefits.

Reducted

Figure 6: Mobile Voice Revenues Declined as Retail Price Declined

Reducted

Figure 7: Total national mobile (voice + data) revenues in Qatar started to decline after reduction in mobile termination rate in 2015.

3.21 The CRA statement made in point 117 of the consultation document, which serves as a justification for the dramatic reduction in termination rates is especially controversial and at odds with the development of telecommunications services in Qatar and related customer benefits: *"It is quite clear that the interest of the Service Providers (i.e. high revenues and profit with low investment and costs) are often different from the interest of the public (i.e. innovation, low prices, high quality)."* Ooredoo notes that the CRA has as part of the latest MDDD process concluded that relevant retail mobile markets are competitive. Hence, as per the CRA's conclusion that market forces alone should ensure efficient market outcome in mobile markets. The retail price benchmark study published by the CRA in 2017 does not indicate that there is a market failure in terms of 'excessively' high mobile retail prices[11], which would serve as grounds for proposed MTR regulatory intervention. Moreover, the 4G service penetration (on Ooredoo's) network is higher than that of the EU or the US. Ooredoo had also already introduced the VoLTE service prior to the publication of the CRA's consultation document contrary to the concerns raised by the CRA in this respect.[12]. Ooredoo has further already run tests of next generation mobile technologies demonstrating that it is fully committed to be at the forefront in terms of the commercial introduction of 5G mobile technologies. What is holding the sector back in this respect is a lack of regulatory clarity regarding the spectrum that the CRA will allocate for 5G technologies.

3.22 As highlighted above the CRA failed to demonstrate that a proposed aggressive reduction in mobile termination rates is indeed *"appropriate and limited to what is*

[11] Refer to report published at the CRA web site: http://cra.gov.qa/en/document/international-retail-price-benchmarking-report

[12] The CRA's argument in section 200 that: *"very high margins for traditional interconnection services would provide limited incentives for migrating to newer and more cost-efficient technologies such as, VoLTE (Voice over LTE)"* is thus simply not valid.

necessary to achieve the pursued regulatory objective". The CRA in section 116 states: *"The CRA has a broad mandate and multiple objectives to reach. In taking its decisions, the CRA has to balance the overarching goal of economic diversification, the interests of the Service Providers and those of the customers."*

3.23 Based on the above evidence we conclude that dramatic MTR reduction proposed by the CRA is posed to have a tangible detrimental impact on the future benefits of mobile subscribers and the overall welfare the ICT sector in Qatar can generate, which is likely to outweigh the limited benefits the CRA seeks to achieve. As demonstrated by Ooredoo in previous submissions to the CRA (as a part of 2016 MDDD consultation) most of the traffic traversing over current telecommunications networks, is predominantly data (as is already reflected in the share of data service revenues[13]). Accordingly, current and future investments in telecommunications networks are focused on further enhancements of data services and delivery of consumers' and wider economic benefits that can be derived from these services. As confirmed by the survey "MEDIA USE IN THE MIDDLE EAST, 2017" done by Northwestern University in Qatar, the telecommunication customers in Qatar spend highest average number of hours online per week among seven MENA area countries included in the study data set.[14] The CRA's MTR reduction thus aims to affect adversely a much larger segment of the telecommunication market than is the one it has potential to benefit.

3.24 Furthermore, the CRA is in its regulatory approach fixated on the use of outdated remedies, which do not reflect current market realities and are thus posed to cause more economic harm than benefits. The CRA duty is to balance the multiple objectives of the Law and it has to demonstrate that proposed MTR reductions are indeed in the best long-term interests of the country. Current regulatory interventions such as MTR regulation are conceptualized as measures targeted to monopolistic market segments. This strategy was useful during the era when monopolistic elements prevailed in the industry but it is increasingly less appropriate in the present market reality characterized by highly interrelated, interdependent market segments surpassing the traditional definitions of relevant

[13] For related data evidence refer to the Ooredoo quarterly MDDD reports.

[14] Qataris estimate they spend an average of 45 hours per week on the Internet compared with just 27 hours among other nationals. The CRA can compare this with the time the Qatari customers spent using traditional voice services, which indeed represent very small fraction of time customer in Qatar spent consuming data services. Study results are available at: http://www.mideastmedia.org/survey/2017/chapter/focus-on-qatar/

regulatory markets. The OTT services together with other technological advances already have and will continue to have much larger impact on (retail and wholesale) prices of and the demand for traditional telecommunication services in the foreseeable future than the CRA's proposed termination rate regulation.

3.25 Consider e.g. the introduction of eSIM, which will effectively disrupt the traditional MNO business model, as it will lend itself to decoupling of the customer ownership from MNO's to mobile device manufacturers. An eSIM (embedded SIM) is a programmable SIM card that is permanently fitted into devices. eSIM enables remote SIM provisioning in any consumer device and enables a consumer device to store more than one operator profile concurrently. As assessed by the PWC in its Strategy& paper the **Cutting the last cord - How the "disappearing" SIM card will liberate the consumer and scramble telco roles**: *"The telco business will never be the same. The shift to eSIM will inspire radical changes in consumer behavior, changes that have the potential to scramble the roles of all the players in the market. Facing the biggest uncertainties are mobile network operators (MNOs), or wireless service providers,…"* One of the possible scenarios described by Strategy& sees the future of mobile industry as follows: "*In today's world, the customer starts by selecting a carrier. In the future, when connectivity is included in the manufacturer's device, customers will pick their smartphone first and then choose a carrier as they put the device into operation. This process will likely mean the buyer is offered a carrier selection page that allows the carrier to define price plans and invoice the customer. In some cases, however, the manufacturer will also operate as an MVNO, selling and invoicing for its own plans,… It is possible that brokers will position themselves…, offering the customer the lowest tariff or the best network, much as Orbitz does in the travel industry and Trivago does with hotels. The danger for the operators is that their role will be sharply marginalized, perhaps reduced to B2B connectivity provider.*[15]*"*

3.26 Indeed Google has already embarked on the march towards this market outcome with introduction of its Pixel 2 phones with eSIM providing coverage in more than 130 countries worldwide.[16]

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[15] The referenced Strategy& paper is available at: https://www.strategyand.pwc.com/media/file/Cutting-the-last-cord.pdf

[16] For further information refer e.g. to the following articles:
https://www.theverge.com/2017/10/4/16424740/google-pixel-2-xl-esim-technology-project-fi-first-ever
https://whatphone.com.au/guide/how-google-pixel-2-and-the-eSIM-can-give-you-the-best-network-coverage

3.27 We conclude that in the context of current and emerging market structures the further MTR reduction is an obsolete regulatory measure likely posed to produce negative net impact on the overall market efficiency. We note that as per the CRA's MDDD decision the national mobile market in Qatar is competitive. We also note that the CRA itself concluded that retail prices in mobile market in Qatar are lowest in the Arab world[17], and hence they cannot be seen as market failure that has to be addressed by a further regulation on the upstream market. Given net negative economic impact the contemplated steep reduction in MTR is posed to yield for overall telecom sector and in the absence of tangible market failure that would require this regulatory intervention the CRA should refrain from further regulation of MTR and let SP's to agree the rates.

3.28 In case the CRA decides to ignore the above evidence supported arguments and insist on further regulation of the MTR, Ooredoo provides in the attached excel file updated cost and volume forecast for mobile voice call termination service and suggests alternative glide path to that proposed by the CRA.

Question 3: Inbound International Termination: Please provided your reasoned responses. Which of the above proposed Options is the most beneficial for the State of Qatar for the coming period?

3.29 It is obvious that the CRA particularly struggles to identify solid objective and to quantify concrete benefits to substantiate regulation / reduction of termination rates for inbound international calls. This is particularly concerning as given its asymmetric nature, this regulation poses substantial risk of detrimental effect on service providers and customers in Qatar while benefiting service providers outside of Qatar. The CRA's reasoning in this case is simply not reflecting the actual market reality, is highly confusing as it changes over time from first to second Consultation Document and contradicts previous CRA's 2016 MDDD decision that market for mobile international calls is competitive. Furthermore, it is questionable if the CRA actually has any legal ground to regulate interconnection relationship involving entities not licensed in Qatar.

[17] Refer to press release "CRA: TELECOM PRICES IN QATAR LOWEST IN ARAB REGION" at http://www.hukoomi.qa/wps/portal/media-center/news/news-details/cratelecompricesinqatarlowestinarabregion

3.30 In the first consultation document the CRA states: "*We also understand that the commercial rates are set reciprocally, i.e. the change of rates of one operator are followed eventually by the other operator.*" As explained in Ooredoo's previous response, this assertion is not reflective of the market reality and represents wrong initial proposition to base this specific regulatory decision on. As detailed previously Ooredoo offered reduction in termination rate for incoming international traffic to Qatar to SP's abroad under condition that they will reduce their retail rates for calls to Qatar (to pass the cost saving benefit to customers) and thus increase volume of incoming calls. This proposition was however, refused by Ooredoo counterparts abroad[18]. We note that the fact that termination rates reduction do not apply automatically at reciprocal basis has been recognized by the EU regulatory authorities and they let service providers to set commercially negotiated rates for calls incoming from non EU countries.

3.31 In the first consultation document, the CRA created an impression that its objective linked to reduction of termination rate for incoming international voice calls is to reduce volumes of OTT calls by stating in section 156*: "A logical effect is that customers rather use OTT services for international calls rather than (inflated) retail telecommunication services. Therefore setting regulated rates for the product might be beneficial for the customer and reduce the drain of international calls to OTT providers".* In the second consultation document however, the CRA appears to contradict this objective by expressing its strong support for OTT services (sections 246 and 247 of consultation document): *"OTTs are integral component of the information society, widely adopted by the consumers and exert a positive influence on the competiveness of the wider ICT eco system. If the CRA would continue not to regulate the Charges of Inbound International Termination this would be under the obligation that OTT services remain unimpeded by Qatari service operators. The CRA will continue to monitor the market and may issue a regulatory instrument to detail this subject matter in future."*

3.32 In the second Consultation Document the CRA thus appears to abandon its original objective, which this regulation was supposed to achieve, i.e. "*reduce the drain of international calls to OTT providers*". We note that the Second Consultation document fails to clearly articulate alternative objective the CRA aims to achieve with the reduction of termination rate for incoming international calls in place of

[18] Note that this is simply a reciprocal condition imposed by SP's abroad on Ooredoo as any reduction of termination rates granted to Ooredoo by SP's abroad was conditioned by the fulfillment of Ooredoo's commitment to increased volume of outbound international traffic to given SP's via reduction in Ooredoo's retail prices.

this original objective. We however observe that in the section 246 of Consultation Document the CRA states that it *"is also first of all cognizant of the various unwanted effect high and imbalanced IOTs bring (see e.g. point 236 above)."* In the absence of direct articulation of clear alternative objective we thus assume that the CRA wants to (through termination rate reduction) address those *"various unwanted effects."* These unwanted effect are listed by the CRA in point 236 and include the following:

- *236.2 High rates may lead to an increase in retail prices that, in turn, may **decrease traffic from international destinations**. This would be against consumers' benefits since communications from abroad would be reduced. It is important to highlight that in the long-term, such decrease in traffic could lead to a counterproductive scenario with a reduction in revenues.*
- *236.3 **Migration from traditional voice** services **to** communications services provided through internet (such as **OTT** services) **are likely to occur** as a result of high retail prices.*
- *236.4 If imposed by regulators, high rates may limit the ability of service providers to negotiate rates for outgoing traffic (termination in other countries), what could lead to high retail tariffs for international calls.*
- *236.5 Incentivize **unwanted practices**, such as the SIM Boxes, refilling, tromboning, etc.*

We address these *"unwanted effects"* in sequel.

3.33 **Point 236.2** seems to indicate that the CRA's objective behind the reduction in termination rate for incoming international voice calls is to increase voice traffic from abroad to Qatar. The CRA here appears to confirm its recognition of the relationship between termination rate and volume of international calls. The CRA also appears to be concerned about the revenues, however the CRA did not specify if it is concerned about retail or wholesale revenues and whether about revenues of SP's in Qatar or SP's abroad. However, given the CRA's intention to reduce termination rate in Qatar it appears the CRA is genuinely concerned about service revenues of the SP's abroad and that the CRA's objective is indeed to motivate these SP's to reduce their prices and in the process to increase their volume and (potentially) revenues of retail international calls from abroad to Qatar. Given that the CRA preserves as one of the regulatory remedy options the reduction of termination rate for international calls to the level of termination rate for national calls (Option 1) it appears the CRA actually wants to maximize the volume of incoming calls to Qatar.

3.34 Ooredoo does not oppose the CRA's observation that the reduction in termination rate for international calls incoming to Qatar may potentially lead to an increase in volumes of incoming voice traffic from abroad. Indeed as demonstrated by Ooredoo's previous submission the change in the relative termination rates does lead to the change in the terms of trade in international minutes as far the retail prices follow the drop in termination rates.

3.35 However, Ooredoo is confused by the related controversy in the CRA's positions in second Consultation Document. On one hand the CRA appears to aim to maximize volume of incoming international voice calls to Qatar (point 236.2) via reduction in termination rate yet at the same in the point 242.2 considers Ooredoo's assumption that 40% of outbound voice traffic could after reduction in termination rate to Qatar be originated abroad as *"very overestimated and not fully supported by evidences".*

3.36 First, since the CRA aims to increase volume of incoming calls we understand the larger the impact of this "reduced rate" regulation is, i.e. the larger the increase in incoming call volumes is, the more successful is this CRA's regulatory remedy. The CRA should hence seek to maximize not minimize the Ooredoo's calculation results[19].

3.37 Furthermore, by raising the concern of missing evidence in point 242.2 the CRA appears to ignore the information value of the data on international calls trade submitted by Ooredoo. Indeed as the CRA learned from that data (as demonstrated by figure 10 of Consultation Document) the reduction of termination rate for international calls abroad allowed for reduction in retail price for this service in Qatar and sequentially lead to increased traffic volumes from Qatar to abroad

[19] The obvious problem with this objective is that the more successful the CRA is in maximizing incoming volumes of international voice calls the more detrimental impact there is on customers and service providers in Qatar. The volume of outbound int'l calls from Qatar will decrease (being substituted by incoming calls), causing the breach of volume commitments given by SP's in Qatar to their counterparts abroad. This will result in an increase in termination rates by SP's abroad and hence in the increase in retail prices in Qatar to the detriment of Qatari customers (price increase will lead to further volume reduction and thus aggravating financial impact yet more). Moreover, SP's in Qatar would lose margin as more profitable retail calls would be replaced by cost based priced incoming calls and hence their investment capacity will be substantially impaired resulting in reduced potential of dynamic market efficiency in Qatar.

destinations. The CRA thus acknowledges (by the very regulatory intervention it proposes, i.e. the reduction in termination rate for incoming international calls) that the ratio of the termination rates for international calls can serve as a predictor for the ratio of incoming and outgoing international calls.

3.38 The data on international calls trade submitted by Ooredoo in the response to the first Consultation Document demonstrate that the higher the ratio of incoming termination rate to outgoing termination rate is (i.e. higher is the rate paid by SP's abroad to terminate voice call in Qatar relative to the rate paid by SP's based in Qatar to terminate calls abroad) the lower is the ratio of incoming to outgoing volume of international voice calls (i.e. the smaller is the volume of calls from abroad to Qatar than the call volumes in opposite direction).

3.39 Indeed when applying the regression analysis to the same data with the in-out ratio of the volume of international voice calls as dependent variable and in-out ratio of termination rates as an explanatory variable we see that the inverse relationship between these variables is indeed statistically significant and that more than 75% of the variation in in-out traffic ratio is explained by the variation in the in-out termination rate ratio[20]. This result confirms the CRA hypothesis that the termination rate reduction could lead to the change in the in-out ratio via increase in the volume of the incoming voice calls from abroad to Qatar. The Figure 8 captures this inverse relationship and regression results.

Reducted

Figure 8: Regression analysis of in-out traffic ratio (y) and in-out termination rate ratio (x) expressed in natural logarithm terms

3.40 We note that the regression equation predicts that the reduction of termination rate for inbound international calls in Qatar to the level proposed by the CRA for national voice call termination (i.e. Option 1) would effectively reverse current in-out termination rate ratio and would result in the in-out ratio for international voice calls of [redacted][21] from the point of view of SP's abroad. To arrive at this in-out traffic

[20] Refer to the attached updated excel file *"Impact of CRA proposed WS charges 2018 to 2020_confidential_updated".* Note that, in a line with general econometrics practice we used natural logarithm of the regression variables to estimate equation parameters. This transformation is done to ensure the distributional assumptions of regression methodology are met in order to improve the statistical quality of estimated parameters.

[21] This result makes intuitive sense. After reduction in termination rate in Qatar to 0.056 (Option 1) it will be [redacted] times more expensive to terminate calls from Qatar to abroad than vice versa in comparison with

ratio more than 90% of existing outbound international calls originated in Qatar would have to be originated abroad. In this context the Ooredoo's assumption of 40% traffic shift from outbound to inbound does not seem *"very overestimated"* as claimed by the CRA and it is supported by the data provided by Ooredoo to the CRA previously. The CRA also challenged Ooredoo's computational assumption that 40% traffic shift is applied across all 3 years equally without any evolution and hence leads to overestimated negative financial impact of this regulation. First, application of glide path proposed by the CRA for MTR (Option 1 proposed by the CRA) will result in immediate almost 90% drop in termination rate for international calls and CRA did not indicate that it plans to reverse this drop in the future. Hence while the change in the in-out ratio may not happen overnight, if the SP's abroad indeed reduce retail price to match termination rate drop and customers response with increased demand for international calls then the impact will last well beyond period of 3 years for which it was calculated by Ooredoo, and would definitely in its totality surpass the Ooredoo's estimate limited to 3 year period. In the attached excel file we amend earlier calculations of related financial impact to reflect regression estimates results and adopt more gradual evolution in the international calls trade balance.

3.41 It is important to note that data used in the above regression were generated by the process in which reductions in termination rates abroad were closely followed by Ooredoo's retail price reductions for international calls from Qatar. Indeed the above predicted value of in-out traffic volume ratio would materialize only in case that the drop in termination rate in Qatar would be matched by the corresponding reduction in retail price for international calls from abroad to Qatar and that customers abroad would respond by increasing demand for these calls with similar retail price elasticity as did customers in Qatar. We could debate the prediction of the magnitude of change in the in-out traffic ratio for long, but that is not the point.

3.42 The main point here is that given asymmetric nature of this regulation the more successful the CRA will be in achieving its objective of increasing the volume of incoming international calls to Qatar the larger detrimental impact this "success" will have on SP's in Qatar (earning lower profits) and their customers (paying higher

today situation when it is [redacted] times more expensive to terminate calls from abroad to Qatar than vice versa (assuming termination rate abroad would not change). If the retail price for international calls to Qatar would indeed be reduced by the SP's abroad to fully pass on the cost savings (granted to these SP's by the CRA's decision) to their retail customers via reduced retail prices, the in-out traffic ratio would likely change significantly, and could change from current [redacted] from the point of view of SP's in Qatar to [redacted] from the point of view of SP's abroad.

prices for outbound international calls)[22]. In case that there is no decrease in retail prices abroad the negative impact would be limited to simple wealth transfer from SP's in Qatar (reduction of call termination revenues) to SP's abroad (reduction in cost of terminating int'l calls to Qatar). We note that the CRA failed to provide any robust quantification of benefits this highly intrusive and disproportional regulation could yield.

3.43 The negative effects of this asymmetric regulatory intervention are the main reasons why there is a lack of similar regulatory precedence; a conclusion, which is actually reinforced by the CRA's comparative references to the practices of regulators in other countries. In our review of the benchmarks provided by the CRA, we are concerned that none of the comparators provide any meaningful support for the CRA's proposed intervention in this case. For example:

3.43.1 Bahrain, Ghana and India all represent markets where the regulator has imposed minimum international MTR's in order to protect the revenues of the domestic operators.

3.43.2 The EU and UK are both illustrative of the regional harmonization initiatives, which are intended, among other things, to ease the burdens of compliance and oversight on the respective operators and regulators.

3.43.3 The references to the UAE and New Zealand both address scenarios where the regulator is directing the treatment of international traffic being exchanged between domestic operators, not the regulation of inbound traffic from international partners.

3.43.4 By the CRA's own admission, the references to Australia, Indonesia, Singapore and Lebanon serve no purpose whatsoever in the context of this consultation.

3.44 The CRA has inferred that international termination rates in KSA are governed by commercial negotiation, not regulatory intervention.

3.45 **Point 236.3** appears to contradict the CRA's position in section 156 from first consultation document as well as sections 246 and 247 of second Consultation Document and hence Ooredoo is confused with respect to the actual position the

[22] Recall that reduced termination rates paid by Ooredoo to SP's abroad are conditioned on the specific traffic volume commitments, which Ooredoo will fail to deliver once outbound traffic, will be replaced by inbound traffic. As a result, the international calls termination rates paid by Ooredoo to SP's abroad will increase and hence will increase the retail rates paid for international calls by customers in Qatar.

CRA has towards OTT voice calls. Moreover, it appears that the CRA's position is to penalize licensed operators in Qatar to benefit unlicensed OTTs providers from abroad – which are deemed illegal under the Law.

3.46 **Point 236.4** Ooredoo does not require CRA to impose high termination rates. Instead the full rate setting freedom is preferred to maintain balanced commercial relationships between domestic SP's and SP's abroad.

3.47 **Point 236.5** The SIM Boxes and similar unwanted practices are illegal practices and should be dealt with through controls at customs (including equipment type approvals by the CRA) and other legal enforcement rather than the CRA trying to create economic regulatory measures to address these practices. Indeed general effective security provisions limit this kind of criminal behavior in Qatar to minimum in comparison with other countries.

3.48 Finally, Ooredoo wants to express its concern regarding perceived controversy in the CRA's regulatory view of the retail market for international calls. In the point 244 of Consultation Document the CRA states: *"The CRA also recognizes the relevance that OTT services are acquiring in Qatar in the last years as alternative product for international voice calls. This alternative option available to Qatari customers reduces the risk that Qatari operators use their market power to unreasonably increase retail tariffs, against customers' interests."* However, as per latest CRA's decision regarding MDDD the CRA concluded that the (mobile) retail market for mobile international calls is competitive and hence SP's have no market power in this market. It is thus not clear what market power the CRA refers to the in the point 244 of their Consultation Document. Moreover as demonstrated by Ooredoo in response to the CRA 2016 MDDD consultation (Ref: OQ/Ref-4414/2016-03) OTT calls already represent majority of total outbound international calls generated in Qatar.

3.49 As demonstrated above the one-sided asymmetric regulation of incoming international call termination rate would put SP's in Qatar at competitive disadvantage against their counterparts abroad, would result in detrimental impact on customers in Qatar in terms of increase in retail prices for international outbound calls, and reduced future investments. Note that SP's in Qatar do not have more market power on the market for international voice call termination than their counterparts abroad do. Rather opposite could be said given relative size of the overall Qatar market vs. much larger markets, in which vast majority of SP's abroad operate. In the absence of compelling evidence to the contrary and complete lack of quantification of the benefits, which the Options 1-3 proposed by the CRA would yield, the CRA should refrain from implementing any of these first three regulatory options for international voice calls termination rate.[23]

3.50 We thus conclude that to avoid any negative welfare impact on the telecommunication sector in Qatar the CRA should adopt Option 4 – No regulation of international calls termination.

Question 4: SMS termination: Do stakeholders have further comments or alternative suggestion? Do stakeholders have a legal rationale to not regulate the charge of this product?

3.51 Regulation is not done because the legal framework supports it but because it aims to improve economic efficiency by addressing specific market failure. Ooredoo notes that the CRA failed to provide any specific objective it aims to achieve with further reduction of mobile SMS termination rate, failed to demonstrate this regulation is necessary to achieve that objective and failed to provide quantification of its impact. As such, Ooredoo do not consider this regulation to be proportional. Moreover, the CRA in their reference to the Articles 29 of the Law and Article 50 of By-Law relies on the regulatory measures that are addressing retail tariffs and are not relevant for the wholesale charges regulation.

3.52 Moreover, the CRA neglects that most of the mobile messaging activity today is taking place via OTT services (MMS, instant messaging, push email and email through Internet) which represent effective substitute for the SMS termination service. Hence, the SMS termination market fails to meet the three criteria test and as such, it is not a relevant market that should be subject to regulation, as SP's in Qatar cannot be deemed to have a dominant position in this market. Note that that penetration of mobile data services is [redacted] and penetration of 4G services [redacted] on Ooredoo's network. Furthermore, we want to point out that the SMS termination market is not among relevant markets defined by the European Commission. EU

[23] Ooredoo understand that termination rates in the case of Option 2 would lead to similar percentage rate reduction as in the case of Option 1 and hence the Option 2 would result in similar negative welfare impact as Option 1. Ooredoo refrain from commenting on the Option 3 as CRA fails to specify what the term *"specific policy strategy"* in the context of Qatar means. We do not want to make any assumptions here that could be challenged by the CRA as was the case of Ooredoo's assumption made for level of termination rate the CRA would set for incoming termination rate made as part of our response to first consultation. However, in a case that Option 3 would result in some degree of reduction in the termination rate for incoming international voice calls to Qatar it would likely result in corresponding degree of welfare reduction as reasoned and supported by evidence above.

countries who in past established SMS termination market as relevant market (France, Denmark and Spain[24]) have recently concluded that markets of SMS termination on each mobile network were not relevant for ex-ante regulation recognizing OTT messaging service as effective substitutes[25].

Question 5: MMS Termination: Do stakeholders have further comments or alternative suggestion? Do stakeholders have a legal rationale to not regulate the charge of this product?

3.53 Ooredoo notes that MMS termination service is not regulated in other jurisdictions. The CRA neglects that most of the mobile messaging activities today are taking place via OTT services which represent effective substitute for the MMS termination service and hence SP's do not truly have DSP position on MMS termination market as it does not meet the three criteria test. The CRA should hence refrain from regulating this market. Any decision to the contrary would simply be an example of bad regulatory practice. As mentioned above vast majority of mobile subscribers are active data users and benefit from the use of OTT application, which thus represent effective substitute to MMS termination service.

Question 6: Do stakeholders agree with the CRA's proposed Wholesale Charges for the Interconnection Links?

3.54 Given the past and expected future decline in the volume of sold / deployed SDH leased lines, Ooredoo expects that unit costs for the SDH based services will increase within the regulatory period of 2018-2020. In order to avoid setting the wholesale charges below costs, Ooredoo recommends the CRA does not reduce the current wholesale charges for interconnection links and SDH leased lines any

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[24] See e.g. Analysis Mason document *"Impact of OTT services on regulatory market definitions in Europe"* available at: https://nca.org.gh/assets/Uploads/Omar-Bouhali-Impact-of-OTT-services-on-regulatory-market-definitions-7-7-2016.pdf

[25] We note that EC in the review of the proposed SMS termination rate decision by French Regulator ACREP commented: *"The Commission therefore fears that ARCEP's approach could lead to persistent overregulation impeding structural market developments, which would have taken place absent regulation in the market, and therefore does not meet the regulatory objectives as expressed in Article 8 (2) b) of the Framework Directive."* See Commission decision of 28 November 2014 available at: https://circabc.europa.eu/sd/a/ba26039d-db58-4f79-8dd2-f6b9eccecec5/FR-2014-1668-1669-1670%20ADOPTED_EN%20FOR%20PUBLICATION.pdf

further. Moreover, if VFQ had considered the charges to be excessive, they would have built their own interconnection link using QNBN – they have chosen not to do so for a good reason – the charges are in fact very reasonable.

Question 7: Do stakeholders agree with the CRA's proposed Wholesale Charges for the SDH Transmission Links?

3.55 As outlined above, Ooredoo agrees with the use of benchmark for setting wholesale charges for the SDH leased lines. Also for the reasons explained in the response to the previous question, the actual unit costs of SDH lines are expected to be at the level recorded in 2015 during the 2018-2020-time period. This fact does not support the CRA's trend used for proposed charges and as an outcome the future wholesale charges risk being set below cost. Ooredoo recommend the CRA does not reduce the current wholesale charges for SDH leased lines any further.

Question 8: Do stakeholders agree with the CRA's proposed Wholesale Charges for Ethernet based Transmission Links?

3.56 No, Ooredoo does not agree with the CRA proposal. As a part of the CRA's NOTICE AND ORDERS DESIGNATION OF OOREDOO Q.S.C. AND VODAFONE QATAR Q.S.C. AS DOMINANT SERVICE PROVIDERS IN SPECIFIED RELEVANT MARKETS (Ref: CRARAC 09/05/2016 A) issued on 9 May 2016 the CRA defined two distinct relevant markets for wholesale leased line: M10 - National trunk segment of (national and international) wholesale leased lines services and M11 - Terminating segment of (national and international) wholesale leased lines services. The CRA's proposed Wholesale Charges for Ethernet transmission links does not correspond to the service definition established by the above CRA order.

3.57 Moreover, Ooredoo is in the progress of developing more robust leased line service cost information as part of the RAS 2016. In case that CRA decides to set rates for Ethernet leased lines as part of this consultation process Ooredoo reserves the right to revise these charges in case they would not allow Ooredoo to recover the actual costs of this service.

Question 9: Do stakeholders agree with the CRA's proposed connection fees?

3.58 Ooredoo does not object to the proposed charges (flat 3,036 QAR for 2018-2020). However we reserve the right to review these charges shall the actual cost of the service surpass the proposed wholesale charges.

Question 10: Do stakeholders agree with the CRA's proposed charge for the Duct Access Product?

3.59 The actual 2015 RAS network costs alone for duct service is QAR [redacted]/m2/m/month. The preliminary 2016 RAS network cost plus wholesale costs are QAR [redacted]/m2/m/month. Ooredoo therefore considers the proposed CRA's charges for duct access to be below RAS costs. We also note that as per the CRA's benchmark data, there is a variation in the wholesale mark-up demonstrating that NRA's in other jurisdiction are mindful in reflecting actually incurred wholesale costs when setting the wholesale charges.

3.60 Ooredoo's recommendation is to increase the wholesale charge for duct access to ensure costs recovery going forward.

3.61 We also note that the QNBN assertion that it does not have a universal service obligation is contrary to its license requirements.

Question 11: Do stakeholders agree with the CRA's proposed charge for the Facility Hosting Product?

3.62 Ooredoo notes that fully allocated cost for this service in RAS 2015 and preliminary RAS 2016 are higher than charges suggested by the CRA for 2018-2020 and we recommend keeping the charge at the current level of 1QAR/liter.

Question 12: Do stakeholders agree with the CRA's proposed Wholesale Charges for the cost per hour? Additionally, stakeholders are invited to provide their views with regards to the possibility of implementing a glide path for Wholesale Charges proposed for the cost per hour.

3.63 Ooredoo does not agree with the CRA's proposed charges for cost per hour. These charges do not reflect the actual costs incurred by Ooredoo and would not allow Ooredoo to recover the relevant costs. In the attachment to this response, Ooredoo submits the updated calculation of cost per hour supported by independent audit report, which Ooredoo attached to this response as well. Moreover it is important to note that the two cost categories used by the CRA to derive labor cost per hour, i.e. the basic salary and housing allowance combined together, represent only about [redacted] of total labor costs actually incurred by Ooredoo.

Question 13: Do stakeholders agree with the CRA's proposed Wholesale Charges for the AAR and RAR?

3.64 Ooredoo refers the CRA to the updated audited AAR and RAR cost models submitted in the attachment to this response document supported by the accompanying independent audit statement. RAR still involves activities, which timing depends on number of processed duct segments and hence has a significant component of variable costs. Ooredoo suggest a follow up meeting with the CRA to address any outstanding CRA queries related to these cost models.

3.65 To ensure cost recovery, Ooredoo insists at this time to use RAR charge based on actual number of duct segments processed per each RAR. Once reliable data sample is amassed for RAR's allowing for cost estimate of average RAR request, the option proposed by the CRA could be reconsidered.

3.66 Ooredoo does not consider the CRA's suggested benefits stemming from applying charge per average RAR as relevant. Note that access seeker will be able, based on information provided by Ooredoo in response to AAR, to assess the cost / charge per each RAR for the area covered by AAR. Since OLO is not as a part of RIAO required to provide Ooredoo with its longer-term fibre rollout plan in advance, Ooredoo's budgeting certainty would not be improved by applying the fixed charge per average RAR. We also note that there is very little additional administrative costs incurred in charging different charge per RAR in comparison with administrative costs incurred when charging uniform charge.

Question 14: Do stakeholders agree with the CRA's proposed Wholesale Charges for the AR?

3.67 Ooredoo does not agree with proposal. The cost causality is not observed in the calculation of the proposed wholesale charge for AR. For one AR there can be multiple subsequent route requests and the AR charge is supposed to cover the costs all of these subsequent route requests. The CRA's charge proposal ignores this reality and thus neglects the costs incurred by Ooredoo to perform related tasks. The AR charge proposed by the CRA in scenario (A) correspond to the sum of charges for one AAR and one RAR only as proposed by the CRA for these two type of requests individually (in scenario A) in tables 25 and 26 of the Consultation Document. Hence in case that there will be more than one route request raised by OLO to Ooredoo for any AR, Ooredoo would not be allowed to recover the full cost of processing these route requests.

Annexure

3.68 Ooredoo hereby provides some additional comments on the methodology used by the CRA in Consultation Document. Ooredoo cannot agree with inclusion of CRF in PMS test, as this approach completely lacks support in international regulatory precedence. Ooredoo notes that the CRA failed to provide relevant references to the international regulatory practice where the CRF would be used in PMS. Ooredoo thus asks the CRA to provide relevant reference to international practice in this respect. Moreover, if the CRA believes CRF it is needed to cover for inaccuracies in forecasting – then it should be included everywhere else, due to inaccuracies in forecasting or other uncertainties – this would imply all costs and benchmarking rates should be uplifted.

3.69 Ooredoo notes that the CRA in the referenced excel file (CRA/RAC-T/115/2017) preforms MST for mobile services provided by Ooredoo. We want to point out that MST in case of mobile service is only relevant in cases when there is an MVNO in the market relying on the access to mobile infrastructure (for mobile origination services). We are not aware of any regulator that would perform the MST for mobile service in the market that is defined by infrastructure-based competition, as is the case in Qatar. The relevant regulatory concern for the mobile market in the context of the overall telecommunication market in Qatar would be that of potential cross-subsidy from relevant market(s) where Ooredoo is designated dominant service provider (DSP) to the market(s) that are competitive (e.g. retail mobile voice market). In this respect, Ooredoo refers to its letter Ref OQ/Reg-4915/2017-05, in which we provided reference to the proper economic definition and test for cross-subsidy. The MST as performed by the CRA for Ooredoo mobile service is much stricter test of potential price abuse than the proper cross-subsidy test.

3.70 If the CRA considers the provision of mobile termination service to be the grounds to perform the MST for retail mobile services, it must perform the MST for both Ooredoo and Vodafone as both service providers are equally designated DSP in the market for mobile service termination.

3.71 Regarding the specification and application of the MST we also want to refer the CRA to the Ooredoo's submission to the previous Wholesale charges consultation (Ref: OQ/Reg-3637/2014-09) in which Ooredoo referenced PWC paper discussing the principles of the MST and costs categories that should be used to perform the test. Ooredoo is working internally to enhance RAS cost information to support the implementation of MST based on these principles.

3.72 The "Proportionality Test" label used by the CRA for the test that in its nature is just another form of margin squeeze test is highly misleading. As stated e.g. in document referenced by the CRA published by for Saudi Arabia regulator *"Principle of Proportionality shall mean that the measures applied in a decision are appropriate and limited to what is necessary to achieve the pursued regulatory objective."* Hence, the true "Proportionality Test" in standard regulatory practice refers to the very test that the CRA has failed to perform in this regulatory proceeding in order to ensure that the proposed regulatory remedy is truly necessary and indeed beneficial for the sector.

الشركة القطرية لشبكة الحزمة العريضة
Qatar National Broadband Network

January 31, 20178

2018/REG/PB/1-22

Mr. Mohammed Al Mannai
President
Communications Regulatory Authority
P.O. Box 23264, Al Nassr Tower
Doha, Qatar

Dear Mohammed,

Subject: Second Consultation on Setting Wholesale Charges for 2018, 2019, 2020

Qnbn acknowledges receipt of the above-referenced Consultation issued 13 December 2017 requesting Submissions, as amended, on or before 11 February 2018.

Introduction

Qnbn is please to participate in this proceeding and has provided, previously, empirical data surrounding appropriate costs associated with infrastructure access. However, as noted in previous submissions the CRA should appreciate a certain amount of skepticism on the part of Qnbn towards addressing the economics in this proceeding dealing with access to Ooredoo telecom infrastructure.

As the CRA is well aware Ooredoo has been found to be engaging in unlawful activity as a result of anti-competitive practices with respect to access to its duct infrastructure. The CRA has issued two Decisions in this regard and multiple Orders with which Ooredoo does not comply. Additionally, the CRA has undertaken a lengthy regulatory proceeding which resulted in a Reference Offer for access to Ooredoo ducts. The CRA issued multiple Orders to Ooredoo to make the Reference Offer for ducts available to the marketplace. Again, Ooredoo fails to comply. Qnbn invested significant time, effort and resources in these proceedings. All to no avail; access to Ooredoo ducts or any Dominant Service Provide products is not a reality in the State of Qatar.

The CRA is addressing the economics of services which Ooredoo has no intention of making available to the marketplace. Unless and until the CRA can enforce its Decisions and Orders on duct access, it seems that in this proceeding, the CRA will have successfully addressed the charges for duct products; but duct products and services from the incumbent Dominant Service Provider will still not be on offer in the marketplace.

For the empirical and substantive reasons which will follow Qnbn can no longer accept Ooredoo's failure to abide by the Decisions and Orders issued by the CRA January 7, 2014 and September 18, 2016 (and other Interim Decisions) stemming from Ooredoo's anti-competitive conduct and its ever ongoing violation of Instructions pertaining to Access and Instructions pertaining to anti-competitive practices. These violations have severely and negatively impacted Qnbn in fiber deployment, obtaining ongoing customers, frustrated fixed line competition and significantly impacted the State of Qatar immeasurably. Further the financial impact upon Qnbn has been in the hundreds of millions of Qatari Rials. This does not take into account the impacts upon Vodafone, the State of Qatar and the loss of new technologies being introduced.

Regrettably, Qnbn can no longer view the CRA as a hapless bystander to this state of affairs. For more than several years Qnbn has been receiving correspondence from the CRA acknowledging Ooredoo's egregious behavior and indicating that it will take appropriate action to enforce its Decisions and Orders. All for naught! Qnbn is not stating that the CRA has been complicit in its failures to have Ooredoo abide by its decisions and properly foster a fixed line marketplace. However, the CRA should undertake a serious and critical self-appraisal as to what it can do better going forward.

Given the introduction of Law No. 17 of 2017 (amending Law no. 34 of 2016) the CRA most adopt a **sense of urgency and relentless focus** upon righting the access marketplace, enforcing all of its Decisions and Orders wherein Ooredoo has engaged in anti-competitive conduct and initiate the building blocks for a truly competitive fixed line marketplace. Qnbn appreciates that this will require a strong and persistent sense of purpose and resolve by key members of CRA personnel.

On various occasions in meetings with Qnbn the CRA has explicitly stated that it has in hand a prepared court action against Ooredoo for its various failures to abide by CRA Decisions and Orders. Qnbn encourages the CRA to initiate appropriate legal action.

Additionally, the CRA should immediately (before the end of Q1) create the Financial Sanctions Committee conveying the seriousness of Ooredoo's violations and the consequences on fixed line competition.

Responses to CRA Questions 10-14

Qnbn proposes to only address the above-referenced questions which are specifically pertinent to infrastructure access. Also, any brevity on Qnbn's part should not be construed as detracting or minimizing from previous economic submissions or earlier views forcefully stated. Rather, Qnbn has reviewed the views stated by the CRA in its consultative document and concurs with much of what is stated therein as well as the methodologies utilized.

Qnbn does wish to add some precision to the duct access charge stated by the CRA, at pages 47-48, as applicable for the State of Qatar. The duct access charge in Qatar is 0.12 QAR/m/ cm2. However, it is more precise to state that the minimum charge is 0.36 QAR/m as the minimum leased space is 3 cm2.

Question 10: Qnbn agrees with the CRA's proposed Wholesale Charge for the Duct Access Product provided that there is no minimum space leased. As noted above, the current minimum $3cm^2$ should not apply but rather reference should be to the actual utilized space. In this regard Qnbn notes a similar discussion which was accepted by the CRA during the RIAO Consultation.

Question 11 (In error this is noted as Question 24 in the CRA document): Qnbn agrees with the CRA's proposed Wholesale Charge for "Facility Hosting".

Clarification Required in Paragraph 4.6.4.5: 166,000 is for 1000 hours per quarter which is equivalent to 2 dedicated resources for supervision (i.e. 2 resources x 8 hours per day x 22 business days per month x 3 months per quarter). This is proposed to prevent any exploitation of this paragraph.

Question 12: Qnbn could agree to the proposed charge (166 QAR/hour) subject to the following conditions:

- The charges will be applicable for field activities only;
- Any office activities (including desktop activities, GIS update, etc.) should be excluded; and
- Such charges should be capped at 166,000 QAR per quarter.

Qnbn is not supportive of any glide path. If the correct rate is the proposed charge then the proposed charge should be effective immediately.

Question 13: Qnbn agrees with the CRA proposal of 1,884 QAR for the AR and agrees the 2,237 QAR charge for the RAR

Question 14: Qnbn only agrees the proposed charges in so far as the proposed charges relate specifically to the IAA and are replacing the AR charges in the IAA.

Given that the proposed charges are proposed for 2018 and onwards Qnbn looks forward to receipt of a final disposition of this consultation in the next several weeks and some form of retroactive application.

Yours Sincerely,

Philip Brazeau
Head of Regulatory
Qatar National Broadband Network

Vodafone Qatar P.Q.S.C. submission to the Communications Regulatory Authority's consultation document

"Setting wholesale charges for the years 2018-2020" issued 13 December 2017

11 February 2018

Non-Confidential Version

Confidential information has been replaced by [✂]

Introduction and executive summary

1. Vodafone Qatar P.Q.S.C. ("**Vodafone Qatar**") welcomes the opportunity to respond to the Communications Regulatory Authority ("**CRA**") consultation document titled "Setting the Wholesale Charges for the years 2018-2020" ("**CD#2**") issued on 13 December 2017.

2. Vodafone Qatar fully supports the CRA's vision and mandate to ensure that Qatar avails of world class high quality telecommunications services at reasonable prices so that the telecommunications sector can play fully its vital role to support the economic and social development of the country.

3. In our response to the first consultation document issued on 27 September 2017 ("**CD#1**") we ask the CRA to:

   - Avoid value transfer to foreign operators by refraining from regulating international inbound calls;
   - Reconsider its proposals on mobile termination rates ("**MTR**") and propose reasonable reduction, if any; and
   - Create a platform for effective competition and investment in fixed by taking appropriate enforcement actions against Ooredoo.

4. We are pleased to note that the CRA has now indicated that it intends to maintain the current arrangements for international inbound calls. This is the right decision which supports the national interest. It will avoid value transfer from domestic operators to foreign operators with no benefits to consumers in Qatar. We look forward to final confirmation of the CRA on this point.

5. Regarding MTR, we disagree with the proposed confirmation of MTR cut. We have developed a cost model which shows that the CRA's proposal would result in MTR well below our reasonable cost in 2020 and completely out of step with benchmarks. This would be contrary to various provisions of the Applicable Regulatory Framework ("**ARF**"), including the promotion of sustainable investment. We estimate the impact to be in the range of [✂✂✂✂✂✂] over three years alone, this represents about [✂✂✂✂✂✂] of our annual revenues.

6. In setting MTR, the CRA must exercise its discretion as granted to it by the ARF and consider a range of factors, including the potential benefits of its proposals. The ARF does not require the CRA to set MTR at the end of the glide path equal to cost. Our view, based on empirical evidence from Qatar is that benefits in terms of further price decline (Qatar compares well with its peers and with OECD countries) and increased demand for domestic calls are likely to be minimal. Those minimal benefits must be balanced against key considerations affecting the mobile sector, including:

   - flat underlying revenue growth;
   - difficult geopolitical and macroeconomic environment negatively impacting growth opportunities and revenues such as roaming;
   - the industry having to incur additional cost and face significant additional operational complexities as a result of the external environment;
   - dynamic efficiency gains which come from investment in new technologies. 4G brought dramatic increase in throughput and significant decline in cost per MB. A new technology cycle is about to start with 5G and lowering further MTR does not support the Government

objective to ensure that 5G is introduced in the country as early as possible. Priority should be given to long term efficiency gains and not to potential short term price reduction.

7. Turning to fixed, access to bottleneck infrastructure remains an outstanding issue 11 years after the issuance of the Telecommunications Law with no wholesale regime in place and no Fixed Number Portability ("**FNP**"). Ooredoo's behaviour amounts to clear abuse of dominant position and coupled with the absence of effective regulatory intervention by the CRA it is continuing to deprive Vodafone Qatar of the opportunity to compete on a level playing field and to invest efficiently. Enforcing access to duct managed by Ooredoo and effective regulation (e.g. "FNP" and retail regulation) should be a key priority of the CRA and we are concerned that this appears deprioritised with no tangible progress in the last two years.

8. We are particularly concerned with the charges related to ducts access which are much higher than benchmarks. We believe that for fixed bottlenecks close alignment of rates with cost is the correct approach as this will foster efficient investment and competition in downstream markets while avoiding inefficient duplication of infrastructure. Regrettably, the CRA appears unwilling to scrutinize those costs and to address obvious inefficiencies.

9. Our position on other matters being consulted upon is set out in the reminder of this document.

PART A – POINTS NOT SUBJECT TO CONSULTATION QUESTIONS

Impact assessment

10. The CRA's proposals will have a significant impact on the sector. Overall we estimate that if implemented the proposals relating to mobile will lead to lower revenues of about [✂✂✂✂✂✂] for Vodafone Qatar alone over the price control period, this represents [✂✂✂✂✂✂] of our annual revenues.[1] Contrary to the assertion of the CRA this is not trivial when considering the state of the industry, revenue trends and expectation of the Government for Qatar to avail of best-in-class services.

Implementation of the PMS Test (CD#1 Question 3)

11. Vodafone Qatar kindly requests the CRA to provide further details on the Price Margin Squeeze ("**PMS**") and its relevant parameters when applied for products like duct access, leased lines and fixed broadband. This is critical to ensure economic replicability by a new entrant and efficient investment. We note that, at present, the example referred to by the CRA relates to mobile and do not include any network cost.

Timeframe defined by the CRA (CD#1 Question 4)

12. For planning purposes, Vodafone Qatar requests that the CRA allows a period of 2 to 3 months from the date of issuance of the final decision before the new rates become applicable.

13. To remove uncertainty, Vodafone Qatar would like the CRA to clarify in its final decision that regulated charges shall remain in place beyond the three-year time period in the event that rates are not set before the end of the three-year period.

Overall methodological approach (CD#1 Question 5)

14. Vodafone Qatar considers that this question is not closed. Regrettably the arguments and comments made by Vodafone Qatar have been largely ignored by the CRA. Our view, supported by the ARF is that the CRA is not required under the ARF to mechanistically set wholesale charges to cost. The CRA is required under the ARF to take into account other duties and hence there is a margin of appreciation when setting wholesale charges, they do not need to be at cost. A key consideration for the CRA in applying its judgement is whether the charge relates to mobile or fixed given the stark contrast between mobile and fixed markets.

15. The market dynamics and situation in fixed are indeed completely different with access to bottlenecks, such as duct, still a distant reality. We believe that for fixed bottlenecks close alignment of rates with cost is the correct approach as this will foster efficient investment and

[1] As the CRA is now indicating that the current arrangements of international in-bound traffic will be maintained we have not included the impact that regulation could have above. However, we estimate that regulation of international in-bound traffic at local MTR will lead to direct impact of [✂✂✂✂✂✂] over three years, leaving aside any indirect effect.

competition in downstream markets while avoiding inefficient duplication of infrastructure. As a national asset built under monopoly conditions and largely depreciated, effective access and efficient use of duct managed by Ooredoo is critical to level the playing field and enable competing investment. Fixed is an area that the CRA itself has identified as in need for greater competition. Regrettably, the CRA appears unwilling to scrutinize those costs and to address obvious inefficiencies.

16. The situation in mobile is completely different where good market outcomes, thanks to competition, are observed in terms of prices, quality of services and innovation. In setting MTR, the CRA must exercise its discretion as granted to it by the ARF and consider a range of factors, including the potential benefits of its proposals. Our view, based on empirical evidence from Qatar is that benefits in terms of further price decline (Qatar compares well with its peers and with OECD countries) and increased demand for domestic calls are likely to be minimal. Those minimal benefits must be balanced against key considerations affecting the mobile sector, including:

    - flat underlying revenue growth;
    - difficult geopolitical and macroeconomic environment negatively impacting growth opportunities and revenues such as roaming;
    - the industry having to incur additional cost and face significant additional operational complexities as a result of the external environment; and
    - dynamic efficiency gains which come from investment in new technologies. 4G brought dramatic increase in throughput and significant decline in cost per MB. A new technology cycle is about to start with 5G and lowering further MTR does not support the Government objective to ensure that 5G is introduced in the country as early as possible. Priority should be given to long term efficiency gains and not to potential short term price reduction.

17. In CD#2, the CRA attempts to justify the further lowering of MTR on the basis that lower MTR leads to increased competition as measured by the HHI. We invite the CRA to consider data from Qatar which shows that there is no such relationship in Qatar – see below graph which demonstrates that the HHI in Qatar has remained fairly constant while MTR have dropped significantly.

[✂✂✂✂✂✂]
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18. Overall Vodafone Qatar submits that the CRA must recognise and take into account the overarching objectives placed on it in the Telecommunications Law and the Emiri Resolution in setting MTR. The CRA is not required to mechanically set the end of the glide path for MTR at cost. Article 2 of the Telecommunications Law says that the regulation of the sector shall achieve the following objectives:

> "1. promoting the telecommunications sector in order to consolidate national, social and economic development;
> 2. enhancing the telecommunications sector's performance in the State of Qatar through encouraging competition and fostering use of telecommunications services;
> 3. encouraging the introduction of advanced and innovative information and telecommunications technologies to meet the needs of customers and the public;
> 4. increasing customers' benefits and safeguarding their interests;
> 5. encouraging sustainable investment in the telecommunications sector"

19. Further, Article 4 of the Emiri Resolution requires the CRA to:

> "2. Provide the legal, transparent, organizational and fair environment to construct a competitive, innovative and investment attractive sector.
> 3. Encourage competition, prevent or limit non-competitive practices, prevent the misuse of any person or entity to his sovereign status in the market and take the necessary procedures in this regard.
> 4. Protect the rights and interests of the public and service providers in the market, enhance the transparency and work to render advanced and innovated services having high quality and for reasonable prices to meet the requirements of the public."

Review clause of wholesale charges

20. For the avoidance of doubt, in the event that a review of wholesale charges is approved by the CRA, any changes should be subject to consultation with the SPs.

PART B – VODAFONE QATAR'S RESPONSE TO THE CRA'S QUESTIONS

CD#2 Question 1: FTR: Which of the options proposed by the CRA (1 or 2) do you suggest to use and why?

21. The CRA proposes the below two options for FTR with a preference for Option 1. Under Option 1, FTRs will drop by 97% in three years.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale charges, which pass the PT (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0119	0.0063	0.0006
Change to previous year			-32%	-47%	-90%
Option 2 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0150	0.0125	0.0100
Change to previous year			-14%	-17%	-20%

22. We refers the CRA to our Submission dated 12 November 2017 and in particular to our points on:

- the magnitude of the difference between an on-net call and two termination charges (paragraph 29), and hence the delta between Option 1 and Option 2; and
- the level of FTR proposed by the CRA relative to benchmarks with CRA FTR 2020 proposal being a quarter of the current EU average (paragraphs 30-31 and graph page 8).

CD# 2 Question 2: MTR: Do stakeholders agree with the CRA's proposed Wholesale Charge for Mobile Call and Video-Call Termination Service?

23. In CD#2, the CRA proposes to lower MTRs from 0.0762 to 0.0158 in three years, this represents an overall decrease of 80%.

		Approved Charge	Charges for consultation		
QAR/min		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Mobile Call and Video-Call Termination Service	QAR/min	0.0762	0.0561	0.0360	0.0158
Change to previous year			-26%	-36%	-56%

24. Vodafone Qatar does not agree with the proposals of the CRA and calls on the CRA to adopt a more reasonable approach to MTR reduction, if any, taking into account:

- Cost: MTR should not be set below reasonable cost;
- Benchmark: MTR should remain in line with benchmarks;

- Current market outcomes and uncertain benefits: prices in Qatar compare well and there is limited scope for further increase in domestic traffic;
- Current geopolitical and macro-economic context;
- Industry transformation; and
- The approach permitted by the ARF.

Estimates of MTR cost

25. We have estimated our MTR cost using a Top-Down Historical Cost Accounting with Fully Distributed Cost ("**TD-HCA-FDC**") approach. Our high level model has involved the following steps (see details in the Excel file provided as requested by the CRA):

    1. Identification of cost information;
    2. Removal of irrelevant cost;
    3. Calculation of return on capital employed;
    4. Traffic analysis; and
    5. Allocation of cost to MTR and derivation of unit cost.

Model results and commentary

26. Our estimates are set out in the below table. It shows that the CRA's proposal based solely on Ooredoo cost at this point in time would lead to MTR significantly below our cost (CRA proposal of 0.0158 vs our cost of [✂✂✂✂✂✂] by 2020). This would lead to a significant under-recovery of cost and will conflict with Article 19(1) of the Telecommunications Law in so far as "low cost interconnection" obviously does not mean below cost interconnection charges. Further by setting MTR below Vodafone Qatar's cost, the CRA will be failing to meet its objective set out in Article 2 of the Telecommunications Law which include amongst others encouraging competition and sustainable investment.

[✂✂✂✂✂✂]
[✂✂✂✂✂✂]

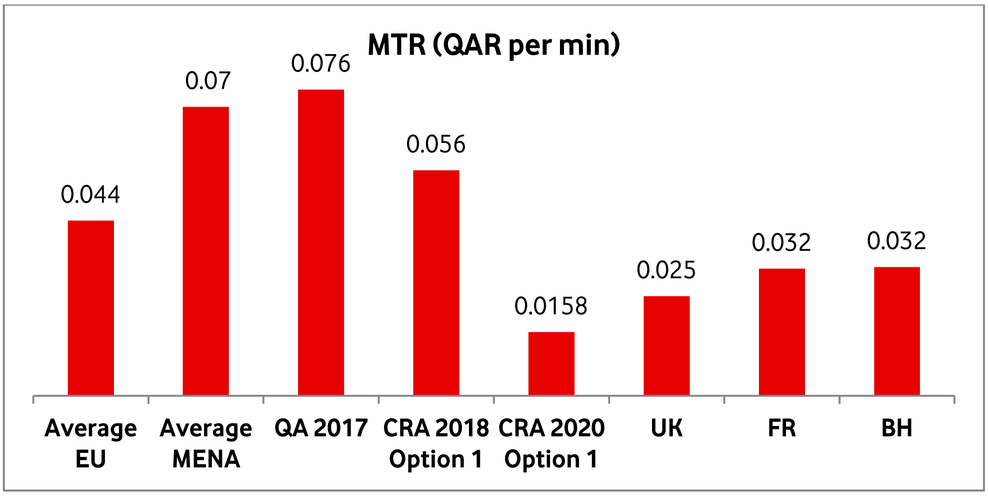
27. The supporting Excel shared with the CRA shows the breakdown of the individual components of our MTR cost. It shows that about [✂✂✂✂✂✂] of our cost are related to the QR 7.716 bn opportunity fee paid in 2008 for Vodafone Qatar to enter the mobile market in Qatar – Ooredoo as the incumbent did not have to make a similar payment.

28. The cost associated with the opportunity fee paid (annual amortization and related return on capital employed) is a relevant cost to be included in MTR as it reflects the cost of operating in Qatar. The inclusion of this cost in MTR ensures that Vodafone Qatar is not put at a competitive disadvantage. It also ensures that this cost is recovered from all relevant services, including mobile termination, and that there is no cross-subsidisation.

29. Given its greater size and associated economies of scale, Ooredoo may enjoy lower unit cost than Vodafone Qatar for certain categories (e.g. network cost). Conversely Vodafone Qatar may be more efficient when it comes to support functions. However an objective difference between both operators relates to the opportunity fee paid by Vodafone Qatar.

Benchmarks

30. We agree with the CRA that benchmarks can be useful to "*ensure the reasonability of the proposed wholesale rates* [...]" (CD#2, paragraph 130, page 23). However as can be seen from the graph below the proposals of the CRA will lead to MTRs levels out of steps with benchmarks. If implemented, MTR in Qatar would be half of the European average and a quarter of the MENA average and well below individual countries such as France, the UK and Spain.



Source: Vodafone Qatar analysis based partly on CRA data.

31. Further it should be noted that the level of MTRs in Europe where pure LRIC (i.e. where the scope of the relevant cost for termination is significantly narrower than in Qatar) has been in place for a number of years is not expected to decline significantly. This is confirmed by key European countries where glide paths are in place and/or proposed for the next three years (see below table). For example in the UK, where MTRs are among the lowest in Europe, there are expected to remain flat in the next three years. France has proposed annual decreases of 3%.

32. If implemented, the CRA's proposal will led to MTRs in Qatar being 36% lower than the UK where the pure LRIC cost standard apply and 50% lower than in Bahrain, where according to the CRA's logic, MTRs should be lower than in Qatar.

		Current	Glide path			2020
Country	Currency	2017	2018	2019	2020	in QAR
Germany	€ cents	1.1	1.07	0.95	n/a	0.0430
	Δ		-3%	-11%		
Greece	€ cents	0.982	0.958	0.946	n/a	0.0429
	Δ		-2%	-1%		
UK (proposed)	Pence	0.495	0.468	0.449	0.433	0.0223
	Δ		-5%	-4%	-4%	
Spain	€ cents	1.09	0.7	0.67	0.64	0.0290
	Δ		-36%	-4%		
France	€ cents	0.74	0.72	0.7	0.68	0.0308
	Δ		-3%	-3%	-3%	
Bahrain (no review planned)	fils	2.4	2.4	2.4	2.4	0.0232
	Δ		0%	0%	0%	
					CRA proposal	0.0158

Comment: for the UK, rates are before inflation meaning that MTR will remain flat for the period

Source: Vodafone Qatar

Current market outcomes and potential benefits

33. The expected consumer benefits of the proposed MTR cut are not clear and far less obvious than suggested by the CRA.

34. In terms of market outcomes, the own benchmarking of the CRA[2] shows that mobile markets in Qatar are delivering strong outcomes for consumers with prices comparing favourably with its peers in the region and well with OECD benchmarks. The Report also shows that Vodafone Qatar is consistently cheaper than Ooredoo. It is competition in mobile that has produced good results and continues to spur innovation and drive operators to introduce new technologies rapidly and on a wide scale (e.g. wide coverage of 4G and 4G+ in the country).

35. Vodafone Qatar does not dispute the proposition that reductions in MTRs when taking place from a very high level, could have a positive effect on consumer surplus in terms of driving higher demand and lower retail prices. However the question is now what could be the incremental benefits going forward given the already low retail prices and demand characteristics.

36. We have looked at the empirical relationship between MTR and domestic mobile traffic using actual data submitted to the CRA on a quarterly basis. To control for the effect of change of customer numbers on traffic, we have used traffic per subscriber as the relevant indictor. As can been since from the graph below there is no clear and systematic relationship between the level of MTR and domestic traffic per subscriber. Whereas MTR declined by 54% between Q2 2015 and Q3 2017, domestic mobile traffic per subscriber [✂✂✂✂✂], i.e. it did not increase. Given current usage levels, the widespread use of free alternatives and the lack of a clear empirical relationship between MTR and usage in Qatar, Vodafone Qatar submits that there are limited and hypothetical benefits, in terms of higher demand from further significant decline in MTR.

[2] CRA, Qatar Telecom Pricing 2016 – International Benchmarking Report, comparing prices in Qatar with other GCC countries, released July 2017.

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Current geopolitical and macro-economic context

37. In setting MTR, the CRA must be cognisant of the current geopolitical and macro-economic context which is negatively impacting growth opportunities and revenues. As a result of the geo-political context, the industry has to incur additional costs and face significant additional operational complexities. These are times when the CRA needs to back the industry and provide a solid platform for growth and further investment in 5G necessary for the country to continue to deliver world class services and improve in international rankings, a key Government priority.

38. Lowering MTR will further depressed overall industry revenues which is a key indicator affecting share prices and credit ratings. It could lead to increase in financing cost which in turn will need to be passed on to consumers.

Industry transformation

39. Another element which, in our view, should be taken into account by the CRA when setting MTRs are the structural changes observed in the industry. As we explained in our Submission dated 25 May 2017the structural changes observed in the industry, and notably the exponential growth of data traffic relative to voice and our revenue mix which remain heavily dependent on voice revenue, called for a cautionary approach by the CRA in setting MTR.

40. The telecommunications industry is indeed in the midst of unprecedented changes which have profound implications for operators. For Vodafone Qatar specifically, our traffic and revenue mix has changed dramatically in the past few years and continues to do so. Key trends which have a significant bearing on the CRA's deliberations are:

    - Mobile data has grown exponentially in the past few years: our network carried [✂✂✂✂✂✂][✂✂✂✂✂✂][✂✂✂✂✂✂].

- OTTs such as Whatsapp are impacting (voice and SMS) traffic and revenues. In FY2017 our international voice traffic [✂✂✂✂] and associated revenues [✂✂✂✂].
- As a consequence, about [✂✂✂✂✂✂] of the traffic carried by our network is data (using a 1 MB = 1 minute of voice conversion factor). However, revenues from data have not grown at the same pace to compensate for the erosion of voice revenues. As a percentage of services revenues, data represented [✂✂] in FY 2017 compared to [✂✂] in FY 2014.

41. These structural changes give rise to a real challenge to appropriately allocate cost between voice and data.

The approach permitted by the ARF

42. Please refer to the section above titled "Overall methodological approach (CD#1 Question 5)".

Conclusion on MTRs

43. For the reasons above, we do not support the CRA's proposal to drop MTR by 80% (from QAR 0.0762 to 0.0158) in a three-year time horizon as this would result in MTR falling well below our reasonable cost and as a consequence will conflict with various provisions of the ARF, including Article 2.1 (on the promotion of the sector) and Article 2.5 (on the promotion of sustainable investment) of the Telecommunications Law. It will bring MTR in Qatar largely out of steps with benchmarks and will further depressed industry revenues in a challenging macro-economic and political context with uncertain net consumer benefits. The ARF requires the CRA to exercise its judgment when setting MTR to an acceptable level balancing the different objectives of the CRA assigned to it in Article 2 of the Telecommunications Law as they relate in particular to the promotion of the sector and investment. As we explained above in the section titled "Overall methodological Approach", the CRA is not required by the ARF to mechanically set the end point of the glide path at cost.

CD#2 Question 3 – Inbound International Termination: Please provide your reasoned responses. Which of the above proposed options is the most beneficial for the State of Qatar for the coming period?

44. Vodafone Qatar supports the continuation of the current arrangements and welcomes the position of principle of the CRA to not oppose the continuation of the status quo. In our view the current arrangements are the most beneficial for the State of Qatar in so far as they avoid value transfer to foreign operators (including operators from blockading countries), maintain the influx of foreign currency while market forces and competitive constraints from OTTs continue to operate and ensure competitive retail prices for out-bound calls.

45. As we explained extensively in our Submission dated 12 November 2017, the regulation of international inbound calls at the local MTR level would be highly detrimental to the country and the operators' interests with no tangible benefits to consumers. Further we agree with the CRA's statement at paragraph 237, page 40 of CD#2 "*[a]t present no regulation is applicable in Qatar for international termination services. Hence the CRA should be sure that a different approach*

would be beneficial to Qatar". Put differently, any changes to the current arrangements will need to provide material net benefit relative to the status quo.

46. The table below sets out Vodafone Qatar's further comments against each option.

CRA's options	Vodafone Qatar's comments
Option 1: Regulation: Apply local MTR to international in-bound calls	• Will lead to value transfer to foreign operators, including participants to the siege with no corresponding benefits to consumers. • Remove negotiation power of domestic operators to negotiate commercial agreements with far-end operators and hence will hinder the ability of domestic operators to offer low retail prices to consumers in Qatar.
Option 2: Regulation: Local MTR + mark-up	• Same as option 1 (only "mark-up" retained in country").
Option 3: Regulation: specific policy strategies	• No clear benefits of regulation above and beyond Option 4. • Regulation may lead to unintended consequences.
Option 4: No regulation	• Most beneficial to the State of Qatar. • Avoid value transfer to foreign operators, maintain influx of foreign currency. • Qatari consumers continue to avail of competitive prices for international calls. • Competitive constraint from OTTs remains effective for both retail prices and wholesale rates.

47. Regulating international inbound termination rates at local MTR would be against the interest of Qatar and would hurt domestic operators without providing benefits to consumers in Qatar in so far as the economic surplus generated by domestic operators on international inbound will benefit foreign operators and would lead to a lower influx of foreign currency. As such it would be against the duties of the CRA set out in Article 2.1 of the Telecommunications Law to "*promot[e] the telecommunications sector in order to consolidate national, social and economic development*".

48. As we explained in our Submission dated 12 November 2017, for Qatari consumers to benefit from the regulation of inbound international calls at the local MTR level would require two conditions to be met. First, the far-end operator will need to pass on the full reduction in termination rate at the retail level leading to lower price to call Qatar AND an increase of calls (the assumed benefit to consumers in Qatar being the additional calls received). This is highly unlikely as pricing for international calls tend to be by zone (e.g. similar price across GCC countries)[3] and the extent of pass through will depend on competitive forces in the country of origin of the call. Further the limited volume of calls to Qatar is unlikely to lead to differentiated pricing. Overall, any potential benefit (i.e. hypothetical increase in in-bound calls) would be trivial and need to be balanced against cost as foreign operators will benefit from lower termination

[3] For example: BT has three zones (with all GCC countries in Zone C), Orange Egypt groups all Arab countries together with the USA; O2 in the UK has seven zones with none specific for Arab or GCC countries which fall in the catch-all category of "Rest of the world"; Bharti Airtel lumps together Africa, GCC, Europe mobile and the Rest of the world together.

rates by retaining the savings while domestic operators will suffer from lower income from international inbound calls.

49. Second, a lower rate for international in-bound calls to Qatar will need to translate into a corresponding decrease for the termination rate for calls destined outside of Qatar. The benefit to consumers will be lower out-bound international calls. However, regulation will constrain our negotiating hand and hence lower MTR for international in-bound calls is unlikely to result in a corresponding decrease in the rate applied by the far-end operator.

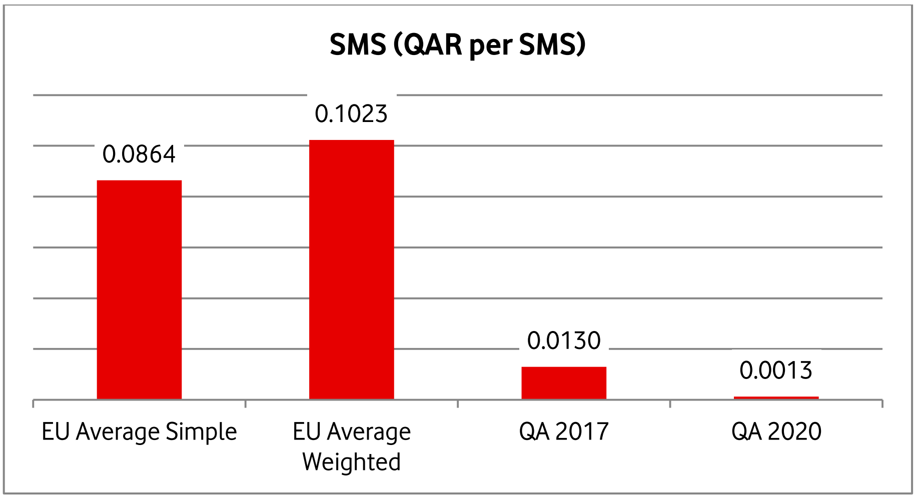
50. To conclude Vodafone Qatar supports a continuation of the current arrangements as these are the most beneficial to the State of Qatar.

CD#2 Question 4: SMS termination: Do stakeholders have further comments or alternative suggestion? Do stakeholders have a legal rationale to not regulate the charge of this product?

51. The CRA proposes the below glide path for SMS with an overall drop of 90% in three years.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
SMS Termination	QAR/SMS	0.0130	0.0091	0.0052	0.0013
Change to previous year			-30%	-43%	-75%

52. We reiterate our comments that while SMS traffic is declining at very fast pace driven by OTT alternatives, Vodafone Qatar does not support such a drastic cut. They would set Qatar further out of line with benchmarks.



Source BEREC, Termination rates at European level January 2017

53. Vodafone Qatar's position is for termination rates for SMS to be kept constant for the next regulatory period as the service is increasingly immaterial, its price is constrained by competitive pressures from free alternatives and it is already very low relative to benchmarks.

54. Vodafone Qatar also notes that the legal instrument[4] on which the regulation of SMS is based makes no mention of SMS or MMS services. In its definition of the relevant product markets and analysis of competition therein, the CRA has not included any reference to SMS and MMS services. It has not specified that SMS and MMS are parts of any relevant markets and has not analysed competitive conditions.

55. For the above reasons, Vodafone Qatar submits that should the CRA decides to regulate SMS and MMS, despite the lack of solid legal and economic bases, it should keep charges constant.

CD#2 Question 5: MMS Termination: Do stakeholders have further comments or alternative suggestion? Do stakeholders have a legal rationale to not regulate the charge of this product?

56. The CRA proposes the below glide path for MMS with an overall drop of 95% in three years.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
MMS Termination (Picture and Video)	QAR/MMS	0.4300	0.2936	0.1572	0.0208
Change to previous year			-32%	-46%	-87%

57. While MMS traffic is largely immaterial, Vodafone Qatar does not support such drastic cut which will not drive customer usage.

58. See above response on SMS.

CD#2 Question 6: Do stakeholders agree with the CRA's proposed Wholesale Charges for the Interconnection Links?

59. The proposals of the CRA for interconnection links are reproduced in the below table:

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
E1 (distance independent)	QAR/E1/month	326	229	133	37
Change to previous year			-30%	-42%	-72%
Km (distance dependent)	QAR/E1/km/month	64	54	43	32
Change to previous year			-17%	-20%	-25%
Connection Fee	QAR/link	5,000	5,000	5,000	5,000
Change to previous year			0%	0%	0%
Disconnection/reconfiguration Fee	QAR/link	950	950	950	950
Change to previous year			0%	0%	0%

[4] See Notice and Orders, Designation of Ooredoo Q.S.C. and Vodafone Qatar Q.S.C. as Dominant Services Provided in Specified Relevant Markets, 9 May 2016. Please also refer to accompanying Economic Analysis and Response Document.

60. Vodafone Qatar supports the proposals of the CRA for this product for which there is limited scope for competitive pressure and which is a direct input cost for competitors to Ooredoo. We note that one-off charges do not appear to bear any relation with underlying cost: for an STM1 the connection charge amount to QAR 315.000. We kindly ask the CRA to provide details regarding the activities and associated costs which justify the QAR 315.000 charge.

CD#2 Question 7: Do stakeholders agree with the CRA's proposed Wholesale Charges for the SDH Transmission Links?

61. In CD#2, the CRA maintains its CD#1 position regarding wholesale charges for SDH based services. Vodafone Qatar does not agree with the proposed charges and refers the CRA to its Submission dated 12 November 2017.

62. Vodafone Qatar reiterates its serious concerns with the regulatory accounts of Ooredoo which, according to the CRA, cannot be used to derive the cost of SDH based transmission links despite audited regulatory accounts being in place for eight years. This contributes to calling into question the reliability and veracity of the regulatory accounts of Ooredoo.

CD#2 Question 8: Do stakeholders agree with the CRA's proposed Wholesale Charges for Ethernet based Transmission Links?

63. In CD#2, the CRA maintains its CD#1 position regarding wholesale charges for SDH based services. Vodafone Qatar does not agree with the proposed charges and refers the CRA to its Submission dated 12 November 2017.

64. Vodafone Qatar is concerned with the contradiction where, on the one hand the CRA indicates that it is in the position to review with confidence the retail charges of leased lines (including Ethernet based products) of Ooredoo, while in the context of wholesale charges, the CRA indicates that the regulatory accounts cannot be relied upon. These two positions cannot be reconciled as the network elements cost at the wholesale and retail levels should not be different.

CD# 2 Question 9 Do stakeholders agree with the CRA's proposed connection fees?

65. Vodafone Qatar refers the CRA to our Submission dated 12 November 2017.

CD#2 Question 10: Do stakeholders agree with the CRA's proposed charge for the Duct Access Product?

66. The CRA now proposes to maintain the charge for the duct access constant at QAR/0.12/cm2/meter/month although the CRA forecast that cost will go down by 8% in the coming three years.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Duct Access	QAR/cm2/meter/ month	0.1200	0.1170	0.1139	0.1109
Change to previous year			-3%	-3%	-3%

67. This contrasts to the position of the CRA in CD#1 where it proposed to lower the duct charge in line with underlying cost. The CRA states that:[5]

> "The CRA is cognizant of the major construction works, for e.g. the World Cup are ongoing. This and the related duct re-routings might have some influence on the cost. Also various changes in duct managers [sic] might have a cost impact. Hence, the CRA is minded to keep this charge at the current level (0.12 QAR/cm2/meter/month)"

68. Vodafone Qatar disagrees with the proposals of the CRA:

- Ducts as an economic bottleneck: Ducts are an enduring economic bottleneck controlled by Ooredoo which continue to refuse to give access to Vodafone Qatar in breach of the ARF. Without effective access to duct there cannot be efficient investment and competition in fixed. As a non-replicable asset on which downstream competition is dependent on, charge should cost-based. As we have previously indicated (see our letter dated 2 February 2017) this requires cost to be valued on an historical cost basis with fully depreciated assets removed from the asset base. Such an approach is necessary to foster efficient use of this bottleneck and avoid over-recovery of cost. Maintenance charges and one-off charges should reflect the efficient cost of provision.

- Cost estimates: unfortunately there is no transparency regarding key parameters including: the asset lives used for duct, the treatment of depreciated assets, how additions and disposals are dealt with. The cost estimates and trends raise a number of questions. The cost trend (-8%) in three years does not seem correct: year-on-year one would expect a steeper decline given the capital intensity of duct. Through the normal depreciation process the capital employed and return on capital should decline. In turn, this should lead to a reduction in the annual cost of a larger magnitude than the -8% over three years. Further Vodafone Qatar submits that any additions year-on-year should be small relative to the asset base in so far as Ooredoo does not incur any cost with re-routing (it is Ashgal which picks up those cost) and in greenfield areas there will either be CRA ducts or no excavation cost for Ooredoo.

- Benchmark: Ooredoo's duct charges are well above the benchmarks of the CRA. There are two to five times more expensive that Spain and Portugal, two best-in-class countries in Europe for duct access where Vodafone has extensively deployed fibre using ducts.

[5] Paragraph 338, page 57, CD#2.

69. As a position of principle Vodafone Qatar recommends setting the duct charge at cost. However, and in light of the large gap with benchmarks and the issues related to the cost estimate, the CRA should consider placing weight on benchmarks from best-in-class countries for competing fibre roll-out based on duct access, i.e. Spain and Portugal.

CD#2 Question 11 Do stakeholders agree with the CRA's proposed charge for the Facility Hosting Product?

70. Vodafone Qatar is not in a position to comment on this charge given the information provided in the CD#1 and CD#2.

CD#2 Question 12: Do stakeholders agree with the CRA's proposed Wholesale Charges for the cost per hour? Additionally, stakeholders are invited to provide their views with regards to the possibility of implementing a glidepath for Wholesale Charges proposed for the cost per hour.

71. The proposed charges for cost per hour of activities such as supervision, field feasibility analysis, GIS update, are set out in the below table.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Cost per Hour applicable to Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products	QAR/hour	375	166	166	166
Change to previous year			-56%	0%	0%

72. Vodafone Qatar reiterates its position as expressed in its Response dated 12 November 2017. Cost should reflect efficient processes and systems. Access seekers should not face discriminatory charges due to the lack of accuracy of Ooredoo's records or the lack of proper tools.

73. Regarding supervision which consists of a dedicated Ooredoo resource attending all the work, Vodafone Qatar does not consider it to be necessary for all installation activities. Instead some random visits of say 5% of installation work and after work completion could be undertaken.

74. We ask the CRA to address those issues and not to merely "note" them. They are fundamental to the access regime the CRA has set for itself to achieve to foster competition in fixed.

CD#2 Question 13: Do stakeholders agree with the CRA's proposed Wholesale Charges for the AAR and RAR?

75. Vodafone Qatar refers the CRA to our Submission dated 12 November 2017 and our responses to Questions 26 and 27. It is regrettable that the CRA elects to "note" our comments without addressing them. In our view all processing activities (e.g. preparation and sending GIS information, maps and network data including XML files and shape files) should be done through a software management tool similar to the CRA web tool from Ericson. All back-office activities should be automated. An on-line tool is an essential element to level the playing field. Further, to save cost, Ooredoo could use the tool already purchased by the CRA.

CD#2 Question 14: Do stakeholders agree with the CRA's proposed Wholesale Charges for the AR?

76. Vodafone Qatar has no further comment than those made in its Submission dated 12 November 2017.

- END -

Communications Regulatory Authority
State of Qatar
هيئة تنظيم الاتصالات
دولة قطر

Setting Wholesale Charges for the years 2018-2020

Response Document to the Second Consultation and Final Decisions

Non-Confidential Version

Version not containing **confidential** information of **SPs**

Confidential to Ooredoo
Confidential to Qnbn
Confidential to Vodafone

CRARAC 2018/05/08A-NC
May 08, 2018

Table of Contents

1 Part I: Background and Legal Basis of the proceeding

1.1 Background

1. On May 21, 2015, the CRA approved the Wholesale Charges applicable to the Products included in the Reference Interconnection Offers (“RIO”) of Ooredoo Q.S.C. (“Ooredoo”) and Vodafone Qatar Q.S.C. (“Vodafone”), in the Reference Transmission Offer (“RTO”) of Ooredoo and in the Reference Infrastructure Access Offer for Ducts of Ooredoo (“RIAO” ref. CRA Order 2015/05/21F).
2. On March 28, 2017, the CRA sent to Ooredoo, Qnbn and Vodafone (“Service Providers” or “SPs”) a Data Request for costing the Wholesale Products in subject, along with a simplified version of the cost model used by the CRA to perform forecasts and calculations. On April 25, 2017, the CRA held an Industry Meeting to provide the SPs with clarifications on the Data Request.
3. Most of the SPs did not provide the data within the timeline set by the CRA (May 25, 2017). Hence, on June 12, 2017, the CRA sent a letter to the SPs moving the deadline for the issuing of the First Consultation Document to September 15, 2017 (ref. CRA’s letter CRA/RAC-E/062/2017).
4. On September 27, 2017, CRA issued the First Consultation Document (First CD) consulting SPs about Wholesale Charges proposed for years 2018, 2019 and 2020.
5. Ooredoo, Qnbn and Vodafone responded to the First CD by the deadline set by the CRA (November 12, 2017). The CRA notes that even if responses given by stakeholders have expressed their disagreement with some of the propositions included by the CRA in the First Consultation Document, they have not provided supporting information nor evidences as requested in the consultation instructions (for instance, no alternative calculations or models have been submitted). This implies that, in the absence of alternative information and/or suggestions, CRA has not been able to evaluate other potential scenarios to revisit initial CRA’s position.
6. On December 6, 2017, CRA set the Cost of Capital at 10.45% (ref. CRA Order 2017/12/06).
7. On December 13, 2017, CRA issued the Second Consultation Document (Second CD), consulting SPs again about Wholesale Charges proposed for years 2018, 2019 and 2020.
8. Ooredoo, Qnbn and Vodafone responded to the Second CD by the deadline set by the CRA (February 11, 2018).
9. This document includes the Responses to the Second Consultation Document and CRA’s Final Decisions on the Wholesale Charges for years 2018, 2019 and 2020.
10. The CRA estimates that the regulated Wholesale Charges result in total domestic wholesale revenues of around QAR 140 million per year[1].

✂ and ✂

Figure 1.1 National Wholesale Revenues – CRA’s estimate based on SPs’ data [SP data, CRA calculation]

11. As shown in the Figure above:

    11.1 Mobile Termination revenues account for more than 80% of the total National

[1] For the Interconnection Traffic Services, revenues have been calculated as volume 2017 forecasted by Ooredoo and Vodafone times the current wholesale charges; for Interconnection Links, Transmission Links and Ducts data have been sourced from Ooredoo’s RAS 2015

Wholesale Revenues;

11.2 Wholesale Revenues for Mobile Termination services between Ooredoo and Vodafone are almost balanced (39% and 44% of total Wholesale Revenues, respectively); and

11.3 The regulated Wholesale Services represent with QAR 140 million p.a. around 1.4% of the total industry revenues (around QAR 10 billion).

12. Therefore, changes in Wholesale Charges are not expected to affect the overall industry’s income, profitability and its investment capacity significantly.

1.2 Legal Basis

13. The following legal provisions, which are not exhaustive, provide the legal basis for the CRA to set the Wholesale Charges:

1.2.1 Emiri Decision No. (42) of 2014 Establishing the Communications Regulatory Authority

14. Article 4 of the Emiri Decision makes the CRA responsible for regulating the communications information technology and the post sector, as well as access to digital media, with the aim of providing advanced and reliable telecommunication services across the State.
15. Article 4(1) empowers the CRA to set Regulatory frameworks for the communications, information technology, the post sector, and access to digital media, in line with the general policies of the sector and to enable optimum performance.
16. Article 4(2) charges the CRA with actions finalized to encourage competition and prohibit or minimize anti-competitive practices, prevent misuse by any person or entity of its market dominance position, and take all necessary measures to achieve this.
17. Article 4(4) requires the CRA to protect the rights and interests of the public and Service Providers in the market, promote transparency and provide advanced, innovative and quality services at affordable prices to meet the needs of the public.
18. Article 4(6) make the CRA responsible for ensuring interconnection and access for all users by setting conditions for effective interconnection and access.
19. Article 15(2) empowers the CRA to develop appropriate Charge regulations, giving priority to the telecommunications market, or telecommunications services according to market requirements, and determine fees for retail and wholesale services.

1.2.2 Telecommunication Law 2006 ("Law")

20. Article 19 provides for "… promoting appropriate, effective and low cost interconnection between telecommunications networks …"
21. Article 25 provides that the CRA shall determine the rights and obligations of a Dominant Service Provider which include any requirements relating to the contents and publication of an interconnection reference offer and access agreements.
22. Article 28 states that Dominant Service Providers must submit to the CRA the offers for the Charges, prices and charges of the telecommunications services in the markets where they have been designated as dominant Service Providers and obtain the prior approval for them.
23. Article 29 provides that the Charge for telecommunications services provided by dominant Service Providers must be based on the cost of efficient service provision and the Charge must not contain any excessive charges which result from the dominant position that the Service Provider enjoys. This Article also states that the CRA may issue decisions along with justifications to amend the Charges where it finds that they are not in line with the cost of the service provision, provided that such decision must prescribe the new Charge amount.

1.2.3 Executive By-Law for the Telecommunications Law 2009 ("By-Law")

24. Article 6 empowers the CRA to issue legal instruments including Orders for the implementation of the provisions of the By-Law and the Law.
25. Article 50(1) provides that the CRA may require that interconnection or access charges of any Dominant Service Provider be subject to Article (29) of the Law and Articles 56, 57, 58 and 59 of this By-Law.
26. Article 54 of the By-Law prescribes that the CRA shall have the authority to review all

Service Provider Charges, including wholesale and retail Charges, and to determine any requirements regarding Charges, their approval and publication, and the CRA may issue regulations or orders to regulate the Charges of Service Providers.

27. Article 56 requires that Charges that are subject to filing with and approval by the CRA shall enter into force only after they have been approved by a decision from the CRA.

28. In accord with Article 59 the CRA may require a Dominant Service Provider to prepare or participate in the development of a cost study of its telecommunications services if it determines that a cost study would be necessary in implementing any scheme of Charge or price regulation. Also, the CRA may require any Dominant Service Provider to prepare or participate in the development of a cost study for the purpose of determining the costs of providing different types of telecommunications services or the business activities of the Service Provider and the CRA shall decide on the cost categories, form, approach, procedures and timing of the cost study. The Service Provider shall comply with all requirements identified by the CRA; and shall file with the CRA the study. The CRA shall consult with the Service Provider required to file a cost study and any other interested parties before it makes an order requiring the study. The CRA may require a Dominant Service Provider to adopt identified cost accounting practices to facilitate cost studies or to achieve any other regulatory purpose under the Law or the By-Law, including the separation of accounts among different categories of business activities or services or as directed by the CRA.

29. Article 60 empowers the CRA to develop methods of price control and to consult Service Providers or any other interested parties. The CRA may issue orders or notices prescribing guidelines for the development of proposals for methods of price control; or setting out directions for the further development of any proposal that has been filed with the CRA or any method of price control that is under development by the CRA. The CRA may also approve of a proposal or method of price control for implementation by one or more Service Providers. Following development and approval of any method of price control, the CRA may also issue regulations, rules, orders or notices required for its implementation.

1.2.4 Order on Wholesale Charges applicable to Wholesale Services for years 2015, 2016 and 2017 (CRA 2015/05/21F, dated May 21, 2015)

30. This Order and the annexed document “Wholesale Charges and their relationship with Retail Charges - Economic Analysis and Response” (CRA 2015/05/21G-NC) set the Wholesale Charges for years 2015, 2016, 2017.

31. Costing and pricing principles defined in this Order are deemed valid for setting the Wholesale Charges for years 2018 onwards, if still applicable.

1.2.5 Retail Tariff Instruction

32. Where applicable, the rules of the Retail Instruction (“RTI”, ref. CRA 2015/05/07) are implemented to assess the relationship between the Wholesale and Retail Charges.

1.2.6 Cost of Capital

33. The Cost of Capital is set at 10.45% with the Order Determination of the Cost of Capital for Service Providers declared as having a Dominant Position, dated December 6, 2017 (CRARAC 2017/12/06).

2 Part II: CRA's responses to the First Consultation Document and positions as expressed in the Second Consultation Document

34. This Part:
    34.1 Summarizes the responses submitted by the SPs to the First Consultation Document;
    34.2 Contains CRA's comments on the responses provided by the SPs;
    34.3 Provides CRA's finding, proposed positions and further Consultation Questions.

2.1 Guiding Principles to set Wholesale Charges

2.1.1 Cost Base and Cost Standard

First CD - Question 1: Do stakeholders agree with the CRA's view and methodology for cost estimation?

2.1.1.1 CRA's position in the first Consultation Document

35. Article 29 of the Telecommunication Law requires low cost interconnection charges for telecommunications services based on the cost of efficient service provision. Therefore, CRA used operators' costs as reference for setting wholesale charges, applying adjustments when considered relevant.

36. With regards to the cost base and the cost standard, after having consulted the SPs, CRA opted for using a top-down model based on Historical Cost Accounting with Fully Distributed Costs (HCA/FDC), applying a forward-looking approach (i.e. projecting the HCA/FDC cost for the next years (ref. CRA letter CRA/RAC-E/023/2017, dated March 7, 2017)).

37. Following points summarize the methodology employed for the calculation of Recurring Wholesale Charges
    37.1 To estimate the Network Unit Cost for the FYs
        (i) 2016, 2017 and 2018, Network Cost from Ooredoo's RAS 2010-2015 have been forecasted for three (3) years. For the volume, the CRA has generally used the forecasted volume submitted by the SPs.
        (ii) 2019 and 2020, prudent cost trends have been then used.
    37.2 For the Wholesale Costs the CRA had no confidence in the Wholesale Cost included in the RAS of Ooredoo. Hence, CRA used a mark-up of 10% "on top" of Network Costs to include this item in the Wholesale Charges. This mark-up was based on a benchmark performed by CRA and is in line with the proceeding for setting the Wholesale Charges 2015 – 2017 (ref. CRA Order 2015/05/25F).

38. Following points summarize the methodology employed for the calculation of One-Time Fees
    38.1 For the Network Costs the CRA typically used the approach described for the calculation of Wholesale Recurring Charges. Where this was not possible "bottom-up" models based on time and material are acceptable if properly justified.
    38.2 Wholesale Costs, a mark-up of 10% "on top" of Network Costs has been used.

2.1.1.2 Ooredoo's response to the first Consultation Document

39. "*Regarding the cost methodology, Ooredoo has the following concerns: the extrapolation of the past cost trends even with the use of more moderate decline may result in under-recovery of service costs. In the regulatory horizon of 2018-2020, Ooredoo expects to make investments in 5G network upgrade and further network enhancement to meet demands related to the 2022 World Cup. Moreover, based on historical trends, the major sport events planned to take place in Qatar in coming years (Athletic World Cup and Football World Cup) are likely to have increased inflationary pressure that will also impact the input costs of Service Providers and hence costs of wholesale services*."

40. "*Reliance on international benchmarks when defining wholesale markup ignores the lack of economies of scale and scope within wholesale operations in Qatar given the small size of the market and therefore the CRA proposed actions would not enable Ooredoo actual cost recovery*."

41. "*Regarding the wholesale rate setting methodology, Ooredoo considers the CRA's proposed wholesale rates reduction to be too aggressive, ignoring its economic impact, which is oblivious to key objectives the CRA must adhere to by the Telecommunication Law*."

2.1.1.3 Vodafone's response to the first Consultation Document

42. "*Vodafone Qatar supports the use HCA/FDC for the purpose of estimating cost and the use of Ooredoo's Regulatory Accounts ('RAS') where appropriately audited. In that regards, we note with some concerns that many years after the introduction of the RAS, the RAS does not enable the CRA to have a clear view of wholesale cost and the cost of leased lines. We recommend that this be looked at closely by the auditors and the CRA. Vodafone Qatar costing information should be used in parallel*."

43. "*The CRA's approach to forecasting appears reasonable although we note that the mixing of network cost derived based on a specific allocation key with forecast of traffic from different sources may lead to inconsistent unit cost results*."

44. "*One-time fee can constitute barriers to entry and are difficult to estimate from regulatory accounts. Hence, we recommend consideration of bottom-up level models for those wholesale charges*."

2.1.1.4 CRA's position in the second Consultation Document

On Ooredoo's comments

45. On the extrapolation of the past cost trends:

    45.1 The CRA recognizes the uncertainty surrounding the process of estimating future costs for regulated wholesale services. However, in order to reduce the associated risks, the CRA has been very prudent in calculating the cost trends to ensure cost recovery.

    As indicated in the First Consultation Document, where a flattening of the cost curve for a certain service has been observed in recent years, the annual future growth has not been estimated taking into account the CAGR 2010 – 2015, as per the defined methodology. Instead, only the evolution observed in the last period has been employed for determining the future growth, avoiding in such a way a situation of non-cost recovery. Moreover, where no clear cost trend was available, the CRA has left the costs stable.

    In addition to this, section 7 of the First Consultation Document proposed the introduction of a review clause (see question 32) in the Order approving the Wholesale Charges. According to this clause the SPs would be allowed requesting a review of the wholesale charges, providing evidences of wholesale charges below costs.

The CRA notes that Ooredoo has not provided a specific correction on any of the cost trends or suggested different input figures.

45.2 On March 28. 2017 (ref, CRA/RAC-E/027/2017), the CRA asked Ooredoo (and all the SPs) to provide the cost forecasted for the years 2016, 2017, 2018 and 2019 for each of the wholesale products object of this proceeding. Ooredoo did not provide the requested information for the voice and messages interconnection services, but only the volumes and a forecast of the wholesale charges. Ooredoo had the possibility to submit information relevant to support its current claims but failed to do it. In its response to the First Consultation Document, Ooredoo criticizes CRA's approach but – again – does not provide any quantitative information to support its position. Hence, the CRA is neither in the position to verify Ooredoo assertion nor to review its own cost-trends.

46. On the wholesale mark-up, as already reported in the Order on Closure of the RAS 2015, the CRA has no confidence in the wholesale costs included in Ooredoo's RAS. Given the lack of alternative sources, and until issues identified in Ooredoo's RAS are solved, the CRA will continue to rely on benchmark values as main reference.

47. On the magnitude of the reduction proposed by the CRA, please refer to the specific sections for CRA's positions (ref. section 2.3).

On Vodafone's comments

48. On the quality of the RAS, the CRA notes that all necessary effort will be done to solve the issues related to leased lines services and wholesale costs identified with the RAS reviews.

49. Concerning the uncertainty of the forecasting process, please refer to CRA's comments on Ooredoo submission (ref. point 45).

50. On the one-time fees, these have been generally estimated based on bottom-up calculations, with the aim to have charges oriented to efficient costs and avoid barriers to entry.

Proposed Decision

51. In summary:

51.1 Ooredoo seems concerned with the cost trends applied by the CRA to the outcomes of Ooredoo's 2015 RAS for projecting the costs for the period 2016-2020. However, Ooredoo has not provided supporting information accompanied by strong evidence allowing CRA to review the cost trends. Vodafone finds CRA's approach to forecasting reasonable.

51.2 On the cost base and standard, this is supported by Vodafone and was accepted by Ooredoo in previous consultations.

The CRA notes that the HCA (Historical Cost Accounting) cost base with a FDC (Fully Distributed Costs) cost standard is the least aggressive scenario for setting the interconnection charges. If other approaches where adopted, e.g. CCA (Current Cost Accounting) cost base with the pure LRIC (Long Run Incremental Costs) cost standard the proposed interconnection charges could easily be reduced by another 30-50%.

52. In conclusion, CRA confirms the approach as proposed in the First Consultation Document (ref. section 2.1.1.1 above) and opts for using a top-down model based on Historical Cost Accounting with Fully Distributed Costs (HCA/FDC), applying a forward-looking approach (i.e. projecting the HCA/FDC cost for the next years).

2.1.2 Non Discrimination and Proportionality Test (PT)

First CD - Question 2: Do stakeholders agree with the CRA's view and implementation of the PT test, i.e. having a threshold of 20%?

2.1.2.1 CRA's position in the first Consultation Document

53. The PT has the scope to ensure that Wholesale Charges of products sold to Access Seekers are non-discriminatory in relation to the Network Cost of functionally similar products provided internally (to the retail arm of the SP).

54. The CRA notes, that this basic test is typically performed by the DSP before submitting cost figures to the CRA, since the non-discrimination is a requirement usually imposed on DSPs worldwide.

55. It is also obvious from a general fairness principle that an Access Seeker should not incur (significantly) higher cost than the (vertically integrated) Access Provider is charging itself.

56. The implementation of the PT was deeply discussed in the proceeding for setting the Wholesale Charges 2015 – 2017 (ref. CRA Order 2015/05/25F).

57. The CRA is aware that differences between the Network Cost of wholesale and retail services are generally not accepted in many jurisdictions at all unless they are properly justified (e.g. different hourly distribution, ABC information showing higher dedication of manpower for wholesale services, etc.). Therefore, strictly speaking, any difference should be materially justified.
Nevertheless, the CRA is aware that the Network Cost of an e.g. MTR might be different from an on-net call due to different routings and Network Elements involved.

58. Therefore, the CRA deems a maximum of 20% as reasonable to assess the relation.

59. For example, to perform the PT, the CRA compares twice the Wholesale Charges of the Mobile Termination Rate with the Network Cost of an end-to-end on-net mobile call.

60. The following table shows an illustrative example of the PT as implemented by the CRA.

						Reasonable Difference	20%
Corresponding Retail Product		(Internal) Network Product		(External) Wholesale Product		Proportionality Test	
Name	Unit	Name	Cost	Name	Cost	Max Cost (inlcluding) RD	Pass
F:F (on-net)	QAR/min	Origination + Termination	0.50	2 FTR	1.00	0.60	NO
M:M (on- net)	QAR/min	Origination + Termination (including Video Calls)	1.00	2 MTR (including Video Calls)	0.50	1.20	YES
SMS (on- net)	QAR/SMS	Origination + Termination	0.20	2 SMSR	0.10	0.24	YES
MMS (on- net)	QAR/SMS	Origination + Termination	0.30	2 MMSR	0.15	0.36	YES

Table 1 Illustrative example of the Proportionality Test as implemented by the Authority [CRA]

2.1.2.2 Ooredoo's response to the first Consultation Document

61. "*Ooredoo notes that the CRA has failed to provide relevant references of where such a test is utilized internationally. Moreover, Ooredoo questions its relevance for mobile termination services where interconnection traffic is more or less balanced. In addition, an insistence by the CRA on applying PT test for FTR in the absence of solving the issue of access deficit appears to demonstrate incoherent regulatory policy being applied by the CRA to fixed market.*"

2.1.2.3 Vodafone's response to the first Consultation Document

62. "*Vodafone Qatar has no objection to the use of the Proportionality Test ('PT') and the*

threshold of 20%."

2.1.2.4 CRA's position in the second Consultation Document

On Ooredoo's comments

63. On the use of the PT, the CRA notes that the reason behind the realization of this test is to comply with CRA's regulatory objective of guaranteeing the principle of non-discrimination, as imposed by the Qatari Telecommunications Law in the Article 44 "*Prohibition of Unjustified discrimination*".

The CRA has also been very prudent and introduced in the test a threshold of 20%, while the majority of the Regulatory Authorities impose DSPs with a value of 0% for this threshold. This means that, in other jurisdictions, the network cost per unit attributed to the Retail Arms of the DSPs must be the same as the network cost per unit attributed to the OLOs and any difference must be fully justified by the DSPs.

Thus, CRA's approach should be seen as more flexible and favorable for the DSPs, allowing for a 20% difference between Retail and Wholesale network cost per unit. It must be noted that the removal of this threshold would lead to a reduction of some of the wholesale charges.

The CRA also indicates that the PT has been passed by all services except the fixed call termination service. Please refer to section 2.3.1.4 for further details on CRA's position.

64. As towards Ooredoo's request for benchmark, CRA notes that non-discrimination is a principle typically followed by regulators in costing exercises such as, for instance, Spain[2], Croatia[3], France[4], Portugal[5], Morocco[6], Tunisia[7] or Saudi Arabia[8]. This principle establishes that the equivalence of usage in the network must be reflected in an equivalence of costs. On solving the issue of the Access Deficit, the CRA reminds to Ooredoo that the approval of the Tariffs for access products (i.e. voice, broadband and TV) is based on a model that ensures the full cost recovery of the fiber access network. The approval of new Tariffs for access products is subordinated to the profitability of the fiber access network as a whole, but not to the profitability of each and any single products. This mechanism - that has never been opposed by Ooredoo - ensures the absence of the Access Deficit. Therefore, the CRA could not understand Ooredoo's reference to an Access Deficit.

Proposed Decision

65. The CRA confirms the approach as proposed in the First Consultation Document.

66. In summary, to ensure that Wholesale Charges of products sold to Access Seekers are non-discriminatory in relation to the Network Cost of functionally similar products provided internally (to the retail arm of the SP), the CRA will apply the PT before translating the cost in wholesale charges.

2.1.3 Price / Margin Squeeze Test methodology (PMS)

First CD - Question 3: Do stakeholders agree with the CRA's view and implementation of the PMS (Price Margin Squeeze) test?

[2] https://www.cnmc.es/sites/default/files/1478899_0.pdf

[3] http://www.hakom.hr/UserDocsImages/dokumenti/Instructions%20On%20Accounting%20Separation%20And%20Cost%20Accounting.pdf

[4] https://www.arcep.fr/uploads/tx_gsavis/06-1007.pdf

[5] https://www.anacom.pt/render.jsp?categoryId=158368

[6] http://www.fratel.org/wp-content/uploads/2011/12/200805-Khaouja-ANRT.pdf

[7] http://www.intt.tn/upload/files/decision%20ES%20fixes%20version%20finale.pdf

[8] http://www.citc.gov.sa/ar/new/publicConsultation/Documents/Attachment1AccountingSeparationRegulatoryFramework.pdf

2.1.3.1 CRA's position in the first Consultation Document

67. DSPs must demonstrate the absence of a Price/Margin-Squeeze ("PMS") for their services. This should be based on the Wholesale Charges of existing wholesale products or, where relevant, the charge of proposed wholesale products.

68. The Price Margin Squeeze test checks whether competing SPs can replicate the retail service with wholesale inputs. The CRA will consider the best available information in deciding the appropriate levels of prices.

69. For the purpose of this consultation, the CRA confirms the PMS test as defined in the Order and attached Economic Analysis for setting the Wholesale Charges 2015 – 2017.

70. The following table shows the generic form of the PMS Test.

Price margin Squeeze

Retail Product		Retail Charge	CRA Propoposed wholesale charge	Outpayment	Retail MU	CRF	Granularity	cost for provisioning	pass
					40%	fixed and mobile			
Product X	QAR/min	10.00	8.00	-	3.20	0.80	-3.60	8.40	yes
Product Y	QAR/min	15.00	13.00	2.00	6.00	1.50	-6.75	15.75	no

Table 2 Price margin Squeeze – generic example [CRA]

71. For the avoidance of doubt, this test could also be used for assessing ex-post competition cases.

2.1.3.2 Ooredoo's response to the first Consultation Document

72. "*Ooredoo cannot agree with inclusion of CRF (Compound Risk Factor) in PMS (Price Margin Squeeze), as this approach completely lacks support in sound economics or any international regulatory precedence. The risk of potential revenue fluctuations are factored in the WACC already via credit rating mechanism (and via betas in the equity component) and therefore any costs that would need to be attributed to this risk is already applied via the WACC to both retail and wholesale services. The CRA must therefore remove the CRF from the PMS formula*."

73. "*The CRA in section 4.3.1 do not address in detail what price and / or (retail) costs should be considered in the specific PMS and therefore Ooredoo cannot comment on what are important details required for the practical implementation of PMS at this point*."

2.1.3.3 Vodafone's response to the first Consultation Document

74. "*In principle Vodafone Qatar has no objection when the Price Margin Squeeze ('PMS') Test although its applicability, parameter values and methodology are unclear in so far as only a 'generic form' is provided. Vodafone Qatar would appreciate clarity on the circumstances in which it is being applied (e.g. as part of the tariff approval process) and further details on the test and its relevant parameters*."

2.1.3.4 CRA's position in the second Consultation Document

On Ooredoo's comments

75. The CRF is utilized to mitigate the risks of forecasting costs and volumes. The CRA does not share Ooredoo's view that the CRF is redundant because of the WACC. The WACC allows for a reasonable rate of return on the investments but does not mitigate the risks of forecasting costs and volumes.

76. On the Retail Charge used for the PMS, on October 1, 2017, the CRA sent to Ooredoo

a file excel including[9] – amongst others - the calculations of the PMS (ref. CRA letter CRA/RAC-T/115/2017).

From the excel file, Ooredoo had the possibility to verify that:

76.1 The CRA used the average revenues as Retail Charge.

76.2 The Retail mark-up is an average mark-up, calculated as Total Retail own cost on top of Network Cost and Outpayments, consistently with the information included in the RAS 2015.

77. On general, the CRA notes that Ooredoo has not provided specific comments or alternative approaches, supporting a review of the CRA's position.

On Vodafone's comments

78. The CRA notes Vodafone's request for clarification, which is provided below.

Proposed Decision

79. The CRA further clarifies the scope and the methodology of the PMS in the following points.

79.1 This test aims at ensuring the replicability of Ooredoo's products to an alternative operator that decides to purchase wholesale services for offering products to its retail customers.

79.2 The test is passed, when

$$Retail\ Charge \geq (Wholesale\ Charge + Outpayments)\ x\ (1 + Retail\ Markup_{\%})\ x\ (1 + CRF_{\%})\ x\ (1 + Granularity_{\%})$$

Formula 1 PMS Test

Retail Charge: average unit revenue generated by Ooredoo for the equivalent retail service;

Wholesale Charge is the regulated fee paid by the alternative operator;

Outpayments are the interconnection charges paid for the service (e.g. in case of terminating the call abroad);

The retail mark-up: it includes all the costs other than network costs (i.e. overheads and retail costs such as marketing, advertising, billing, etc.). The Retail Mark-up is calculated using the latest approved RAS of Ooredoo;

CRF: this is the Compound Risk Factor, whose main objective is to mitigate the risk that the existing uncertainties may cause the offer to be below cost; and

Granularity: this expresses the difference between the actual call in exact seconds and the billed calls, always rounded up to the next full minute.

80. The CRA notes that the CRF was introduced to mitigate the risk and uncertainties surrounding the Price Margin Squeeze test (e.g. projections of future costs and volumes) which could cause the Retail Tariffs not to be replicable.

81. In conclusion, the CRA confirms the approach as proposed in the First Consultation Document. Hence, the margin squeeze test described above shall be used by the CRA to ensure that competing SPs can replicate retail services provided by dominant SPs, by means of wholesale services acquired to them. For the avoidance of doubt, this test could also be used for approving the Tariffs and for assessing ex-post competition cases.

82. The same approach was also used to set the Wholesale Charges for the years 2015, 2016 and 2017 (ref. CRA Order 2015/05/25F).

[9] This excel file was sent only to Ooredoo because included confidential data to Ooredoo

2.2 Mechanism for setting the Wholesale Charges

2.2.1 Applicable timeframe

First CD - Question 4: Do stakeholders agree with the timeframe defined by the CRA?

2.2.1.1 CRA's position in the first Consultation Document

83. CRA was of the view that Wholesale Charges should cover the calendar years 2018, 2019 and 2020.

2.2.1.2 Ooredoo's response to the first Consultation Document

84. "*Ooredoo agrees with the proposal that new wholesale charges will cover calendar years 2018, 2019 and 2020. Ooredoo notes that the new wholesale charges might come in force in January 2018 and assumes that current wholesale charges will stay in force till then and will not be changed retroactively. Confirmation from the CRA is sought in this respect*."

2.2.1.3 Vodafone's response to the first Consultation Document

85. "*Vodafone Qatar supports the use of a three years period for price control. The option to review charges during the price control period should be limited to material changes only*."

2.2.1.4 CRA's position in the second Consultation Document

Proposed Decision

86. The CRA notes that Ooredoo and Vodafone agree that the new wholesale charges shall cover the calendar years 2018, 2019 and 2020, as proposed by the CRA.
87. Hence, the CRA will set the New Wholesale Charges for the calendar years 2018, 2019 and 2020.
88. The current Wholesale Charges shall be applied until the new charges are approved. This has been confirmed separately (ref. CRA letter CRA/RAC-T/153/2017, dated December 5, 2017).

2.2.2 Overall methodological approach

First CD - Question 5: Do stakeholders agree with the overall methodological approach defined in this section?

2.2.2.1 CRA's position in the first Consultation Document

89. The CRA has four following main references for setting new wholesale charges, namely:
    - 89.1 Ooredoo's and/or Vodafone's cost information, to calculate cost oriented wholesale charges;
    - 89.2 Proportionality Test results;
    - 89.3 Price Margin Squeeze Test results; and
    - 89.4 Benchmarks/Bottom Up Models.
90. In case tests are passed, costs can be translated directly into Wholesale Charges. If cost oriented wholesale charges do not pass the tests, they need to be adjusted to pass the tests, so that they can be translated into Wholesale Charges.

2.2.2.2 Ooredoo's response to the first Consultation Document

91. "*Ooredoo does not agree with the dramatic reductions in termination rates proposed by the CRA. Doing so will cause substantial costs to Service Providers and ultimately customers, which are not likely to be offset by any corresponding benefits that the proposed regulation will deliver. The CRA has neither identified market failure it is trying to address through the proposed rate reduction nor has the CRA quantified the benefit this regulation aims to deliver to market participants*."

92. Additionally, in the Executive Summary of the letter submitted, Ooredoo also states: "*The proposed regulation largely ignores the CRA's responsibility to deliver on the objective of ensuring the orderly development and regulation of the telecommunication sectors within Qatar*."

2.2.2.3 Vodafone's response to the first Consultation Document

93. "*Vodafone Qatar does not agree to this mechanistic approach to rate setting which is inconsistent with the duties of the CRA. There are inherent tensions in setting wholesale charges and we are concerned with the approach of the CRA which consists of seeking to set wholesale charges based on cost in a mechanistic fashion by invoking only Article 29 of the Telecommunications Law. The CRA must recognise and take into account the overarching objectives placed on it in the Telecommunications Law and the Emiri Resolution and articulate how its proposals contribute to achieving those objectives. Article 2 of the Telecommunications Law says that the regulation of the sector shall achieve the following objectives: '1. promoting the telecommunications sector in order to consolidate national, social and economic development; 2. enhancing the telecommunications sector's performance in the State of Qatar through encouraging competition and fostering use of telecommunications services; 3. encouraging the introduction of advanced and innovative information and telecommunications technologies to meet the needs of customers and the public; 4. increasing customers' benefits and safeguarding their interests; 5. encouraging sustainable investment in the telecommunications sector'* ".

94. "*Further, Article 4 of the Emiri Resolution requires the CRA to: 2. Provide the legal, transparent, organizational and fair environment to construct a competitive, innovative and investment attractive sector; 3. Encourage competition, prevent or limit non-competitive practices, prevent the misuse of any person or entity to his sovereign status in the market and take the necessary procedures in this regard; 4. Protect the rights and interests of the public and service providers in the market, enhance the transparency and work to render advanced and innovated services having high quality and for reasonable prices to meet the requirements of the public."*

95. *"The CRA's proposals in mobile (cut of MTRs by of 80% in three years and regulation of international in-bound) go in the wrong direction and do not support the development and growth of the mobile industry."*

2.2.2.4 CRA's position in the second Consultation Document

On Ooredoo's comments:

96. On the reduction of the Wholesale Charges proposed by the CRA, the CRA indicates that this is consistent with the cost information available to the CRA, including the audited Ooredoo's RAS.

97. On the allegation that the '*proposed regulation largely ignores the CRA's responsibility to deliver on the objective of ensuring the orderly development and regulation of the telecommunication sectors within Qatar*', the CRA points out that this has already been considered in setting the new Cost of Capital and choosing prudent cost trends.

On Vodafone's comments:

98. On the approach used, the CRA clarifies that it is not taking a mechanistic approach: both the conservative cost trends applied and the Cost of Capital have been already

used to balance the various objectives the CRA is responsible to achieve.

99. On Vodafone's statement that the CRA goes in the wrong direction, this is not substantiated. In many other jurisdictions, similar cuts have been done and low termination rates have been beneficial for both the SPs and the customers (ref. following paragraphs for further details).

Proposed Decision

100. The CRA notes that neither Ooredoo nor Vodafone have provided a rational to support their views. Also, no alternative approaches have been proposed.

101. The CRA stresses that reductions in wholesale charges imposed by national regulators worldwide in recent years have demonstrated to have positive impacts on the telecommunication sector. More specifically, these impacts are generally reflected in, among other aspects, increase of competition levels, benefits to customers and fostering of demand. These aspects are described in detail in the following paragraphs:

101.1 **Increase in competition levels:** Reductions of wholesale charges have been generally accompanied by a growth in competition levels within the telecommunication market. As illustrative example, the following chart shows the Herfindahl Hirschman Index (HHI)[10] together with MTR evolution of a set of OECD countries[11] in the period 2006-2014. It is worth noting that the lower the index is, the higher is the competition in the assessed country.

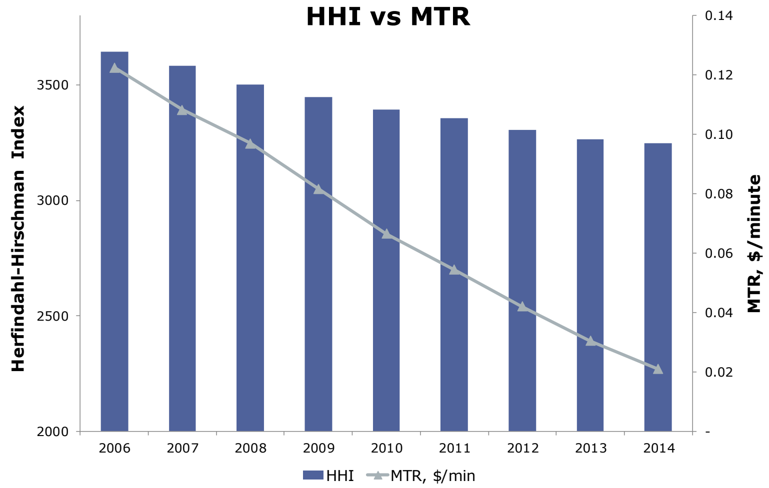


Figure 2.1 Evolution of average HHI and MTR in OECD countries [Source: GSMA and OECD]

From the chart above, it can be extracted that the increase of competition levels (reflected by a reduction of the HHI index) observed in the period 2006-2014 for the list of assessed countries took place in parallel with the reduction observed in the MTR.

101.2 **Benefits to customers:** The increase of competition levels in a telecommunication market generally entails benefits to customers in the form of innovative products or more affordable prices, offered by service providers in their efforts to differentiate against competitors. For instance, the following chart shows the evolution of mobile calls prices observed in the European Union over the period 2005-2014, as published by the European Commission:

[10] The HHI index reflects the level of concentration in the market of a given country and it is calculated as the sum of the squared market shares of all operators.

[11] List of countries considered: Australia, Austria, Belgium, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, South, Luxembourg, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States of America.

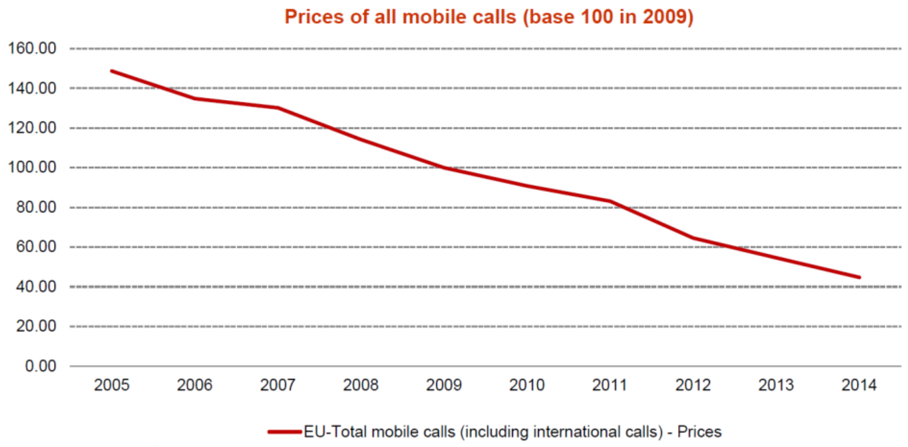


Figure 2.2 Evolution of the price of all mobile calls (2009 is the reference year, with a value of 100%) [Source: EC]

The reduction of retail prices shown in the figure above was accompanied with an average reduction in MTR of 86% (from 12.36 to 1.69 Eurocent/min)[12], in the same period.

In the specific case of Qatar, a reduction of the average revenue for mobile national calls has also been observed over the years 2014-2016, along with a reduction of the applicable MTR, as illustrated in the following figure:

✂ and ✂

Figure 2.3 Evolution of the average revenue per minute of national mobile voice call vs MTR [Source: MDDD, Annex B - Licensed activities only, CRA calculation]

As it can be observed, MTR and average price per minute have both followed a declining trend, whereas the average retail price per voice minute fell faster than the MTR.

101.3 **Fostering of Demand:** It is worth outlining that a decrease of retail prices ultimately leads to increases in the use of telecom services, benefiting customers and increasing networks' economies of scale. The following chart shows mobile traffic together with average MTR in a set of OECD countries[13] during the period 2005-2011.

[12] See following report published by BEREC: http://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/6086-termination-rates-at-european-level-janu_0.pdf

[13] List of countries: Austria, Belgium, Chile, Finland, France, Hungary, Ireland, Japan, Korea, Mexico, Norway, Portugal, Slovak Republic, Spain, Sweden, Switzerland and Turkey.

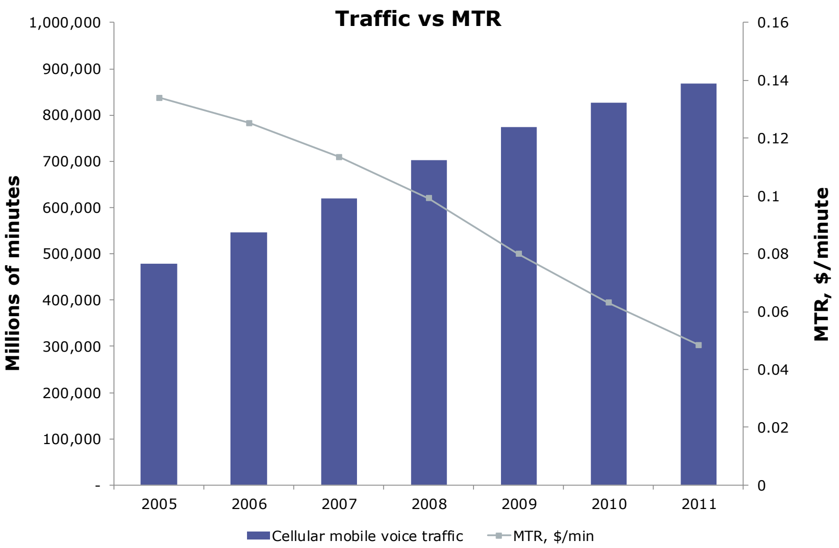


Figure 2.4 Comparison of mobile voice traffic vs MTR in OECD countries [Source: OECD]

The chart shows an increase in mobile traffic which took place in parallel with the reduction of MTR. At the same time, it must be outlined that the increase in traffic tends to compensate the reduction of retail prices.

A similar situation can be observed for Ooredoo Qatar where, for instance, the traffic of the mobile termination service has increased – in excess of the population growth - in the lasts years, as shown in the following chart:

Figure 2.5 Comparison of Ooredoo's mobile termination voice traffic vs MTR in Qatar [Source: Ooredoo]

102. The CRA has a broad mandate and multiple objectives to reach. In taking its decisions, the CRA has to balance the overarching goal of economic diversification, the interests of the Service Providers and those of the customers.

103. It is quite clear that the interests of the Service Providers (i.e. high revenues and profit with low investments and costs) are often different from the interests of the public (i.e. innovation, low prices, high quality).

104. Article 19 (1) of the Telecommunication Law requires the CRA to set low Interconnection and Access Charges, which, as shown above, typically lead to lower Retail Tariffs and higher demand levels, favoring the customers and the development of the Qatari economy. However, other CRA's objectives – such as favoring the investments in infrastructures in Qatar - would suggest the CRA to set higher Wholesale Charges.

105. To balance all the various objectives, the CRA:

105.1 Has relied on objective data and information (i.e. the Audited RAS of Ooredoo);

105.2 Has been very conservative when forecasting costs;

105.3 Has set the new Cost of Capital at the highest possible level of the calculated range.

106. The CRA is aware that significant reductions are proposed for some services. Therefore, in order to smooth the potential impact of the new wholesale rates, a mechanism of glidepath has been proposed, being the approach generally adopted in the international practice when current applicable charges are significantly different from the new cost-oriented charges.

107. In any decision, short-term benefits could differ from long-terms gains for the State of Qatar. The CRA shall be focused on the latter.

108. The impact on the revenues of the reduction of FTR and MTR is not significant (i.e. 1%, as already mentioned in section 1 above). Also, the impact on the Margins of the SPs is negligible, given that the traffic is almost balanced between Ooredoo and Vodafone. More details on the economic impact are provided in points 144 and 171 below.

109. The CRA will set the Wholesale Charges for the calendar years 2018, 2019 and 2020 striking a balanced solution among the various conflicting goals.

2.2.3 Use of benchmarks

First CD - Question 6: Do stakeholders agree with proposed use of benchmarks?

2.2.3.1 CRA's position in the first Consultation Document

110. CRA stated that it intended to use benchmark information:

 110.1 In cases in which no costing information is available or the information is considered inaccurate or unrepresentative;

 110.2 As additional tool to understand where Qatari Wholesale Charges stand against other countries.

2.2.3.2 Ooredoo's response to the first Consultation Document

111. "*Ooredoo notes that a number of the CRA's benchmarks are not representative in terms of how the presented values were calculated. Ooredoo also finds the use and interpretation of benchmarks by the CRA to be misleading on a number of occasions. Ooredoo comments on the use of specific benchmarks in more detail below*".

2.2.3.3 Vodafone's response to the first Consultation Document

112. "*Vodafone Qatar supports the use of relevant benchmarks as a cross-check. This is important to ensure that charges remain within reasonable bounds. Benchmark can also be used where information is not reliable or available*."

2.2.3.4 CRA's position in the second Consultation Document

On Ooredoo's comments

113. The CRA's responses to Ooredoo on the benchmark are included in section 2.3.1 and 2.3.2 of this document.

On Vodafone's comments

114. The CRA acknowledges Vodafone's comments.

Proposed Decision

115. The CRA confirms the approach proposed in the First Consultation Document and will use relevant benchmarks: As a cross-check; and / or where information is not reliable or available.

116. This approach has been consistently applied by the CRA for the charges included in this document.

 116.1 For the vast majority of the wholesale services, information extracted from Ooredoo's RAS and/or submitted by the SPs has been used as primary source for the definition of the wholesale charges.

 116.2 Only for setting the charges of transmission links services and for defining the mark-up for wholesale costs, benchmarks have finally been used because relevant information is not reliable or available.

 116.3 Benchmarks have been used as a cross-check tool to ensure the reasonability of the proposed wholesale rates for the most relevant wholesale services.

2.2.4 Application of glide paths

First CD - Question 7: Do stakeholders agree with the application of glide paths and the methodology outlined in this section?

2.2.4.1 CRA's position in the first Consultation Document

117. The CRA proposed the application of glide paths, based on equal yearly charge reductions, from the currently applicable charges until charges defined for the last year of the applicable timeframe as indicated in section 2.2.1.

2.2.4.2 Ooredoo's response to the first Consultation Document

118. "*Ooredoo agrees with the use of the glide path as a general principle, to gradually reduce the wholesale charges, provided such a decline will not prevent cost recovery. However, Ooredoo does not agree with the steep declines in the wholesale rates proposed by the CRA as they are posed to do more harm than benefit to the telecommunication sector in Qatar*."

2.2.4.3 Vodafone's response to the first Consultation Document

119. "*Vodafone Qatar supports the use of glide paths to bring wholesale charges to the desired level*."

2.2.4.4 CRA's position in the second Consultation Document

Proposed Decision

120. The CRA notes that the two respondents agree using the glide paths as mechanism for setting the Wholesale Charges.
121. The CRA also indicates that SPs have not expressed any disagreement with the use of equal steps in absolute terms for proposed glidepaths.
122. In conclusion, the CRA shall set the Wholesale Charges for the calendar years 2018, 2019 and 2020 based on a mechanism of glide path.

2.2.5 Alternative approaches

2.2.5.1 CRA's position in the first Consultation Document

123. CRA consulted about alternative approaches for charging wholesale services (such as e.g. Zero Rating).

2.2.5.2 Zero Rating

First CD - Question 8: Do stakeholders agree with the use of zero rating for interconnection rates? If yes, for which services do stakeholders believe zero rating should be implemented?

2.2.5.2.1 Ooredoo's response to the first Consultation Document

124. "*No. The financial impact on Service Providers would be worse than any other proposed alternatives*."

2.2.5.2.2 Vodafone's response to the first Consultation Document

125. "*Vodafone Qatar does not support the use of 'zero rating' or 'bill-and-keep' for*

interconnection agreements. To Vodafone Qatar' knowledge bill-and-keep is in place in a handful of countries. We note in passing that bill and keep will be illegal in Europe based on the draft European Electronic Communications Code. We also would like to clarify that traffic between Vodafone Qatar and Ooredoo are not balanced."

2.2.5.2.3 CRA's position in the second Consultation Document

Proposed Decision

126. The CRA appreciates Ooredoo's and Vodafone's contributions and notes that it does not expect to use the 'zero rating' (or 'bill-and-keep') mechanism for the regulation of wholesale services for the calendar years 2018, 2019, 2020.

2.2.5.3 Other approaches

First CD - Question 9: Do stakeholders see other alternative approaches? This might be e.g. port charges for IC products or up-front lump sum payments. If yes, for which services do stakeholders believe such alternative approaches should be implemented?

2.2.5.3.1 Ooredoo's response to the first Consultation Document

127. "*Ooredoo do not have alternative proposals*."

2.2.5.3.2 Vodafone's response to the first Consultation Document

128. "*No, Vodafone Qatar does not think that alternative approaches for interconnection should be considered for the coming price control period.*"

2.2.5.3.3 CRA's position in the second Consultation Document

Proposed Decision

129. The CRA's is not happy with the lack of alternatives proposed by the SPs. However, for the coming price control period, the CRA shall abstain to adopt alternative approaches.

2.3 Wholesale Charges: Conveyance Services

2.3.1 Fixed Call Termination Service to Geographic Numbers

First CD - Question 10: Do stakeholders agree with the CRA's proposed Wholesale Charge for the Fixed Call Termination Service to Geographic Numbers? Which of the Options proposed by the CRA do you suggest and why?

2.3.1.1 CRA's position in the first Consultation Document

130. The CRA consulted on the following options for the regulation of the "Fixed Call Termination Service to Geographic Numbers" service:

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale charges, which pass the PT (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0119	0.0063	0.0006
Change to previous year			-32%	-47%	-90%
Option 2 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0150	0.0125	0.0100
Change to previous year			-14%	-17%	-20%
Option 3 – Fixed and Mobile Blended Wholesale Charges (n.b. susceptible of changes according to the level of the MTR)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	not applicable	0.0549	0.0353	0.0158
Change to previous year		not applicable	not applicable	not applicable	not applicable
Option 4 – Zero Rating					
Fixed Call Termination Service to Geographic Numbers	QAR/min	not applicable	0.0000	0.0000	0.0000
Change to previous year		not applicable	not applicable	not applicable	not applicable

Table 3 Fixed Call Termination Service to Geographic Numbers – Wholesale Charges [CRA calculation]

2.3.1.2 Ooredoo's response to the first Consultation Document

131. "*The CRA is using international benchmarks on population density and FTR's to view the proposed FTR's for Qatar in wider context. The CRA considers Singapore to be closest to Qatar in terms of population density and bases FTR's comparison on this premise. Ooredoo notes from the CRA's population density benchmarks that, in terms of number of inhabitants per squared km, both UAE (111) and Ghana (124) are more similar to Qatar (221) than Singapore (7,909). Ooredoo also notes that fixed termination rates in these countries are much higher than the current and the CRA's proposed termination rates for Qatar. Across all countries with Ooredoo footprint, Qatar has the smallest FTR already. There are no significant further reductions in FTR's expected in other countries where Ooredoo operates in next three years. The CRA's FTR rate reduction proposal is thus too extreme in this international comparison*."

132. "*The CRA raises concern that fixed termination service does not pass the proportionality test. In this respect Ooredoo points out that the current technical interconnection solution for fixed call termination was agreed by Ooredoo and Vodafone Qatar as the optimal one, given the small volume of fixed to fixed traffic and the additional costs that would have to be incurred by both service providers were an alternative network topology used instead*."

133. "*Ooredoo during the previous consultation on wholesale charges within the year 2014 raised the fact that the FAC methodology alone does not provide the best basis on which to set regulated prices due to temporal variations (spikes and troughs) in costs that can incur due to the nature of the telecommunication business. This applies also in the case of the fixed termination cost that are derived from RAS information for the year 2015, which shows a significant drop in unit cost compared to the year 2014. This decrease was largely driven by the decline in the operation and maintenance cost associated with the UMG (fixed network switch) in comparison with the same cost category in previous years. This drop reflects data sourced from time analysis input used within RAS 2015, when the given department's effort was focused on alternative network element(s). However, this is not a long-term sustainable situation and Ooredoo expects these maintenance costs to increase again in 2016 and to bring the unit cost closer to the 2014 level*."

134. "*Moreover, as historical experience shows, the inflation in Qatar is increasing when there is a major sports event occurring within country. The Asian Olympics games saw the price inflation in Qatar of 16%. There is Athletic World Cup and Football World Cup scheduled to take place in Doha in 2019 and 2022 respectively. Ooredoo expects both of these events to contribute to the increase in inflation in Qatar, which will likely be reflected in the cost of labor and other Service Providers' costs as well as has been the case in the past*."

135. "*Hence, to avoid the under-recovery of the associated costs, Ooredoo's recommendation is to increase the fixed termination rate at the rate of 3% per year in the course of next three years. If this was not possible, then to at least keep at the same level as is today*."

2.3.1.3 Vodafone's response to the first Consultation Document

136. "*As per our response to Question 8, we do not support Option 4 - Bill and keep*".

137. "*We also do not support Option 3, a blended termination rate for fixed and mobile. Fixed and mobile termination costs are different and translate into higher termination rates to mobile than to fixed. As confirmed by the CRA's benchmarks the EU average for MTRs is about 12 times greater than the EU average for FTRs (QAR 0.004 vs 0.044 per min). We also note that termination on mobile and termination on fixed are in different economic markets. For those reasons, Vodafone Qatar considers that it is more appropriate to keep the pricing for services in these markets distinct*."

138. "*According to the CRA the PT is not passed with 'network costs associated to two termination charges are 452% above those allocated to the on-net call'. This is a very substantial difference which should be investigated and explained by the CRA. At present, it either implies that the network costs allocated to termination are wrong or the network costs allocated to on-net calls are or both. The routing factor table and unit cost per network elements for each call scenario available in Ooredoo's RAS should enable the CRA to identify the cause of the differences as the set-up for interconnection alone is unlikely to explain such gap*."

139. "*We also note that Option 1 would lead to a drop of 97% of FTR in three years. Such a drastic cut is unrealistic and confirms the need for the CRA to further investigate the issues highlighted above regarding the PT and to conduct an analysis network element by network element. Further the end point would be completely out of step with benchmarks*".

140. "*Under Option 1, the FTR would be 6 times lower than the EU average of FTR. While FTR may continue to decline in the coming years, they would need to drop in the EU by 85% in the coming years. Such drop is unlikely given that most countries have now transitioned to pure LRIC*."

141. "*The CRA makes a number of statements to justify why FTRs in Qatar can be expected to be higher than in the EU but lower than in other MENA and African countries. The main argument of the CRA regarding cost structure is based on population density. In our view this is misplaced because: i) Population density is relevant for the access network but this is not included in the FTR. ii) The main cost driver would be customers (or traffic) per exchange. iii) However it is not clear that Qatar would have more customers or traffic per exchange. iv) Labour and land cost are a significant component and Qatar face higher cost than other non-oil abundant MENA countries and African countries. v) The benchmark of the CRA does not show strong correlation between population density and FTR*."

142. "*Overall and pending further clarifications from the CRA to explain the gap between Option 1 and Option 2 which should be much narrower it would appear that the rates under Option 2 are reasonable when compared to benchmarks*."

2.3.1.4 CRA's position in the second Consultation Document

On Ooredoo's comments:

143. On the benchmark, the CRA is fully aware that the high number of different aspects (e.g. geographical, economical, technical or market conditions) that affect the cost of provision in a certain country generally hamper the direct comparability with other countries. In addition to that, there are other regulatory aspects, such as methodological principles defined in the costing tool used as reference (e.g. cost base, cost standard, etc.) or policy-making decisions, that impede a direct correlation

between the population density and the applicable FTR of countries from the benchmark.

At the same time, the CRA outlines that this benchmark has been exclusively used as an additional tool to crosscheck the proposed FTR with the international practice. However, there is no doubt that costing information available to the CRA is the most appropriate tool to define the FTR and ensure compliance with Article 29 of the Telecommunication Law, requiring Wholesale Charges to be cost-oriented.

144. On the impact of the proposed reduction in the FTR, the CRA has evaluated the weight of revenues generated by wholesale services over total revenues of Qatari SPs. The revenues generated by the FTR have very low relevance (ref. section 1). Hence, the CRA is confident that the proposed charges will not introduce any prejudicial distortion in the market.

145. On the current technical interconnection solution for fixed call termination, agreed between Ooredoo and Vodafone, the CRA outlines the evolution of Ooredoo's network towards an integrated network where fixed and mobile calls will follow the same routing and have lower cost per unit. In addition, under the option 1, the CRA has allowed the FTR to be higher than the Retail internal cost for a fixed call, having introduced a leeway of 20% (ref. section 2.1.2 above).

146. On the fact that the FAC methodology alone does not provide the best basis for wholesale charges setting, the CRA notes that the use of the FAC cost standard was a methodological aspect previously consulted on and accepted by Ooredoo (ref. section 2.1.1). Indeed, the use of the audited RAS of Ooredoo should make Ooredoo confident on the evaluation of the wholesale charges. Moreover, even expressing disagreements with the cost trends proposed by the CRA, Ooredoo has neither corrected CRA's calculations nor provided alternative information or useful evidence allowing the CRA to evaluate potential alternative situations.

147. On the inflation, the CRA notes that Ooredoo has failed to provide evidences that support how such increase in the inflation had a relevant effect in either retail or wholesale costs for the operator.

148. On the request to keep the current FTR stable or increase it at the rate of 3% per year, the CRA notes that neither the RAS information supports this approach nor Ooredoo has delivered information or evidences supporting its request.

149. Finally, concerning Ooredoo's comment about a potential scenario below costs, please refer to CRA's position in section 3.7.1 where the option of the review clause is considered.

On Vodafone's comments:

150. On the 'Bill and keep' (option 4), the CRA confirms that this approach shall not be used, as already indicated in section 2.2.5.2.3.

151. On the blended termination rate for fixed and mobile termination services (option 3), the CRA recognizes that this approach could lead to cross-financing between fixed and mobile services. In addition, the low adoption of this approach according to the international practice does not suggest opting for this alternative. On the other hand, this option would anticipate the convergence between fixed and mobile networks providing with a forward-looking wholesale charge.

152. On the differences observed between the retail on-net and the wholesale termination cost per unit in Ooredoo's RAS, these are due to the current technical interconnection solution for fixed call termination agreed between Ooredoo and Vodafone as the optimal one. Under this solution, mobile switches are used as intermedium step to interconnect fixed switches, increasing the network cost per unit of the FTR.

153. On Vodafone concerns on the reduction proposed by the CRA for the FTR over the period 2018-2020, the CRA refers Vodafone to the responses given above to Ooredoo on this same topic (ref. point 144).

154. With regards to Vodafone comments on the benchmark, the CRA would like to note

the following:

154.1 Vodafone states that the population density is relevant for the access network, while for the FTR the main cost driver would be customers (or traffic) per exchange. The CRA agrees with Vodafone that FTR costs would be related with the density of subscribers per exchange, which is in turn directly related with the population density.

154.2 Vodafone also claims that labor and land costs are higher in Qatar than in other countries. The CRA notes that costs effectively incurred by Qatari operators related with these items are already properly reflected in the costs used to set the Wholesale Charges.

Proposed Options

155. Taking into consideration operators' contributions, the CRA now consults on the two following options:

155.1 **Option 1**: **Wholesale Charges, which pass the PT (with Glide Path)**

This approach follows the principle of non-discrimination and is aligned with CRA's scope to create a fair competitive field, permitting the OLOs to compete with Ooredoo. This approach is also forward looking given that Ooredoo is installing a unified network, where fixed and mobile calls will be routed in the same way. Hence, in the medium term the current routing will be obsolete and cost per unit will decrease from the current one (ref. Option 2).

This option is based on the Audited RAS of Ooredoo. Cost trends used by the CRA has not been corrected by the SPs. Indeed, the value proposed is higher than the Retail internal cost for a fixed call, because the CRA allows for a leeway of 20% (ref. section 2.1.2 above).

The CRA also notes that the Option 1 was previously employed for Setting the Wholesale Charges for the period 2015-2017 (ref. CRA Order 2015/31/05F).

155.2 **Option 2: Wholesale Charges, based on actual cost (with Glide Path)**

This option is based on the cost of the current technical solution implemented by Ooredoo.

156. The table below shows the Wholesale Charges proposed by the CRA for the options above, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale charges, which pass the PT (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0119	0.0063	0.0006
Change to previous year			-32%	-47%	-90%
Option 2 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0150	0.0125	0.0100
Change to previous year			-14%	-17%	-20%

Table 4 Fixed Call Termination Service to Geographic Numbers – Wholesale Charges [CRA calculation]

157. The CRA is minded to set the Wholesale Charge for this service consistent with the Option 1 above, as;

157.1 The same approach was used to set the Wholesale Charge for the years 2015, 2016 and 2017;

157.2 The Wholesale Charge would be forward looking from a technical and economic perspective, anticipating the convergence of the Fixed and Mobile Networks, which process is on-going;

158. Regarding the value proposed by the CRA for both of the above options, the CRA outlines that alternative cost trends and inputs are welcomed from SPs provided that they are specific, fully justified and accompanied by strong evidence and supporting

information/calculations. Ooredoo is also specifically requested to review the cost trends, which are included in the file excel sent to Ooredoo on October 1, 2017 (ref. CRA letter CRA/RAC-T/115/2017).

Second CD - Question 1 FTR: Which of the options proposed by the CRA (1 or 2) do you suggest to use and why?

2.3.2 Mobile Call and Video-Call Termination Service

First CD - Question 11: Do stakeholders agree with the CRA's proposed Wholesale Charge for the Mobile Call and Video-Call Termination Service? Which of the Option proposed by the CRA do you suggest and why?

2.3.2.1 CRA's position in the first Consultation Document

159. The CRA consulted on the following options for the regulation of the "Mobile Call and Video-Call Termination Service":

QAR/min		Approved Charge 2017	Charges for consultation 2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Mobile Call and Video-Call Termination Service	QAR/min	0.0762	0.0561	0.0360	0.0159
Change to previous year			-26%	-36%	-56%
Option 2 – Fixed and Mobile Blended Wholesale Charges (n.b. susceptible of changes according to the level of the FTR)					
Mobile Call and Video-Call Termination Service	QAR/min	not applicable	0.0549	0.0353	0.0158
Change to previous year		not applicable	not applicable	not applicable	not applicable
Option 3 – Zero Rating					
Mobile Call and Video-Call Termination Service	QAR/min	not applicable	0.0000	0.0000	0.0000
Change to previous year		not applicable	not applicable	not applicable	not applicable

Table 5 Mobile Call and Video-Call Termination Service – Wholesale Charges for consultation [CRA calculation]

2.3.2.2 Ooredoo's response to the first Consultation Document

160. "*The mobile termination service represents a major part of the total wholesale revenues and a dramatic drop in termination rates suggested by the CRA will cause the total telecommunication market revenue to decrease for a third year in the row. In the absence of the drop in wholesale rates for national termination services (which otherwise represents loss of QAR market revenues in next three years), the total market revenues is expected to show modest but positive increase. The dramatic drop in mobile termination rate is ill timed given the economic circumstances negatively affected by both general economic downturn and economic blockade. Minded of its consequences, Ooredoo cannot agree with the proposed reductions of wholesale charges for the mobile voice and video call termination services. Instead, Ooredoo urges the CRA to delay any revision of mobile termination rates or to adopt a much more gradual decline that would not disrupt the market, as the current CRA proposals will. In this respect, Ooredoo refers the CRA back to its initial response submitted on 6 June 2017.*"

161. Additionally, in the Executive Summary of the letter submitted, Ooredoo also states: "*One of the justifications typically used by regulatory authorities to justify lower wholesale rates is a drive for lower retail rates, assuming that the industry can and would pass on the lower wholesale rates. However, as the CRA itself has acknowledged, retail prices in Qatar are already low. The International Retail Price benchmark report published by the CRA in 2017 indicates that retail prices in Qatar are one of the lowest in the GCC region.*"

2.3.2.3 Vodafone's response to the first Consultation Document

162. "*Vodafone Qatar does not support Options 2 and 3 for the reasons we set out in our responses to Questions 8 and 10 above.*"

163. “*Under Option 1, the CRA is proposing to lower MTRs by 80% in three years. Vodafone Qatar disagrees with this proposal. While Vodafone Qatar acknowledges that there may be some room for MTRs to decline when compared to benchmarks, reductions, if any, should be gradual to an acceptable level and not detrimental to the overall sector growth*.”

164. “*Vodafone Qatar’s considers that the CRA’s proposed drastic cut is neither reasonable nor justified. It the wrong signal to investors and the mobile sector characterised by flat underlying revenue growth, a difficult geopolitical and macroeconomic environment which is negatively impacting growth opportunities and revenues such as roaming and as a result of which the industry has to incur additional costs and face significant additional operational complexities well known to the CRA. At the same time, a new wave of investment in 5G is expected by mobile operators. Vodafone Qatar, despite being a lean and efficient operation, has not be able to make a positive profits since its market entry and its EBITDA margin has varied between ✂ and ✂, hardly an evidence of super-normal profit. We continue to post net losses. Lowering MTRs will further depressed overall industry revenues which is a key indicator affecting share prices and credit ratings. It could lead to increase in financing cost which in turn will need to be passed on to consumers*.”

165. “*Further in terms of market outcomes, the own benchmarking of the CRA shows that mobile markets in Qatar are delivering strong outcomes for consumers with prices comparing favourably with its peers in the region and well with OECD benchmarks. The Report also shows that Vodafone Qatar is consistently cheaper than Ooredoo. Competition in mobile in Qatar has produced good results and continues to spur innovation and drive operators to introduce new technologies rapidly and on a wide scale: Vodafone Qatar has a wide coverage of 4G and 4G +. It is not clear what the CRA intends to achieve through those cut*.”

166. “*Further, the proposals will be completely out of step with benchmarks. If implemented, the CRA proposals will lead to MTR half of the European average and about a quarter of the MENA average*.”

167. “*Further it should be noted that no significant downward trend in MTRs is expected in Europe where pure LRIC has been in place for a number of years. This is confirmed by key European countries where glide paths are in place and/or proposed for the next three years. For example in the UK, where MTRs are among the lowest in Europe, there are expected to remain flat in the next three years. France has proposed annual decreases of 3%*.”

168. “*If implemented, the CRA’s proposal will led to MTRs in Qatar being 36% lower than the UK where the pure LRIC cost standard apply, i.e. where the scope of relevant cost is significantly narrower, and 50% lower than in Bahrain, where according to the CRA’s logic, MTRs should be lower than in Qatar*.”

169. [Additionally, Vodafone has presented longer explanations and modifications to the exercise previously submitted to the CRA on 25 May 2017, where the MTR was estimated based on Vodafone’s information and assumptions.]

170. “*For the reasons above, we do not support the CRA’s proposal to drop MTR by 80% in a three year time horizon as this would result in MTRs falling below our cost and further depressed industry revenues during a challenging macro-economic and political context. We urge the CRA to rethink its proposal in light of the current environment and industry trends and to explain the desired market outcomes it seeks to achieve with the proposed cut. We would also welcome clarification from the CRA as to how the proposal supports the furthering of the duties of the CRA as they relate in particular to the promotion of the sector and investment. In our view the ARF gives the CRA ample leeway to exercise its judgment in setting MTRs to an acceptable level balancing the different objectives of the CRA, especially when considering the effect of various allocation bases on MTRs*.”

2.3.2.4 CRA's position in the second Consultation Document

On Ooredoo's comments:

171. On Ooredoo's comment that the reduction proposed by CRA in the MTR will cause the market revenues to decrease for a third year in the row, the CRA notes that Ooredoo has estimated a reduction of ✂[14] million QAR over the period 2018-2020. This equals to a reduction of -1% of the total revenues estimated by Ooredoo for the same period ✂ million QAR. The CRA is of the view that this reduction is not likely to introduce any damage on the operator's performance.

Additionally, the reduction will not impact the margin of Ooredoo (and Vodafone). In fact, for a two-way interconnection service, wholesale costs incurred by the industry are netted. Given that the traffic for mobile calls is nearly balanced between Ooredoo (✂ ✂%) and Vodafone (✂ ✂%), the reduction in revenues would equally be reflected in the incurred costs, without substantial impact on the profit.

172. The CRA is also aware of the geopolitical and economic conditions that the State of Qatar is currently facing. However, there is no evidence that the reduction proposed in the MTR would negatively affect the development of the telecom sector as a whole. Indeed, low MTR has demonstrated to have a positive impact in investments conducted in the industry.

As example, one of the conclusions of the study '*Assessment of the 2009 Termination Rates Recommendation and costing methodologies for estimating termination rates'*[15] published by the European Commission was that an increase in mobile investments (measured by the increase of 55% in CAPEX in the 28 countries) had taken place in the European Union between 2009 and 2014. In that same period, the simple average of MTRs at European level was reduced by -76% (from 7.00 to 1.69 Eurocent/min)[16]. It can be highlighted that market conditions in Europe along that period where not the most favorable either (i.e. the countries of the European Union were facing a period of economic regression).

173. On the comments about the favorable position of Qatar when comparing prices offered by Qatari SPs to retail customers with respect to those observed in other jurisdictions, this situation could have been enabled in parallel with reductions in the MTR imposed in the past by the CRA. As such, CRA considers that further reductions of the MTR are fundamental to guarantee these consumers' benefits in the future. In the same line, the CRA notes that the non-reduction of the MTR would entail a scenario with artificially high wholesale costs. This scenario could potentially lead to controversial situations such as surplus gained from the wholesale charges used to subsidise retail services, which is prohibited according to the Qatari Telecommunications Law.

174. The CRA noted that Ooredoo has submitted an additional exercise in Excel format where it calculates the potential impact on the revenues of the Wholesale Charges proposed by the CRA. Ooredoo has used traffic forecasts for the mobile termination voice service that differ from those previously submitted (ref. response of Ooredoo to the Data Request sent by CRA to the operators on March 28, 2017). The following table shows the existing differences:

[14] It is also worth outlining that the impact calculated by Ooredoo has assumed the zero-rating scenario (MTR equal to zero), which is the most aggressive among the proposed options, and that as already indicated in section 2.2.5.2.3 it is not the option that CRA expects to use.

[15] See website: https://ec.europa.eu/digital-single-market/en/news/termination-rates-recommendation-helps-achieve-lower-and-more-consistent-rates-new-study-shows

[16] See following report published by BEREC: http://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/6086-termination-rates-at-european-level-janu_0.pdf

	2017	2018	2019
Original Submission (min)	✂	✂	✂
New Submission (min)	✂	✂	✂
Difference (%)	35%	58%	81%

Figure 2.6 Differences between traffic forecast for the mobile termination service [Source: Ooredoo]

Ooredoo is welcome to revise its assumptions, as long as a compelling rationale is being provided.

On Vodafone's comments

175. On the application of options 2 (fixed and mobile blended termination rate) and 3 (zero rating – bill and keep), the CRA confirms that these will not be applied in Setting the Wholesale Charges for the period 2018 – 2020 (ref. to section 2.3.1.4 for more details).

176. On the comment on the impact of proposed reduction of the MTR and on the favorable position of Qatar in terms of prices when compared with other jurisdictions, the CRA refers Vodafone to the responses given above to Ooredoo on these same topics (ref. points 171 and 173).

177. Vodafone is also concerned with the decrease proposed in the MTR (i.e. -79% in three-years).

CRA notes that the magnitude of this proposal is aligned with glidepaths previously applied by a number of national regulators worldwide:

177.1 In the period between April 2012 and December 2014 (less than 3 years of duration), the CNMC imposed to Spanish operators, reductions of the MTR in the range between -73% and -78%[17];

177.2 AGCOM imposed to Italian operators a reduction in between -61% and -72% in only one year (in the period July 2012 and July 2013);

177.3 In Germany[18], the regulatory agency imposed national operators a suddenly reduction of -58% in the MTR at the end of the year 2010.

177.4 In Luxembourg[19] the MTR was reduced by -89% in the year 2014.

178. On Vodafone's comment that no significant downward trend in the MTR is expected in other jurisdictions for the next three years, the CRA outlines the following:

178.1 In Jordan[20], the national authority (TRC) has imposed a reduction from the current MTR of 0.0641 QAR/min to a value of 0.0104 QAR/min in 2021, by means of a glidepath with equal steps. This entails a reduction of -84% in a period of 4 years.

178.2 In India[21], the Telecom Regulatory Authority of India has recently notified a reduction from the previous applicable charge of 0.0078 QAR/min to the new charge of 0.0033 QAR/min (reduction of -57%), with effect from October 2017 and applicable until December 2019. Additionally, this Authority has also announced that from January 2020, the MTR will be set to zero, following a bill-and-keep charging method.

178.3 In United Kingdom and France, the MTR already presents considerably low

17 See weblink: https://blog.cnmc.es/2011/12/02/nuevo-recorte-a-las-tarifas-de-terminacion-movil/

18 See following weblink from the OECD: http://dx.doi.org/10.1787/888933225193

19 See following weblink from the OECD: http://dx.doi.org/10.1787/888933225193

20 See weblink: http://www.trc.gov.jo/EchoBusV3.0/SystemAssets/PDF/AR/%D9%85%D8%B1%D8%A7%D8%AC%D8%B9%D8%A9%20%D8%B3%D9%88%D9%82%20%D8%A7%D9%84%D8%A7%D8%AA%D8%B5%D8%A7%D9%84%D8%A7%D8%AA/%D8%A7%D9%84%D9%82%D8%B1%D8%A7%D8%B1%20%D8%A7%D9%84%D8%AA%D9%86%D8%B8%D9%8A%D9%85%D9%8A8-12-2017/TRC%20Explanatory%20memorandum%20on%20pricing%20for%20mobile%20interconnection.pdf

21 See weblink: http://www.trai.gov.in/sites/default/files/IUC_Regulations_2017_Final.pdf

levels in the year 2017. For instance, currently, the MTR in United Kingdom (0.0247 QAR/min) and in France (0.0315 QAR/min) are respectively 47% and 33% lower than the average of the MTR in European countries (0.0469 QAR/min). For these countries, the low level of the MTR justifies the reduced trends applied in the subsequent period 2018-2020.

178.4 In Spain, in 2017, the MTR is set at 0.0465 QAR/min., value consistent with the average of the MTR in European countries (0.0469 QAR/min). Nevertheless, the National Regulatory Authority has recently decided[22] to reach a MTR of 0.0273 QAR/min in 2020. This entails a reduction of -41% in less than three years.

178.5 In Norway, the National Regulatory Authority has recently decided the reduction of the MTR from the currently applicable value of 0.0281 QAR/min to 0.0138 QAR/min, to be reached in January 2020 by means of glidepath.

Based on the above, the CRA confirms that the reduction proposed for Qatar in the period 2018-2020 is not dissimilar from practices undertaken by other national authorities worldwide for the coming years.

179. In relation to the exercise submitted by Vodafone, the CRA has checked this model against another model submitted by Vodafone in July 2017. According to the model delivered in July 2017, the cost of the MTR falls within the range proposed by the CRA.

180. On the request to explain how the proposed charges allow CRA to fulfil its various obligations, we kindly refer Vodafone to section 2.2.2.4.

Proposed Decision

181. In conclusion, the CRA expects to regulate the service “Mobile Call and Video-Call Termination Service” based on the option 1 of those proposed in the First Consultation Document.

182. The CRA also notes that the current wholesale charges were set well above costs. By way of example, the comparison between the Qatari MTR applicable in 2015 (0.0900 QAR/min) and the cost produced by Ooredoo’s RAS for that same year (✂ QAR/min) leads to a difference in excess of 130% (or more than two times).

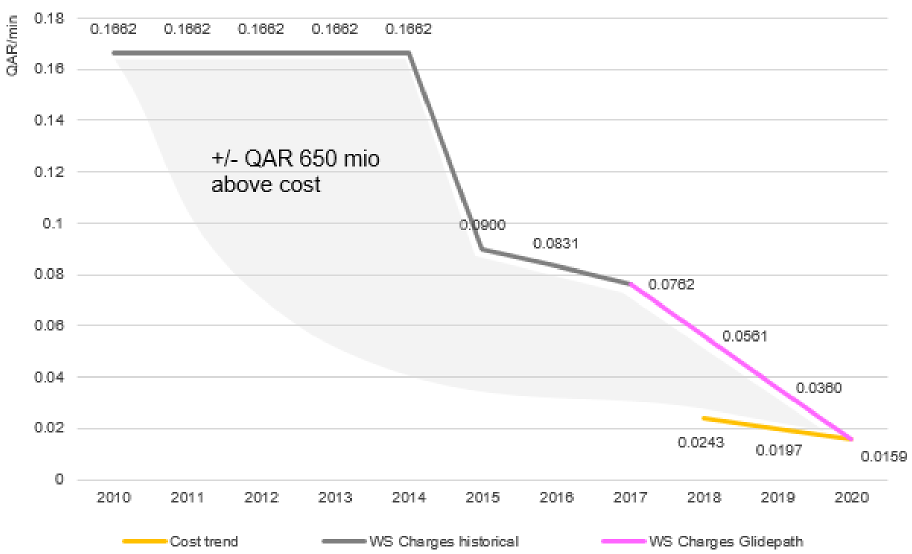


Figure 2.7 MTR vs cost [Ooredoo’s RAS and CRA calculation]

22 See weblink: https://www.cnmc.es/2017-11-21-la-cnmc-propone-rebajar-los-precios-mayoristas-del-movil-mas-del-40-365656

183. As shown in Figure 2.7 above, the regulated rates far exceed cost. Even with an existence of glidepath the excess is around QAR 650 million QAR for Ooredoo and Vodafone on the MTR alone.

184. This option is based on a cost-oriented scenario, in line with the Article 29 of the Telecommunications Law.

185. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
QAR/min		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Mobile Call and Video-Call Termination Service	QAR/min	0.0762	0.0561	0.0360	0.0158
Change to previous year			-26%	-36%	-56%

Table 6 Mobile Call and Video-Call Termination Service – Wholesale Charges for consultation [CRA calculation]

186. The CRA notes that very high margins for traditional interconnection services would provide limited incentives for migrating to newer and more cost-efficient technologies such as, VoLTE (Voice over LTE). This will be to the detriment of the development of the sector in Qatar and ultimately to the detriment of customers.

187. It is also important to highlight that the ongoing migration to a modern network combining fixed and mobile networks is likely to reduce cost. Hence, conservative cost trends applied by the CRA for forecasted costs are unlikely to leave wholesale charges below costs.

Second CD - Question 2	MTR: Do stakeholders agree with the CRA's proposed Wholesale Charge for for Mobile Call and Video-Call Termination Service?

2.3.3 Call Termination Service to Toll-Free Numbers (reverse charge) for fixed and mobile

First CD - Question 12: Do stakeholders agree with the CRA's proposed approach for setting the "Call Termination Service to Toll-Free Numbers (reverse charge) for fixed and mobile"?

2.3.3.1 CRA's position in the first Consultation Document

188. CRA informed that it expected to regulate the "Call Termination Service to Toll-Free Numbers (reverse charge) for fixed and mobile" service at the same level as the "Mobile Call and Video-Call Termination Service" (see section 2.3.2.4).

2.3.3.2 Ooredoo's response to the first Consultation Document

189. "*Ooredoo agrees, provided the CRA accepts Ooredoo's position on FTR and MTR.*"

2.3.3.3 Vodafone's response to the first Consultation Document

190. "*Vodafone Qatar agrees.*"

2.3.3.4 CRA's position in the second Consultation Document

On Ooredoo's comments

191. Please refer to CRA's positions about FTR and MTR, given in sections 2.3.1.4 and 2.3.2.4.

Proposed Decision

192. The CRA appreciates that Ooredoo's and Vodafone's agree with the approach proposed by the CRA.

193. In conclusion, the CRA will set the wholesale charges for this service at the same level as the "Mobile Call and Video-Call Termination Service" (see section 2.3.2.4).

2.3.4 Call Termination Services to Numbers for Inbound International calls

First CD - Question 13: The CRA is interested in hearing a justification for the SPs on the (non) regulation of Call Termination Services to Numbers for Inbound International calls. This argumentation should include clear figures in terms of volumes, revenues and cost.

2.3.4.1 CRA's position in the first Consultation Document

194. CRA consulted Qatari SPs about their views with respect to the regulation of the "Termination Services to Numbers for Inbound International calls".

2.3.4.2 Ooredoo's response to the first Consultation Document

195. "*The proposed reduction of the termination rates for incoming international calls would have major negative impact on both Ooredoo and Vodafone Qatar revenues and profit margins. It would effectively result in the transfer of wealth from Qatar to other countries thus benefiting blockade GCC countries as well as other countries*."

196. With regards to the statement included by the CRA in the Consultation Paper, Ooredoo notes the following: "*First, the commercial rates are not set reciprocally. Second, one cannot compete with something that is priced at zero rate (OTT VoIP is)*." Additionally, the operator also notes that "*In the face of OTT substitution, price declines for international calls do not anymore lead to corresponding increase in the volume of calls per subscribers and as such, result in revenue and margin decline for service providers*."

197. "*Any reduction of the international call termination rate that Ooredoo is able to negotiate with the service providers outside of Qatar hinges on the commitment of increased volumes of traffic sent by Ooredoo to that service provider. In other words, no service provider will voluntarily reduce its own international call termination revenues. This traffic volume increase is mainly achieved by Ooredoo (or any other service provider) by winning subscribers from other network(s) via retail price reduction*."

198. "*There are two possible market reactions to the CRA's proposed reduction of international call termination rate: a) Service Providers outside of Qatar will simply pocket the extra margins and Service Providers in Qatar will lose 'only' the wholesale revenues (about ✄ QAR mn. in next 3 years), b) service providers outside of Qatar will in response to reduced termination rate in Qatar drop their retail price for calls to Qatar. Given such dramatic reduction in termination rates for international calls proposed by the CRA (and supported by larger economies of scale and more relaxed retail regulations) this will allow service providers outside of Qatar to set retail rates for international calls to Qatar below those set by service providers in Qatar for reciprocal service. This will affect the terms of trade in international calls. The volume of international calls coming to Qatar will increase and volume of international calls going from Qatar will decline*."

199. "*Furthermore, as the volume of international call traffic from Qatar to other countries will decrease, any discounted termination rates negotiated in the past with such counter-parts will not apply, as Service Providers in Qatar will fail to meet the volume thresholds committed to benefit from those discounts. Consequently, Service Providers in Qatar will have to increase their retail prices for international calls for its*

customers to cover the increased cost of termination at the destination countries".

200. "*A vicious downward spiral of decreasing value will be created by the CRA contemplated action. Ooredoo estimates that accounting for the effects of a) and b) together, the total revenues on telecom market in Qatar will be reduced by QAR ✂ bn. in next three years. Because there will not be reciprocal reduction in termination rates for international calls from Qatar abroad, the reduction in termination rates for incoming international calls will be translated also to margin impact for Service Providers in Qatar*."

201. "*Currently there is significant trade imbalance in international voice call traffic, with Qatar being a net exporter of traffic. Ooredoo in the first 9 months of the year 2017 sent out ✂ minutes and received ✂*."

202. "*The CRA proposal to reduce international call termination rate by ✂ will likely reverse the flow of international voice call traffic. The CRA's proposed steep termination rate reduction for incoming international calls is not tied to specific incoming voice call volume commitments. This termination rate reduction provide all Service Providers abroad with same retail price flexibility without any burden to meet specific volume commitments (unlike service providers in Qatar) and hence they do not have to be afraid of failing to meet volume commitments once they reduce their retail price in case that their competitors will follow the same move. Reduced costs and lack of restrictions in terms of specific volume commitments thus provide right incentive for Ooredoo's counterparts abroad to reduce their retail price to further enhance their gains from the international trade for voice calls*."

203. Additionally, in the Executive Summary of the letter submitted by Ooredoo, the operator also states: "*If the impact of the reduction in termination rate for international calls on retail revenues is factored in, the total market revenue erosion can be up to QAR ✂ over the period*."

204. "*Rating agencies have already downgraded the credit rating of both Qatar and Ooredoo in the recent past and they maintain a negative outlook. Given its substantial negative impact on Service Providers revenue and profitability prospects, the CRA's regulatory action will contribute to further downgrade(s) in credit rating of the Service Providers. This will have a knock on effect by reducing shareholder value, as well as increasing the cost of investment financing for service providers. The higher cost of financing will likely negatively affect customers in the short-term through higher prices and in long-term through lower network investments that will result following the worsening financials of service providers and a lower appetite for capital expenditure*."

205. Additionally, in the General Observations of the letter submitted by Ooredoo, the operator also states: "*The CRA proposed reduction in wholesale charges regulation will have an adverse impact on the financial position of both Ooredoo and Vodafone Qatar. It will have an adverse impact on their respective shareholders and bond holders, and will be seen by the world and in particular regional countries, as a sign of the general impact the economic blockade is having against the country, which would not be a true reflection of the state of affairs, but an artificial creation by the CRA's own making. Such an outcome goes against government interest*".

206. "*The CRA regulation will have a detrimental impact on the service provider's performance and will reduce the contribution the telecommunications sector makes to the country Gross Domestic Product (GDP). The CRA's regulation may also result in a further reduction in Qatar's sovereign credit rating and credit rating for service providers, increasing the cost of borrowing for the country and adversely affect the market value of both telecom Service Providers in Qatar. A negative change to the credit rating would increase the cost of borrowing for both telecom Service Providers in Qatar and ultimately may lead to increases in prices for customers*."

207. *"It is important to note that Ooredoo Qatar generates 25% and 29% of Ooredoo Group revenue and EBITDA respectively. It also contributes ✂ of total net profit attributable to shareholders. The impact of the CRA's proposed regulation would thus adversely*

affect overall Ooredoo Group financial performance. The current Stand Alone Credit Profile (SACP) of Ooredoo with S&P is BBB-, one step above a junk rating threshold, (Ooredoo's rating based on state support is uplifted by three notches). Ooredoo is also set on for negative credit outlook by rating agencies already. Institutional Ooredoo bondholders who by definition prefer a lower risk profile for their portfolio investments will see such ratings as very concerning."

Rating Agency Ratings: Company Default Spreads

Fitch's Rating	S&P's Rating	Moody's Rating	Default spread in basis points*	Increase in spread
AAA	AAA	Aaa	54	
AA+	AA+	Aa1	62	8
AA	AA	Aa2	67	5
AA-	AA-	Aa3	72	5
A+	A+	A1	76	5
A	A	A2	78	2
A-	A-	A3	86	7
BBB+	BBB+	Baa1	107	21
BBB	BBB	Baa2	118	12
BBB-	BBB-	Baa3	144	26
BB+	BB+	Ba1	264	120
BB	BB	Ba2	266	2
BB-	BB-	Ba3	268	2
B+	B+	B1	301	33
B	B	B2	365	64
B-	B-	B3	452	88
CCC+	CCC+	Caa1	789.95	
CCC	CCC	Caa2	948.71	
CCC-	CCC-	Caa3	1,053.27	

Figure 2.8 Rating spread - as of Sept 2017 [Source: Ooredoo]

208. "*The revenue and margin drop caused by the proposed CRA's regulation is likely to cause Ooredoo's SACP rating to descent further down to BB+ or lower, effectively crossing the junk rating threshold. There is a gradual progression of spreads as rating drop, whilst there is a large jump as one moves from BBB- to BB+; the reason being that many institutional investors (e.g. pension funds by law) cannot own junk rated debt as part of their portfolio. The drop in the rating will cause substantial sell-off of Ooredoo bonds, raising the cost of Ooredoo's bonds (expected return) up by points. Consequently, increased interest service cost will put pressure on future dividends, leading to greater share discounting and further increase the cost of capital for Ooredoo*."

209. "*To compensate for the reduction in the margin and increased cost of financing, Ooredoo will be forced into a major cost saving drive, that will likely result in the reduction and / or delay in investments and hence reduction in long-term customer benefits. In such circumstances, it is also likely that service providers will seek to pass on some of these adverse effects onto consumers through higher prices*."

2.3.4.3 Vodafone's response to the first Consultation Document

210. "*Vodafone Qatar does not support the regulation of termination for internationally originated calls at the domestic MTRs. We do not understand why the CRA is raising this question as it would be against the national interest to regulate MTRs for internationally originated calls at domestic MTRs. It would be particularly ill-advised to proceed with regulating international inbound termination rates as this would be against the national interest. It would hurt domestic operators without providing benefits to consumers in Qatar as the economic surplus generated by domestic operators on international inbound will benefit foreign operators and lead to a lower*

influx of foreign currency. As such it would be against the duties of the CRA set out in Article 2.1 of the Telecommunications Law to 'promote the telecommunications sector in order to consolidate national, social and economic development' ".

211. "*For Qatari consumers to benefit from the regulation of inbound international calls at the local MTR level would require two conditions to be met. First, the far end operator will need to pass on the full reduction in termination rate at the retail level leading to lower price to call Qatar and an increase of calls, the benefit to consumers in Qatar being the additional calls received. This is highly unlikely as pricing for international calls tend to be by zone (e.g. similar price across GCC countries) and the extent of pass through will depend of competition in the country of origin of the call. Further the limited volume of calls to Qatar is unlikely to lead to differentiated pricing. Overall, any potential benefit would be trivial and need to be balanced against cost as foreign operators will benefit from lower termination rates by retaining the savings while domestic operators will suffer from lower income from international inbound calls*."

212. "*Second, a lower rate for international in-bound calls to Qatar will need to translate into a corresponding decrease for the termination rate for calls destined outside of Qatar. The benefit to consumers will be lower international calls. However, regulation will constrain our negotiating hand and hence lower MTR for international in-bound calls is unlikely to result in a corresponding decrease in the rate applied by the far end operator*."

213. "*Rates are typically not reciprocal (except within the GCC)*".

214. "*Given the population composition of the country, Qatar is a net sender of international traffic and for key destinations by a very significant amount (e.g. India, Pakistan, Egypt, Bangladesh, Philippines where the termination for the originating country is lower than the termination rate to Qatar). Hence, for our high volume destinations we regularly negotiate with far end operators to seek competitive rates in order to respond to competition on international calls and with OTT but the question of reciprocity does not come up in negotiations*."

215. "*The statement made by the CRA according to which the current situation with international termination lead to higher cost of international calls for retail customers in Qatar is therefore incorrect*."

216. "*We also note that in a large number of countries in Europe (such as Italy, Greece, the Czech Republic, Spain, Malta, Portugal) there is no regulation of rate for international inbound traffic originated outside the European Economic Area in order to further the national interest and protect domestic operators*."

217. "*To conclude, Vodafone Qatar considers that the regulation of international inbound rate at the local MTR level would be detrimental to the country and the operators' interests with no tangible benefits to consumers. Should the CRA be minded to consider regulating international inbound calls, we urge the CRA to carry out first a detailed analysis of the cost and benefits of regulating international inbound calls; explain how it will benefit the country and how it will satisfy its duties*."

2.3.4.4 CRA's position in the second Consultation Document

CRA Comments

218. The CRA thanks Ooredoo and Vodafone for their extensive comments.

219. The CRA has analysed the approaches commonly chosen by other regulators across the world for the regulation of international termination voice services:

  219.1 European Union: The general practice is to set the International Termination Rate (ITR) at the same levels as the National Rates (FTR or MTR) for intra-EU traffic, while commercial agreements are used to negotiate charges for traffic coming from services providers located in jurisdictions outside the EU.

  219.2 United Kingdom specifically: The National Regulatory Authority does not differentiate the origin of the international termination calls, what would indicate that all calls, including also those originated outside the EU, would be regulated based on the National Rates[23].

219.3 Bahrain[24], Ghana[25], India[26]: International termination rates are regulated and set differently to domestic charges.

219.4 United Arab Emirates[27], New Zealand[28]: These countries have regulated the international termination rates at the **same levels** as national termination rates.

219.5 Australia, Indonesia, Singapore and Lebanon: For these countries, no public information has been found regarding the regulation of international termination rates. Presumably, these rates would be based on commercial agreements.

219.6 Saudi Arabia: According the market review[29] in 2010, the market of wholesale international termination calls was not subject to ex-ante regulation. Therefore, commercial agreements would be applicable in this case.

219.7 We also note that no countries with a Zero Rating scenario have been identified for the international termination.

220. Based on the above recollection, the CRA is of the view that 4 Options are applied in other jurisdictions to regulate the international termination:

220.1 **Option 1**. International termination set at the **same level** as national termination. Under this option, national regulators impose the same wholesale charges for all termination voice calls, irrespective of the origin.

220.2 **Option 2**. International termination calculated as the **national termination plus a mark-up**, due to differences in costs. In some cases, regulators may opt for adding extra-rates on top of the national terminations, whose main objective is to reflect existing differences in terms of provision between the national and the international service (e.g. use of international gateways or specific links that may increase the cost).

220.3 **Option 3**. International termination based on **specific policy strategies**. In some jurisdictions, political decisions have led to the setting of rates above the national terminations, generally addressed to revenue generation. These rates would have not been set based on cost-oriented scenarios.

220.4 **Option 4**. **Non-regulation**. Service providers are free to negotiate applicable charges, based on commercial agreements reached with service providers from other jurisdictions.

221. The following outcomes are expected from the options listed above:

221.1 Options 1 and 2 often lead to low rates for the international terminations, given the fact that they are generally set based on cost-oriented scenarios.

221.2 Option 3 presents higher rates than the international termination cost.

221.3 Option 4 tends also to establish rates higher than international termination cost.

222. Main effects of high rates associated to the international termination services are:

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[23] See page 26, 3.52 of document https://www.ofcom.org.uk/__data/assets/pdf_file/0011/103340/mobile-call-termination-consultation.pdf

[24] See link (page 7): http://www.tra.org.bh/media/document/MCD%2009%2015%20067%20RO%20Orders%20on%20Batelco%20Viva%20and%20Zain%20setting%20the%20regulated%20call%20termination%20rates%20PV.pdf

[25] See link: https://nca.org.gh/assets/Uploads/Ghana-Electronic-Communications-Amendment-Act-Act-787.pdf

[26] See link (page 7): http://www.trai.gov.in/sites/default/files/IUC_Regulations_2017_Final.pdf

[27] See link (page 23): https://www.google.es/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0ahUKEwj9n6y4qcPXAhWMvBQKHdWkDDEQFgg3MAI&url=https%3A%2F%2Fwww.tra.gov.ae%2Fassets%2FiuZK4C0I.pdf.aspx&usg=AOvVaw0VTXE3vHNJq-cTaEH3K4Nd

[28] See link (Decision 724, page 4): http://www.comcom.govt.nz/regulated-industries/telecommunications/regulated-services/standard-terms-determinations/mobile-termination-access-service/

[29] See link (page 24): http://www.citc.gov.sa/en/Decisionsoffers/Decisions/Documents/Attch274-284_MDDDReport_English_Final_August_31_2010.pdf

222.1 At least in the short-term, high rates allow service providers to increase revenues. These additional revenues can be invested in the domestic network, increasing for instance coverage levels and quality of services or favoring the deployment of new technologies.

222.2 High rates may lead to an increase in retail prices that, in turn, may decrease traffic from international destinations. This would be against consumers' benefits since communications from abroad would be reduced. It is important to highlight that in the long-term, such decrease in traffic could lead to a counterproductive scenario with a reduction in revenues.

222.3 Migration from traditional voice services to communications services provided through internet (such as OTT services) are likely to occur as a result of high retail prices.

222.4 If imposed by regulators, high rates may limit the ability of service providers to negotiate rates for outgoing traffic (termination in other countries), what could lead to high retail tariffs for international calls.

222.5 Incentivize unwanted practices, such as the SIM Boxes, refiling, tromboning, etc.

223. At the present time no regulation is applicable in Qatar for international termination services. Hence, the CRA should be sure that a different approach would be beneficial to Qatar.

224. With respect to traffic statistics, as indicated by both Ooredoo and Vodafone, in Qatar, incoming international traffic is tremendously lower (✂ according to information submitted by Ooredoo) than outgoing international traffic. In other words, Qatari customers are sending a higher number of calls to international destinations than those received from abroad.

225. The above situation has been further accentuated in the last years, with a continuous increase of outgoing international traffic and a reduction of incoming international traffic, as illustrated in the following figures, based on information provided by Ooredoo:

✂

Figure 2.9 Evolution of internatinonal traffic and termination rates [Source: Ooredoo]

From the above chart, the following insights may be extracted:

225.1 The balanced situation observed in 2006 (✂ and ✂ million of minutes for outgoing and incoming traffic, respectively) has evolved towards to the current situation, where the outgoing traffic is significantly higher (around 10 times).

225.2 Such evolution has been accompanied by a reduction in terminations rates paid for outgoing international traffic, while in the case of incoming international traffic, a flatter evolution of rates paid to Ooredoo for terminating calls in its network may be observed. We note that foreign operators pay around x times the rate as they receive.

225.3 Qatari service providers have indicated in their arguments that the evolution observed in termination rates for outgoing international calls is a consequence of the evolution in traffic. More specifically, their efforts for reducing retail prices for international calls offered to Qatari customers over that period would have led to an increase in outgoing international traffic. At the same time, such increase has allowed them to negotiate competitive rates for termination rates paid to services providers located in other jurisdictions, benefiting in such way from low termination rates paid for outgoing international traffic.

225.4 In contrast, the reduction of volumes observed in incoming international traffic has induced to a flatter evolution of termination rates paid to Qatari service providers for international calls terminated in their networks.

226. In the same context, the following chart shows the evolution observed in Ooredoo's average unit revenue together with total revenues associated to international outgoing calls over the period 2006-2016:

✂

Figure 2.10 Evolution of unit and total revenues of outgoing internatinonal traffic [Source: Ooredoo]

The following considerations may be extracted:

226.1 Along the period 2006-2016, Ooredoo has reduced retail prices offered to Qatari customers for outgoing international calls, as it is reflected in the average unit revenue, roughly in line with the decrease of IOT, retaining its profitability.

226.2 When assessing total revenues, the highest amounts correspond to the period 2010-2012, when traffic volumes had already reached considerable high levels (for instance, in the year 2011, traffic volumes already represented a ✂ of volumes in the year 2016).

227. The CRA notes that the above comments have been developed based on the information provided by Ooredoo. However, Vodafone has not provided any information regarding its incoming and outgoing international traffic and prices trends which could help this Authority to validate its conclusions.

228. On Ooredoo calculation exercise on the impact that the regulation of the international service might have in the credit rating, CRA outlines the following:

228.1 The high number of variables at play and the uncertainties associated make difficult to accurately estimate the impact that such decision could have, first, on the traffic and revenues of international calls, and second, on the credit rating.

228.2 After having reviewed the calculation exercise, the CRA considers that this exercise presents a number of simplistic assumptions, such as:

a) No traffic forecasts have been applied to international call services over the period 2018-2020, assuming the same levels of traffic as in 2017 for all these years. Thus, the decline in traffic that OTT services will likely provoke has not been considered. Indeed, this overestimates the impact on revenues lost.

b) Ooredoo has assumed that the international termination would be set at the same level as the national termination. This is the 'worst case scenario'. However, in the first Consultation Document, such assumption was not stated by CRA. In fact, no specific value was indicated.

c) The operator has also assumed that, after the introduction of the regulation, a 40% of international calls currently originated in Qatar will be originated from other countries (and terminated in Qatar). This percentage is drastically applied to all years in the period 2018-2020, without any kind of evolution. This aggressive assumption is not supported by evidences. The 40% percentage seems arbitrary.

In light of the above, CRA considers the Ooredoo's calculated impact is very overestimated and not fully supported by evidences.

229. From paragraphs above, it can be concluded that Qatari operators would be well positioned in terms of revenues generated thanks to the relative high termination rates received for international calls terminated in their networks when compared to those paid for outgoing international calls. At the same time, this situation would have been

reached due to Qatari operators' efforts in offering low retail prices to their customers, what would explain the increase in outgoing international traffic over the last years.

230. The CRA also recognizes the relevance that OTT services are acquiring in Qatar in the last years as alternative product for international voice calls. This alternative option available to Qatari customers reduces the risk that Qatari operators use their market power to unreasonably increase retail tariffs, against customers' interests.

Proposed Decision

231. The CRA is of the view that 4 Options are available to regulate this service:

231.1 **Option 1**. International termination set at the **same level** as national termination. Under this option, national regulators impose the same wholesale charges for all termination voice calls, irrespective of the origin.

231.2 **Option 2**. International termination calculated as the **national termination plus a mark-up**, due to differences in costs. In some cases, regulators may opt for adding extra-rates on top of the national terminations, whose main objective is to reflect existing differences in terms of provision between the national and the international service (e.g. use of international gateways or specific links that may increase the cost).

231.3 **Option 3**. International termination based on **specific policy strategies**. In some jurisdictions, political decisions have led to the setting of rates above the national terminations, generally addressed to revenue generation. These rates would have not been set based on cost-oriented scenarios.

231.4 **Option 4**. **Non-regulation**. Service providers are free to negotiate applicable charges, based on commercial agreements reached with service providers from other jurisdictions.

232. The CRA sees merits in any of the above Options.

Whilst the CRA is in principle not opposed to stay with the current option, the CRA is also first of all cognizant of the various unwanted effects high and imbalanced IOTs bring (see e.g. point 222 above).

Whilst the CRA recognizes the benefit of the strong position of the Qatari SPs vis a vis their international counter parts, the CRA must also strike a balance between the interests of the industry and the interests of the consumers. OTTs are integral component of the information society, widely adopted by the consumers and exert a positive influence on the competiveness of the wider ICT eco system.

233. If the CRA would continue not to regulate the Charges of Inbound International Termination this would be under the obligation that OTT services remain unimpeded by Qatari service operators. The CRA will continue to monitor the market and may issue a regulatory instrument to detail this subject matter in future.

Second CD - Question 3	Inbound International Termination: Please provided your reasoned responses. Which of the above proposed Options is the most beneficial for the State of Qatar for the coming period?

2.3.5 Termination Emergency Services

First CD - Question 14: Do stakeholders agree to set the charge for the "Termination Emergency Services" at the same level of the FTR?

2.3.5.1 CRA's position in the first Consultation Document

234. The CRA informed that it expected to regulate "Termination Emergency Services" at the same level as the FTR (see section 2.3.1.4).

2.3.5.2 Ooredoo's response to the first Consultation Document

235. "*Ooredoo agrees with this proposal provided the CRA accepts Ooredoo's position on FTR*."

2.3.5.3 Vodafone's response to the first Consultation Document

236. "*In so far as the underlying costs of termination for emergency services are comparable to the cost of FTR, Vodafone Qatar has no objection to the proposal of the CRA to apply the same rate*."

2.3.5.4 CRA's position in the second Consultation Document

On Ooredoo's comments

237. Please refer to CRA's position about the FTR, given in section 2.3.1.4.

Proposed Decision

238. The CRA notes that Ooredoo and Vodafone agree on the approach proposed in the First CD for the "Termination Emergency Services".

239. In conclusion, the CRA will set the charge of the "Termination Emergency Services" at the same level as the FTR (see section 2.3.1.4).

2.3.6 SMS Termination

First CD - Question 15: Do stakeholders agree with the CRA's proposed Wholesale Charge for the SMS Termination?

2.3.6.1 CRA's position in the first Consultation Document

240. The CRA consulted on the following proposed Wholesale Charges for the regulation of the "SMS Termination" service:

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
SMS Termination	QAR/SMS	0.0130	0.0091	0.0052	0.0013
Change to previous year			-30%	-43%	-75%

Table 7 SMS Termination – Wholesale Charges for consultation [CRA calculation]

2.3.6.2 Ooredoo's response to the first Consultation Document

241. "*Ooredoo notes that the current SMS and MMS termination rates pass the PMS test. Although we do not agree that minimum retail price for a service provider should be used to perform the PMS test as per the CRA's methodology. Instead, the average retail revenue per unit of a service set by Ooredoo should be used as per the definition of the PMS test and international practice. Hence, Ooredoo see no need to reduce the SMS termination charge any further*."

242. "*Ooredoo notes that EU average termination rate for the SMS service is 2.2 Euro cents (i.e. 0.1 QAR) and that the CRA's target proposed rate for 2020 is way out of this international benchmark figure. The MMS termination charge is not being regulated by EU regulatory authorities at all. Moreover both SMS and MMS service has declined in total volumes over time being effectively replaced by OTT messaging services*".

243. "*Ooredoo considers in general that the definition of the relevant markets for the SMS and MMS termination services to be obsolete and not reflecting the market reality. Since the OTT services are not regulated by the CRA and since they represent effective substitute for these services, Ooredoo proposes that the CRA deregulates the termination services for SMS and MMS and allows service providers to agree the*

termination rates for these services on a commercial basis. While not a major source of the wholesale revenues, the dramatic reduction in the wholesale termination rates for these services as proposed by the CRA are not supported be international practice and will contribute to a drop of the wholesale revenues for both service providers with its consequent negative implications"

2.3.6.3 Vodafone's response to the first Consultation Document

244. "*While SMS traffic is declining at fast pace driven by OTT alternatives, Vodafone Qatar does not support such a drastic cut. They would set Qatar further out of line with benchmarks*:"

2.3.6.4 CRA's position in the second Consultation Document

On Ooredoo's comments:

245. On the use of the minimum retail price for the PMS test, the CRA would like to note that the operator's statement is erroneous. In fact, the average retail revenue is the parameter used for performing the test, while no minimum retail price has been considered. Please see further details on the methodology applied for the PMS test in section 2.1.3.4.

246. On the proposed rates, the CRA indicates that the cost orientation is an obligation imposed by the Qatari Telecommunication's Law in Articles 19 and 29 respectively.

While the CRA is aware that proposed rates are not aligned with those currently applied in other countries, the regulator considers that such proposed rates do not carry any risk of distorting the market because of the following reasons:

246.1 SMS termination services presents a low weight on revenues of Qatari operators. Based on information submitted by Ooredoo, the impact of the SMS termination reduction would be ✂ million QAR for the period of 2018-2020. Taking into account that total revenues expected for the operator in that same period amount to ✂ million QAR, this impact represents less than 0.1%.

246.2 Additionally, as already recognized by both Ooredoo and Vodafone, SMS services are being substituted by OTT services, indicating that the weight of these services will further decrease in the coming years.

On Vodafone's comments:

247. The CRA refers Vodafone to the comments above.

Proposed Decision

248. None of the Respondents have neither provided amended figures for CRA's to review its estimates nor any legal rational of why SMS should be out of regulation.

249. In conclusion, the CRA expects to regulate "SMS Termination" based on the approach proposed in the First Consultation Document.

250. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
SMS Termination	QAR/SMS	0.0130	0.0091	0.0052	0.0013
Change to previous year			-30%	-43%	-75%

Table 8 SMS Termination – Wholesale Charges for consultation [CRA calculation]

Second CD - Question 4	SMS termination: Do stakeholders have further comments or alternative suggestion? Do stakeholders have a legal rationale to not regulate the charge of this product?

2.3.7 MMS Termination (Picture and Video)

First CD - Question 16: Do stakeholders agree with the CRA's proposed Wholesale Charge for the MMS Termination (Picture and Video)?

2.3.7.1 CRA's position in the first Consultation Document

251. CRA consulted on the following proposed Wholesale Charges for the regulation of the "MMS Termination (Picture and Video)" service:

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
MMS Termination (Picture and Video)	QAR/MMS	0.4300	0.2936	0.1572	0.0208
Change to previous year			-32%	-46%	-87%

Table 9 MMS Termination (Picture and Video) – Wholesale Charges for consultation [CRA calculation]

2.3.7.2 Ooredoo's response to the first Consultation Document

252. Please refer to responses given in section 2.3.6.4 together with the SMS Termination service.

2.3.7.3 Vodafone's response to the first Consultation Document

253. "*While MMS traffic is largely immaterial, Vodafone Qatar does not support such drastic cut*".

2.3.7.4 CRA's position in the second Consultation Document

Proposed Decision:

254. None of the Respondents have neither provided amended figures for CRA's to review its estimates nor any legal rational of why MMS should be out of regulation.
255. Considerations made for the SMS Termination are also applicable (please refer to section 2.3.6.4) to the MMS Termination.
256. In conclusion, the CRA expects to regulate "MMS Termination" based on the approach proposed in the First Consultation Document.
257. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
MMS Termination (Picture and Video)	QAR/MMS	0.4300	0.2936	0.1572	0.0208
Change to previous year			-32%	-46%	-87%

Table 10 MMS Termination – Wholesale Charges for consultation [CRA Calculation]

Second CD - Question 5	MMS Termination: Do stakeholders have further comments or alternative suggestion? Do stakeholders have a legal rationale to not regulate the charge of this product?

2.3.8 Outgoing International Call Conveyance

First CD - Question 17: Do stakeholders agree with the above Option for the Outgoing International Call Conveyance?

2.3.8.1 CRA's position in the first Consultation Document

258. The "Outgoing International Call Conveyance" service is not used, since Ooredoo and Vodafone have their own network connections.
259. If this product is used in future, the CRA expects the Access Provider and the Access Seeker to agree on the various charges as per country destination.
260. In case no agreement can be reached, the Access Provider and/or the Access Seeker can bring the case in front of the CRA.

2.3.8.2 Ooredoo's response to the first Consultation Document

261. "*Ooredoo agree with the CRA that regulation of this service is irrelevant*."

2.3.8.3 Vodafone's response to the first Consultation Document

262. "*Vodafone Qatar agrees with the CRA's proposal*."

2.3.8.4 CRA's position in the second Consultation Document

Proposed Decision:

263. The CRA notes that Ooredoo and Vodafone agree with the approach proposed by the CRA for the "Outgoing International Call Conveyance".
264. In conclusion, the "Outgoing International Call Conveyance" service is not used, since Ooredoo and Vodafone have their own network connections. If this product is used in future, the CRA expects the Access Provider and the Access Seeker to agree on the various charges as per country destination. In case no agreement can be reached, the Access Provider and/or the Access Seeker can bring the case in front of the CRA.

2.4 Interconnection Links

2.4.1 Interconnection Links (charges and fees)

First CD - Question 18: Do stakeholders agree with the CRA's proposed Wholesale Charge for Interconnection Links?

2.4.1.1 CRA's position in the First Consultation Document

265. Following points summarize how costs were estimated for the different components of interconnection links services:

   265.1 Service E1 (capacity - distance independent) – recurring cost:

   a) CRA has forecasted the total Network Costs for the years 2016-2018, assuming that the cost will decrease -24% per year as per the average of the annual growths of the years 2014 and 2015.

   b) The volume is left stable, as confirmed by Ooredoo's and Vodafone's forecast.

   c) The trend to establish the forecast cost per unit for the years 2019 and 2020 was prudently assumed equal to -10% per year.

   265.2 Service km (distance dependent) – recurring cost

   d) In reviewing the RAS 2015, the CRA did not accept the cost of the distance component of the Interconnection Links (DWNR15) because the cost driver used to attribute the cost of the SDH Rings to this product was not reliable.

   e) Therefore, CRA has relied on the average cost per unit per km of the wholesale SDH Rings, sourced from the RAS 2015. This network component has been deemed reliable after the review of the RAS 2015.

CRA has forecasted the total Network Costs for the years 2016-2018, assuming that the cost will decrease -45% per year as per the average of the annual growths of the years 2014 and 2015.

f) The volume is left stable, as confirmed by Ooredoo's and Vodafone's forecast.

g) The trend to establish the cost per unit for the years 2019 and 2020 was prudently assumed equal to -20% per year.

h) The CRA may review the margin of this product as reported in RAS 2016, after Ooredoo has changed the driver to attribute the cost of the SDH Rings.

265.3 Connection Fees

i) The CRA is not immediately concerned with the Connection Fees, given that both Vodafone and Ooredoo do not foresee changes in the Interconnection Links in the period 2018 – 2020.

j) As such, the current applicable rates are proposed also for the future period.

266. Accordingly, the CRA consulted on the following charges.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
E1 (distance independent)	QAR/E1/month	326	230	133	37
Change to previous year			-30%	-42%	-72%
Km (distance dependent)	QAR/E1/km/month	64	54	43	32
Change to previous year			-17%	-20%	-25%
Connection Fee	QAR/link	5,000	5,000	5,000	5,000
Change to previous year			0%	0%	0%
Disconnection/reconfiguration Fee	QAR/link	950	950	950	950
Change to previous year			0%	0%	0%

Table 11 Interconnection Links – Wholesale Charges [CRA calculation]

2.4.1.2 Ooredoo's response to the first Consultation Document

267. "*RAS unit capacity costs have increased between 2014 and 2015 because of a total decline in the volume of the capacities sold / deployed in Ooredoo's network. This fact does not support the CRA's declining trend used for the proposed wholesale charges and as an outcome, cost recovery would be questionable for Ooredoo*."

268. "*The 2014 and 2015 RAS distance related network costs were QAR ✂ and ✂/km/month respectively. The year over year decrease is a result of rapid increase in the use of longer distance low capacity SDH E1 leased lines to connect Ooredoo's base stations. SDH leased line distance related unit costs for 2016 and going forward are projected to increase as a result of this SDH capacity being replaced by MPLS technology. This fact does not support the CRA's declining trend used for the proposed wholesale charges and as an outcome Ooredoo cost recovery may be at risk*."

269. "*Ooredoo also notes serious inconsistency in the CRA's approach to the use of the RAS costs in setting wholesale charges for interconnection links and SDH leased lines. In the section 6.2 of the consultation document, the CRA states: '…The CRA relies on the average cost per unit per km of the wholesale SDH Rings, sourced from RAS 2015. This network component has been deemed reliable after the review of the RAS 2015.' Yet in the section 6.3 of the same document discussing the wholesale charges for SDH leased lines, the CRA states: 'Due to lack of information to be able to obtain reasonably accurate pricing (for SDH leased lines), the CRA believes that it is appropriate to apply the benchmark methodology used to set the wholesale charges for 2017.' If the CRA does not consider the RAS costs for SDH network to be reliable and detailed enough to support setting wholesale charges for SDH leased lines and*

relies on benchmark information instead, then to ensure consistency in setting the wholesale charges, the CRA should use the very same cost benchmarks also to set the wholesale charges for the interconnection links."

270. "*For the reasons explained above, given the past and expected future decline in the volume of sold / deployed SDH leased lines, Ooredoo expects that unit costs for the SDH based services will increase within the regulatory period of 2018-2020. In order to avoid setting the wholesale charges below costs, Ooredoo recommends the CRA does not reduce the current wholesale charges for interconnection links and SDH leased lines any further. Meanwhile, Ooredoo is enhancing the robustness and details of the cost information for the SDH based services. The interconnection and SDH leased lines wholesale charges can be reviewed once the CRA's gains confidence in the related RAS cost information*."

2.4.1.3 Vodafone's response to the first Consultation Document

271. "*Vodafone Qatar supports the proposals of the CRA for this product for which there is limited scope for competitive pressure and is the straight input cost for competitors to Ooredoo. We note that one-off charges do not appear to bear any relation with underlying cost: for an STM1 the connection charge amount to QAR* ✂."

2.4.1.4 CRA's position in the second Consultation Document

On Ooredoo's comments

272. Ooredoo is concerned with cost trends applied by CRA to Interconnection Links services. However, the CRA notes that the operator has not provided supporting information accompanied by strong evidences that allow the review of the cost trends calculated by the CRA. This impedes the CRA to evaluate potential alternative scenarios.

Hence, Ooredoo's proposal for keeping the currently applicable charges cannot be considered as viable by the CRA.

Nevertheless, in the hypothetical case that the evolution observed in the future leads to wholesale charges set below costs, the CRA would be pleased to modify applicable wholesale charges by making use of the review clause proposed in this Document (ref. section 2.7).

273. Ooredoo also states that for consistency, the CRA should use the same cost benchmarks for the setting of wholesale charges related to both Interconnection Links services and Transmission Links services. The CRA is not fully convinced that the values extrapolated from the benchmark are suitable for Interconnection Links.

Hence, the CRA deems more appropriate to continue using the RAS data, ensuring consistency with approach already used for Setting the Wholesale Charges for the period 2015-2017 (ref. CRA Order 2015/31/05F).

On Vodafone's comments

274. The CRA acknowledges Vodafone's support for CRA proposed approach.

275. On the comment on the one-off charges, the CRA asks Vodafone to clarify its position.

Proposed Decision

276. The CRA expects to regulate the Wholesale Charges following the approach proposed in the First Consultation Document, i.e. charges oriented to RAS costs.

277. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
E1 (distance independent)	QAR/E1/month	326	229	133	37
Change to previous year			-30%	-42%	-72%
Km (distance dependent)	QAR/E1/km/month	64	54	43	32
Change to previous year			-17%	-20%	-25%
Connection Fee	QAR/link	5,000	5,000	5,000	5,000
Change to previous year			0%	0%	0%
Disconnection/reconfiguration Fee	QAR/link	950	950	950	950
Change to previous year			0%	0%	0%

Table 12 Interconnection Links – Wholesale Charges [CRA calculation]

Second CD - Question 6	Do stakeholders agree with the CRA’s proposed Wholesale Charges for the Interconnection Links?

2.5 Transmission Links

2.5.1 Transmission Links based on SDH

First CD - Question 19: Do stakeholders agree with the CRA’s proposed Wholesale Charge for recurrent charges of SDH Transmission Links, i.e. to continue to use the Benchmark?

2.5.1.1 CRA’s position in the first Consultation Document

278. Due to the lack of reasonable information to obtain accurate pricing from the RAS of Ooredoo, the CRA considered that it was appropriate to apply the benchmark methodology used to set the Wholesale Charges for 2017 (ref. Order and Economic Analysis for setting the Wholesale Charges 2015 – 2017 for a detailed explanation of this approach).

279. As such, the CRA consulted on the following proposed Wholesale Charges for the regulation of the “Transmission Links based on SDH” services:

1	**Transmission Link SDH**	**Current wholesale charge (CY 2017) BM based**	**Benchmark**		
2	Nominal Distance	Current Wholesale Charge	2018	2019	2020
3	km	QAR/month	QAR/month	QAR/month	QAR/month
4					
5	**for E1 (no differentation for SLAs)**				
7	00-10	1,418	1,240	1,158	1,081
8	11-20	1,478	1,314	1,226	1,145
9	21-30	1,538	1,387	1,295	1,209
10	31-40	1,598	1,460	1,363	1,273
11	41-50	1,658	1,534	1,432	1,336
12	50 and above	1,868	1,790	1,671	1,560
13	**for E3 (no differentation for SLAs)**				
15	00-10	8,164	7,089	6,617	6,177
16	11-20	8,224	7,162	6,686	6,241
17	21-30	8,284	7,235	6,754	6,305
18	31-40	8,344	7,309	6,823	6,369
19	41-50	8,404	7,382	6,891	6,433
20	50 and above	8,614	7,639	7,131	6,657
21	**for STM1 (no differentation for SLAs)**				
23	00-10	12,438	10,794	10,076	9,406
24	11-20	12,498	10,867	10,145	9,470
25	21-30	12,558	10,941	10,213	9,534
26	31-40	12,618	11,014	10,282	9,598
27	41-50	12,678	11,087	10,350	9,662
28	50 and above	12,888	11,344	10,590	9,886
29	**for STM4 (no differentation for SLAs)**				
31	00-10	20,645	17,910	16,719	15,607
32	11-20	20,705	17,984	16,788	15,671
33	21-30	20,765	18,057	16,856	15,735
34	31-40	20,825	18,130	16,925	15,799
35	41-50	20,885	18,204	16,993	15,863
36	50 and above	21,095	18,460	17,233	16,087
37	**for STM16 (no differentation for SLAs)**				
39	00-10	36,881	31,987	29,860	27,874
40	11-20	36,941	32,060	29,928	27,938
41	21-30	37,001	32,134	29,997	28,002
42	31-40	37,061	32,207	30,065	28,066
43	41-50	37,121	32,280	30,134	28,130
44	50 and above	37,331	32,537	30,373	28,353

Table 13 SDH Transmission Links – Recurring Wholesale Charges [TRPC PTE Limited Benchmark and CRA calculation]

2.5.1.2 Ooredoo’s response to the first Consultation Document

280. “*Ooredoo agrees with the use of benchmark for setting wholesale charges for the SDH leased lines. Also for the reasons explained in the response to the previous question, the actual unit costs of SDH lines are expected to be at the level recorded in 2015 during the 2018-2020 time period. This fact does not support the CRA’s trend used for proposed charges and as an outcome the future wholesale charges risk being set below cost. Ooredoo recommend the CRA does not reduce the current wholesale charges for SDH leased lines any further*.”

281. “*Ooredoo is working on improving the robustness of the cost calculation for these services and when available will propose to replace current benchmark with actual costs*.”

2.5.1.3 Vodafone’s response to the first Consultation Document

282. “*The CRA proposes to continue to use the benchmarking approach and dataset used in the previous proceedings with a forecast of 6.6% annual decline in cost. Vodafone Qatar notes with some concern that the RAS of Ooredoo is still not reliable enough for the CRA to derive robust cost estimate of transmission and leased lines. We are also surprised to note that the CRA has not been able to update its benchmark. Overall the reductions appear on the low side especially when compared the X factor set by Ofcom*

for leased lines.[30]"

2.5.1.4 CRA's position in the second Consultation Document

On Ooredoo's comments

283. The CRA acknowledges that Ooredoo agrees with the use of benchmark for setting the wholesale charges for the SDH leased lines.

284. On Ooredoo's comment that the actual unit costs of SDH lines are expected to be at the level recorded in 2015 during the 2018-2020 time period, the CRA notes that this statement is not supported by fact based evidences.

The CRA also notes that the annual trend of -6.6% proposed by the CRA is seen as a conservative scenario. In the hypothetical case that the evolution observed in the future leads to wholesale charges below costs, the CRA would be pleased to modify applicable wholesale charges by making use of the review clause proposed in this Document (ref. section 2.7).

On Vodafone's comments

285. On Vodafone's concern about Ooredoo's RAS, the CRA notes that the regulator is making all necessary efforts - together with Ooredoo and the auditors - for solving issues related to leased lines services identified in previous audit reviews.

286. On the magnitude of the reduction proposed by the CRA compared to that approved in U.K., the CRA highlights that only one country cannot be considered as relevant benchmark.

Proposed Decision

287. In conclusion, the CRA confirms the Wholesale Charges as proposed in the First Consultation Document.

288. The table below shows the Wholesale Charges that the CRA shall approve.

[30] See https://www.ofcom.org.uk/__data/assets/pdf_file/0015/72303/bcmr-final-statement-volume-one.pdf.

	Transmission Link SDH	Current wholesale charge (CY 2017) BM based	Benchmark		
1					
2	Nominal Distance	Current Wholesale Charge	2018	2019	2020
3	km	QAR/month	QAR/month	QAR/month	QAR/month
4					
5	**for E1 (no differentation for SLAs)**				
7	00-10	1,418	1,240	1,158	1,081
8	11-20	1,478	1,314	1,226	1,145
9	21-30	1,538	1,387	1,295	1,209
10	31-40	1,598	1,460	1,363	1,273
11	41-50	1,658	1,534	1,432	1,336
12	50 and above	1,868	1,790	1,671	1,560
13	**for E3 (no differentation for SLAs)**				
15	00-10	8,164	7,089	6,617	6,177
16	11-20	8,224	7,162	6,686	6,241
17	21-30	8,284	7,235	6,754	6,305
18	31-40	8,344	7,309	6,823	6,369
19	41-50	8,404	7,382	6,891	6,433
20	50 and above	8,614	7,639	7,131	6,657
21	**for STM1 (no differentation for SLAs)**				
23	00-10	12,438	10,794	10,076	9,406
24	11-20	12,498	10,867	10,145	9,470
25	21-30	12,558	10,941	10,213	9,534
26	31-40	12,618	11,014	10,282	9,598
27	41-50	12,678	11,087	10,350	9,662
28	50 and above	12,888	11,344	10,590	9,886
29	**for STM4 (no differentation for SLAs)**				
31	00-10	20,645	17,910	16,719	15,607
32	11-20	20,705	17,984	16,788	15,671
33	21-30	20,765	18,057	16,856	15,735
34	31-40	20,825	18,130	16,925	15,799
35	41-50	20,885	18,204	16,993	15,863
36	50 and above	21,095	18,460	17,233	16,087
37	**for STM16 (no differentation for SLAs)**				
39	00-10	36,881	31,987	29,860	27,874
40	11-20	36,941	32,060	29,928	27,938
41	21-30	37,001	32,134	29,997	28,002
42	31-40	37,061	32,207	30,065	28,066
43	41-50	37,121	32,280	30,134	28,130
44	50 and above	37,331	32,537	30,373	28,353

Table 14 SDH Transmission Links – Recurring Wholesale Charges approved by the CRA

Second CD - Question 7	Do stakeholders agree with the CRA's proposed Wholesale Charges for the SDH Transmission Links?

2.5.2 Transmission Links based on Ethernet technology

First CD - Question 20: Are stakeholders interested in Transmission Links based on Ethernet Technology? Do you find the potential charges calculated by the CRA acceptable? Please provide cost information to calculate a cost oriented charge for this product.

2.5.2.1 CRA's position in the first Consultation Document

289. The CRA welcomed the introduction of Transmission Links based on Ethernet Technology and CRA consulted on following proposed Wholesale Charges, which were estimated based on the same benchmark used to calculate the cost of the Transmission Links – SDH (see section 2.5.1)

	[A]	[B]	[E]		
1	Transmission Link Ethernet		Benchmark (Average distance of 15km) Monthly Rental		
2	speed	speed	2018	2019	2020
3			QAR/month		
4	speed				
5	256 KB	256	722	684	648
6	512 KB	512	891	844	799
7	1 MB	1,000	1,098	1,040	985
8	2 MB	2,000	1,267	1,200	1,136
9	4 MB	4,000	1,717	1,626	1,540
10	8 MB	8,000	2,159	2,045	1,937
11	16 MB	16,000	2,724	2,580	2,443
12	24 MB	24,000	3,124	2,958	2,802
13	32 MB	32,000	3,444	3,262	3,089
14	50 MB	50,000	4,340	4,110	3,893
15	100 MB	100,000	6,891	6,526	6,181
16	200 MB	200,000	7,875	7,458	7,064
17	500 MB	500,000	8,859	8,390	7,946
18	1 G	1,000,000	9,127	8,644	8,186

Table 15 Ethernet Transmission Links– Recurring Wholesale Charges [TRPC PTE Limited Benchmark and CRA calculation]

2.5.2.2 Ooredoo's response to the first Consultation Document

290. "*Ooredoo considers the discussion of the wholesale charges for transmission links based on Ethernet premature. As highlighted by Ooredoo's letter to the CRA and to MOTC, a number of policy issues have to be addressed at a government level before further access obligations are imposed on Ooredoo. To the best of Ooredoo's knowledge, this has not happened yet. In addition, as highlighted to Ooredoo and the CRA, the question regarding the role for the QNBN within the market structure remains unanswered and poses specific additional risks to Ooredoo's return on investment. Instead of the CRA trying to estimate the cost of the Ethernet leased lines, the CRA should take a more proactive role in engaging with government to initiate and progress discussions and clarify the future vision for the sector and the role QNBN should play within that vision, if at all*."

2.5.2.3 Vodafone's response to the first Consultation Document

291. "*Vodafone Qatar supports the introduction of Ethernet based transmission links*."
292. "*Regarding the pricing approach of the CRA it is not clear why the cost of a completely different and higher cost technology (SDH), should be used to calculate the cost of Ethernet based transmission. Based on the RAS, the CRA should be able to build the cost stack of Ethernet based transmission. It should also have visibility of the cost stack when approving retail price changes for Ethernet based retail services*."

2.5.2.4 CRA's position in the second Consultation Document

On Ooredoo's comments

293. The CRA notes that, according to the Regulatory Framework and the Market Definition Designation and Dominance (MDDD) currently applicable in Qatar, Ooredoo is obliged to offer Transmission Links services regardless the technology used for their provision, provided that any of the Licensed Operators requires them. Based on this, the CRA considers that the introduction of Ethernet services shall be effective and not subject to discussion.

On Vodafone's comments

294. The CRA acknowledges Vodafone's comment on the introduction of Ethernet based transmission links.
295. On the benchmark used to set the charges, the CRA notes that the benchmark used

by the CRA included specific information on Ethernet. This specific information on Ethernet has been used to derive the proposed charges.

296. On the use of the RAS, this has not been considered for keeping consistency with SDH products.

Proposed Decision

297. The CRA is of the view that the Ooredoo is obliged to offer Transmission Links based on Ethernet Technology, if this service is required by any Licensed Operators.

298. This is consistent with CRA's request to Ooredoo for putting forward a Wholesale Reference Offer for Leased Lines (any-to-any, not only site-to-site) (ref. CRARAC 2016/06/30, dated June 30, 2016). Ooredoo did not comply with CRA's request.

299. The CRA confirms the Wholesale Charges as proposed in the First Consultation Document are deemed applicable.

300. The table below shows the Wholesale Charges that the CRA shall approve.

	[A]	[B]	[E]		
1	Transmission Link Ethernet		Benchmark (Average distance of 15km) Monthly Rental		
2	speed	speed	2018	2019	2020
3			QAR/month		
4	**speed**				
5	256 KB	256	722	684	648
6	512 KB	512	891	844	799
7	1 MB	1,000	1,098	1,040	985
8	2 MB	2,000	1,267	1,200	1,136
9	4 MB	4,000	1,717	1,626	1,540
10	8 MB	8,000	2,159	2,045	1,937
11	16 MB	16,000	2,724	2,580	2,443
12	24 MB	24,000	3,124	2,958	2,802
13	32 MB	32,000	3,444	3,262	3,089
14	50 MB	50,000	4,340	4,110	3,893
15	100 MB	100,000	6,891	6,526	6,181
16	200 MB	200,000	7,875	7,458	7,064
17	500 MB	500,000	8,859	8,390	7,946
18	1 G	1,000,000	9,127	8,644	8,186

Table 16 Ethernet Transmission Links– Recurring Wholesale Charges approved by the CRA

Second CD - Question 8	Do stakeholders agree with the CRA's proposed Wholesale Charges for Ethernet based Transmission Links?

2.5.3 Transmission Links: connection fees

First CD - Question 21: Do stakeholders agree with the CRA's proposed Wholesale Charge for the Transmission Links connection fees?

2.5.3.1 CRA's position in the first Consultation Document

301. The CRA proposed to rely on currently applicable Wholesale Charges, reduced consistently with the cost trend applied for setting the recurring Wholesale Charges.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Connection, disconnection - For all speeds and distance	QAR/connection or disconnection	3,036	2,672	2,511	2,361
Change to previous year			-12%	-6%	-6%

Table 17 Transmission Links – One Time fees Charges for consultation [CRA calculation]

2.5.3.2 Ooredoo’s response to the first Consultation Document

302. “*The RAS 2015 wholesale national leased circuits installation cost is QR* ✂. *The CRA’s proposed 2018-2020 rates trend will thus likely cause wholesale charges for connection fees to be below cost in the future. Ooredoo’s recommendation is to maintain the current wholesale price or apply a 3% increase per annum to ensure cost recovery in the face of expected inflationary costs going forward*.”

2.5.3.3 Vodafone’s response to the first Consultation Document

303. “*Connection fees should be looked at as and when the service description is modified to ensure that they do not create a barrier to entry*.”

2.5.3.4 CRA’s position in the second Consultation Document

On Ooredoo’s comments

304. On the use of the RAS information, the CRA indicates that due the reduced number of activations carried out in 2015 by Ooredoo, the cost produced by the RAS cannot be considered as representative. However, CRA recognizes that the trend applied for recurring cost would not be necessarily applicable to non-recurring cost, because of their different nature. As such, the CRA has opted for maintaining stable the currently applicable wholesale prices for connection fees of transmission links services.

On Vodafone’s comments

305. The level of the one time fee does not seem capable to constitute a barrier to entry, compared to the revenues generated by this product (i.e. mobile national calls).

Proposed Decision

306. The CRA consults on keeping the one-time fees stable at the 2017 level.

307. The table below shows the Wholesale Charges proposed by the CRA.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Connection, disconnection - For all speeds and distance	QAR/connection or disconnection	3,036	3,036	3,036	3,036
Change to previous year			0%	0%	0%

Table 18 Transmission Links – One Time fees Charges for consultation [CRA calculation]

308. CRA also notes that alternative costing information (for instance, bottom-up calculations) is welcomed from SPs provided that it is specific, fully justified and accompanied by strong evidences and supporting information/calculations.

Second CD - Question 9	Do stakeholders agree with the CRA’s proposed connection fees?

2.6 Duct Products

2.6.1 Duct Access Product

First CD - Question 22: Do stakeholders agree with the CRA’s proposed Wholesale Charge for the Duct Access product?

2.6.1.1 CRA’s position in the first Consultation Document

309. CRA consulted on the following proposed Wholesale Charges for the regulation of the "Duct Access Product":

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Duct Access	QAR/cm2/meter/month	0.1200	0.1174	0.1147	0.1121
Change to previous year			-2%	-2%	-2%

Table 19 Duct Access – Wholesale Charges for consultation [CRA calculation]

2.6.1.2 Ooredoo's response to the first Consultation Document

310. "*The CRA in the presented benchmark analysis portrays current wholesale charges for access to duct in Qatar as being one of the highest in the world. There are number of problems with these benchmarks, which lead to an exaggeration of duct charges in Qatar by international comparison, simply because the CRA are not comparing apples to apples.*"

311. "*As each country in the CRA's benchmark sample uses different charging units, the CRA had to translate these various charges into a common unit measure. In their calculations of unit costs, the CRA had to make a large set of assumptions, which as explained below skew the benchmark results against Qatar significantly.*"

312. [Ooredoo has provided further explanations on the assumptions used by the CRA in the comparative exercise mentioned above].

313. "*In summary, due to the assumptions used by the CRA in their benchmark calculations, the cost / charges for duct access is artificially inflated for Qatar in the international comparison as presented by the CRA. This is explained by: i) The major part of the duct infrastructure in Qatar is built in dense areas with more expensive surface; ii) The duct assets are depreciated by Ooredoo over ✂ years, whereas many other jurisdictions have 20-25 years; iii) The Ooredoo duct infrastructure is relatively new and occupancy is likely lower in Qatar than in some other countries (with more service providers sharing ducts).The cost resulting from FAC/HCA model may be higher in Qatar than in some of the other countries. However, definitely the duct cost / charge for Qatar would not be as large relative to other countries as CRA portrays in their benchmark if correct comparison methodology was used.*"

314. "*The actual 2015 RAS network costs alone for duct service are QAR ✂ /m2/m/month. The 2015 RAS network cost plus wholesale costs are QAR ✂ /m2/m/month. The same RAS costs for 2014 was QAR ✂ /m2/m/month. Ooredoo therefore considers the proposed CRA's charges for duct access to be below RAS costs.*"

315. "*Ooredoo's recommendation is to increase the wholesale charge for duct access to ensure costs recovery going forward.*"

2.6.1.3 Vodafone's response to the first Consultation Document

316. "*Proposed charges for monthly rental by the CRA are clearly out of steps with benchmarks: Ooredoo's wholesale charges are 2 to 5 times more expensive that Spain and Portugal, two best-in-class countries in Europe for duct access where Vodafone has deployed extensively using ducts. The annual trend proposed (-2%) does not seem correct: year on year one would expect a steeper decline given the capital intensity of duct. Through the normal depreciation process the capital employed and return on capital should decline. In turn, this should lead to a reduction in the annual cost of a larger magnitude than the proposed 2%.*"

2.6.1.4 Qnbn's response to the first Consultation Document

317. "*Qnbn agrees with the CRA's proposed Wholesale Charge for the Duct Access product provided that there is no minimum space leased. As noted above, the current minimum 3cm2 should not apply but rather reference should be to the actual utilized space.*"

318. "*Qnbn does wish to add some precision to the duct access charge stated by the CRA, at pages 47-48, as applicable for the State of Qatar. The duct access charge in Qatar is 0.12 QAR/m/cm2. However, it is more precise to state that the minimum charge is*

0.36 QAR/m as the minimum leased space is 3 cm2."

2.6.1.5 CRA's position in the second Consultation Document

On Ooredoo's comments:

319. The benchmark has been used as additional information to cross-check the proposed charges with the international practice. The wholesale charges proposed in the Consultation Document are cost-oriented, based on the outcomes of Ooredoo's RAS and cost trends defined by the CRA. The CRA notes that Ooredoo has only criticized CRA's benchmark, without providing any alternative benchmark. This does not help the CRA to review its position.

320. Regarding Ooredoo's claims that the proposed charge is below cost, the CRA notes that Ooredoo refers to the total cost per unit as per RAS 2015, including both the network and the wholesale costs. This approach leads Ooredoo to calculate a total cost per unit higher than the wholesale charge proposed by the CRA.

However, as explained in the first Consultation Document (ref. section 2.1.1 above), the CRA has never accepted the wholesale cost included in the RAS. In absence of robust RAS data, for setting the wholesale charges the CRA relies on a percentage value to calculate the wholesale cost, extracted by means of a benchmark exercise. Hence, Ooredoo's claims that the wholesale charge is below cost cannot be verified until Ooredoo improves the attribution of the wholesale cost. In addition, to avoid non-discrimination issues, the network cost per unit is calculated by the CRA at network component level (but not at product level), where the cost per unit attributed to the OLOs is equal to the cost per unit attributed to the Retail Arms of Ooredoo.

According to the above, Ooredoo's request to increase the wholesale charge is not viable.

On Vodafone's comments

321. On the annual trend of -2%, the CRA notes that from the RAS there is not a clear trend in cost decline. As consequence, the CRA has assumed the costs to stay stable in the period of the analysis. Hence, the trend (-2%) is not reflecting an evolution in costs but, instead, it is a consequence of the glidepath applied between the initial and end year of the period.

On Qnbn's comments

322. Regarding the minimum charge, this topic was discussed in the consultation for setting the Wholesale Charges for the years 2015, 2016 and 2017. The minimum charge was agreed at that time between Ooredoo and Qnbn.

Options

323. The table below shows the Wholesale Charges as calculated by the CRA, including the new cost of capital (10.45%):

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Duct Access	QAR/cm2/meter/month	0.1200	0.1170	0.1139	0.1109
Change to previous year			-3%	-3%	-3%

Table 20 Duct Access – Wholesale Charges for consultation [CRA calculation]

324. The CRA is cognizant of the major construction works, for e.g. the World Cup are ongoing. This and the related duct re-routings might have some influence on the cost. Also various changes in duct managers might have a cost impact. Hence, the CRA is minded to keep this charge at the current level (0.12 QAR/cm2/meter/month).

Second CD - Question 10	Do stakeholders agree with the CRA's proposed charge for the Duct Access Product?

2.6.2 Duct Access Product – Alternative charging mechanism

First CD - Question 23: Stakeholders are invited to provide their view on alternative mechanism for charging Duct Access, with particular reference to the introduction of lump-sums upfront to the commitment for buying a certain maximum amount of volume

2.6.2.1 CRA's position in the first Consultation Document

325. The CRA consulted about alternative methods of charging this product, e.g. a lump-sum payment.

326. In particular, the CRA was interested in evaluating the introduction of medium-long term commitment for the OLOs, including the right/obligation to rent a maximum volume of duct with an upfront payment (lump-sum).

2.6.2.2 Ooredoo's response to the first Consultation Document

327. "*Ooredoo has no alternative suggestions at this point of time*."

2.6.2.3 Vodafone's response to the first Consultation Document

328. "*Vodafone Qatar does not object to lump-sums payment but these should be designed very carefully to ensure that they are not discriminatory and do not create barriers to entry. Link to it is the issue of one-off charges. However we note that at this point there is no information readily available on duct controlled by Ooredoo or effective access to those ducts*."

2.6.2.4 Qnbn's response to the first Consultation Document

329. "*Lump sum payments based on volume commitments are a non-starter for new fixed (passive) market entrants such as Qnbn. Qnbn does not have a universal service obligation and, to be fiscally responsible, it deploys fiber based upon customer demand. Qnbn has been painstaking in communicating this strategic reality to the CRA. It is Qnbn's customers who determine active service requirements and request fiber from Qnbn. It is fiscally impossible for Qnbn to be in a position to agree volume commitments in any given Zone or development within the State of Qatar*."

2.6.2.5 CRA's position in the second Consultation Document

330. The CRA notes the contributions received by the SPs.

2.6.3 Facility Hosting

First CD - Question 24: Do stakeholders agree with the CRA's proposed Wholesale Charge for "Facility Hosting"?

331. CRA consulted Qatari SPs on the following proposed Wholesale Charges for the regulation of the "Facility Hosting ":

		Approved Charge	Charges for consultation		
Facility Hosting	**n.b. First 20 liters of facility space per linear kilometer of route distance: no charge**	**2017**	**2018**	**2019**	**2020**
Duct Access	(QAR/Liter)	1.0000	0.7950	0.5901	0.3851
Change to previous year			-20%	-26%	-35%

Table 21 Facility Hosting – Wholesale Charges for consultation [CRA calculation]

2.6.3.1 Ooredoo's response to the first Consultation Document

332. "*The 2015 RAS network costs are QAR* ✂ */liter/month. If the RAS wholesale costs*

are included, the proposed CRA pricing is below the total RAS costs."

2.6.3.2 Vodafone's response to the first Consultation Document

333. "*Vodafone Qatar is not in a position to comment on this charge given the information provided in the CD*".

2.6.3.3 Qnbn's response to the first Consultation Document

334. "*Qnbn is in full agreement with the CRA's proposed Wholesale Charge for Facility Hosting*."

2.6.3.4 CRA's position in the second Consultation Document

On Ooredoo's comments:

335. Regarding Ooredoo's claims that the proposed charge is below cost, please see CRA's position on paragraph 320 above.

On Vodafone's and Qnbn's comments:

336. CRA acknowledges SPs' comments.

Proposed Decision:

337. The CRA expects to regulate the Wholesale Charges following the approach proposed in the First Consultation Document;

338. The table below shows the Wholesale Charges proposed by the CRA:

		Approved Charge	Charges for consultation		
Facility Hosting		2017	2018	2019	2020
Duct Access	(QAR/Liter)	1.0000	0.7938	0.5877	0.3815
Change to previous year			-21%	-26%	-35%

Table 22 Facility Hosting – Wholesale Charges for consultation [CRA calculation]

Second CD - Question 11	Do stakeholders agree with the CRA's proposed charge for the Facility Hosting Product?

2.6.4 Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products – Cost per hour

First CD - Question 25: Do stakeholders agree with the CRA's proposed cost per hour applicable to "Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products?" Stakeholders are explicitly invited to submit evidence of the cost per hour applicable for these products. Evidence could include invoices paid to external companies for comparable services or salaries of the employees involved in comparable activities.

2.6.4.1 CRA's position in the first Consultation Document

339. The CRA consulted on the following proposed Wholesale Charges for the regulation of services based on hourly cost:

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Cost per Hour applicable to Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products	QAR/hour	375	166	166	166
Change to previous year			-56%	0%	0%

Table 23 Cost per hour – Wholesale Charges for consultation [CRA calculation]

2.6.4.2 Ooredoo's response to the first Consultation Document

340. "*Ooredoo notes that the CRA calculation of labor cost per hour significantly underestimates the total labor related costs actually incurred by Ooredoo. The CRA's calculation fully neglects a number of other labor cost categories such as for example annual bonus, cost of long term incentive scheme (costs of shadow shares allocated and paid to employees), medical costs, children education costs, training costs, travel costs, service gratuity costs and pension contribution costs. These costs represent on average ✂% of total labor costs of Ooredoo's employees*."

341. "*Hence, the CRA's derived cost per hour is simply not acceptable as it grossly underestimates the actual cost per hour incurred by Ooredoo and would not allow for cost recovery*."

342. "*The AAR and RAR cost models including the Ooredoo's derivation of labor cost per hour are currently undergoing independent audit review. To ensure recovery of the costs incurred by Ooredoo, we insist that the cost figures confirmed by the audit are used as a basis for setting relevant wholesale charges related to duct access service activities*."

2.6.4.3 Vodafone's response to the first Consultation Document

343. "*Vodafone Qatar supports the use of bottom-up modelling for supervision charges which should be capped on a per km basis to provide the right incentive for Ooredoo to be efficient and avoid penalisation of access seekers due to the lack of accurate records/tools. One-offs charges constitute a significant barrier to entry for duct access which is magnified in the context of Ooredoo where there is no on-line system for access request with up-to-date information on duct locations and availability. The availability of such tool has proven to be a key driver for the uptake of duct access in Spain and Portugal. It has enable Vodafone to deploy fibre in an efficient way. Normally site survey should be optional and considered only where the access seeker finds that the status on the ground does not match the database."*

344. *"Regarding supervision consisting of a dedicated Ooredoo resource attending all the work), Vodafone Qatar does not consider it to be necessary for all installation activities. Instead some random visit of say 5% of installation work and after work completion could be undertaken*."

2.6.4.4 Qnbn's response to the first Consultation Document

345. "*Qnbn could agree to the proposed charge (166 QAR/hour) subject to the following conditions: the charges will be applicable for field activities only, Any office activities (including desktop activities, GIS update, etc.) should be excluded; and Such charges should be capped at 166,000 QAR per quarter*".

2.6.4.5 CRA's position in the second Consultation Document

On Ooredoo's comments:

346. Regarding Ooredoo's contribution, the CRA notes that cost categories indicated by the operator have already been considered as "housing and other allowances". In fact, these costs represent ✂% of the total labor costs, in line with the average percentage reported by the operator for these additional costs.

On Vodafone's comments:

347. The CRA appreciates and takes note of Vodafone's contributions on the one-off activities for ducts services.

On Qnbn's comments:

348. The CRA clarifies that the cost per hour is applicable to products as defined in the IAA and in the RIAO.

349. On capping the charge for the Supervision, the CRA requires Qnbn to provide more

information on both the reasons supporting the proposal and on how this amount has been calculated, allowing the CRA to take an informed decision.

Proposed Decision:

350. In September 2017 (ref. CRA/RAC-E/097/2017), CRA required Ooredoo to:

350.1 To deliver an Audit Review the Cost per man-hour.

350.2 To demonstrate a "live process" of managing the Access requests to the CRA.

351. Pending the outcomes of Ooredoo Audit Review and the above information requested to Qnbn, the CRA confirms the approach proposed in the First Consultation Document. In absence of the above deliverables, the CRA will use its own calculations.

352. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Cost per Hour applicable to Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products	QAR/hour	375	166	166	166
Change to previous year			-56%	0%	0%

Table 24 Cost per hour – Wholesale Charges for consultation [CRA calculation]

353. The CRA is also considering the possibility of implementing a glidepath for the wholesale charges of the cost per hour proposed above. Consistently with other services' glidepaths, cost per hour glidepath would be gradually applied from the approved charge in 2017 (375 QAR/hour) to the new proposed charge for 2020 (166 QAR/hour).

Second CD - Question 12	Do stakeholders agree with the CRA's proposed Wholesale Charges for the cost per hour? Additionally, stakeholders are invited to provide their views with regards to the possibility of implementing a glidepath for Wholesale Charges proposed for the cost per hour.

2.6.5 Access Area Request (AAR) and Route Access Request (RAR) for the RIAO

First CD - Question 26: Do stakeholders agree with the CRA's proposed Wholesale Charge for "Access Area Request", i.e. using the man-hour cost as per CRA's calculation and a charge for an average number of duct segments?

First CD - Question 27: Do stakeholders agree with the CRA's proposed Wholesale Charges for "Route Access Request", i.e. using the man-hour cost as per CRA's calculation and a charge for an average number of duct segments?

2.6.5.1 CRA's position in the first Consultation Document

354. The CRA consulted Qatari SPs on the following proposed Wholesale Charges for the regulation of "Access Area Request (AAR)" and "Route Access Request (RAR)" services:

	Cost per manhour	Scenario A) Cost regardless of number of duct		Scenario B) Cost per 100 duct segments			
		All segments		First 100 segments		additional 100 segments	
		time	cost	time	cost	time	cost
	QAR/h	h	QAR	h	QAR	h	QAR
Ooredoo	667	11.86	6,005	4.56	3,041	1.70	690
Qnbn	115	10.81	1,243	3.51	404	1.70	196
CRA	166	11.34	1,884	4.04	671	1.70	283

Table 25 Access Area Request - Costing Summary [CRA calculation]

	Cost per manhour	Scenario A) Cost regardless of number of duct		Scenario B) Cost per 100 duct segments			
		All segments		First 100 segments		additional 10 segments	
		time	cost	time	cost	time	cost
	QAR/h	h	QAR	h	QAR	h	QAR
Ooredoo	404	7.67	3,098	15.14	6,119	1.35	547
Qnbn	115	19.25	2,214	20.79	2,391	1.06	122
CRA	166	13.46	2,237	17.96	2,986	1.21	201

Table 26 Route Access Request Costing – Summary [CRA calculation]

355. Whether to charge per 100 duct segments or to use a figure for an average request, CRA prefers a charge on an average basis. This will ease the burden of administration and increase the predictability of the revenues for Ooredoo and of the costs for the OLOs.

2.6.5.2 Ooredoo's response to the first Consultation Document

356. "*The cost of the AAR / RAR depends on the number of duct segments. In the absence of the relevant data (there was only one wide ranging Access Request performed by QNBN under IAA), it is impossible to estimate number of segments per 'average request'. To ensure cost recovery, Ooredoo proposes the AAR charge to reflect actual number of duct segments per each AAR / RAR. Once reliable data sample is amassed for AAR's / RAR's allowing for cost estimate of average request, the option proposed by the CRA can be reconsidered*."

357. "*Man-hour cost should reflect the cost actually incurred by Ooredoo as verified by independent audit to ensure relevant cost recovery, which is key principle of the Telecommunications Law. As explained above, the CRA derived man-hour costs grossly underestimate the actual labor costs incurred by Ooredoo and it is simply not acceptable*."

2.6.5.3 Vodafone's response to the first Consultation Document

358. "*This charge is yet another barrier to entry and a discriminatory charges caused by Ooredoo's lack of accurate records regarding its duct infrastructure. Accordingly, this charge should reflect efficient cost and not be based on the time it takes Ooredoo to update its records*."

359. "*Our key proposal here would be that for all processing activities (e.g. preparation and sending GIS information, maps and network data including XML files and shape files), there should be a software management tool similar to the CRA web tool from Ericson to automate all back-office activities an online tool. This would be a win-win for all stakeholders: i) For Ooredoo: automated tool replacing the database and manual*

processes will lead to cost savings, efficient processes and secure accurate tracking for all of Ooredoo's assets and changes (e.g. utilised space, Vodafone Qatar / Ooredoo cables). ii) For access seekers: faster request processing and cost savings, enabling faster roll-out. iii) For the CRA: tool will support CRA's objective to foster efficient investment and will provide full visibility on requests status. Tool could be used when/if conflicts arise between Ooredoo and access seekers."

360. "*Having an on-line tool is an essential element to level the playing field. To save cost, Ooredoo could use the tool already purchased by the CRA*."

2.6.5.4 Qnbn's response to the first Consultation Document

361. "*At the outset Qnbn wishes to note, given its actual experience, its interest in any audit undertaken of Ooredoo man hour costs. The CRA is invited to discuss with Qnbn, as a sanity check, its own per man hour costs. Qnbn favors costs arrived at regardless of the number of ducts (the proposal given in Scenario A)*."

362. "*Qnbn favors costs arrived at regardless of the number of ducts (the proposal given in Scenario A*)."

2.6.5.5 CRA's position in the second Consultation Document

On Ooredoo's comments:

363. The CRA has been unsuccessfully asking Ooredoo to visit its premises and have a demonstration of the process followed to handle the AAR/RAR since September 2017. In absence of this demonstration, the CRA is not in the position to conclude that the cost of the AAR/RAR depends on the number of segments.

On Vodafone's comments:

364. The CRA acknowledges Vodafone's comments.

On Qnbn's comments:

365. The CRA acknowledges Qnbn's comments.

Proposed Decision:

366. The CRA maintains its preference for fees arrived at regardless of the number of ducts and intends to regulate the Wholesale Charges following the approach proposed in the First Consultation Document.

367. The fee depends on both the cost per manhour (ref. section 2.6.4 above) and the time needed to perform the activities.

368. Pending the outcomes of Ooredoo Audit Review and the site visit to Ooredoo's premises to follow live the access requests (ref. section 2.6.4 above), the CRA confirms the approach proposed in the First Consultation Document. In absence of the above deliverables, the CRA will use its own calculations.

369. Tables below show the Wholesale Charges proposed by the CRA.

	Cost per manhour	Scenario A) Cost regardless of number of duct	
		All segments	
		time	cost
	QAR/h	h	QAR
CRA	166	11.34	1,884

Table 27 Access Area Request - Costing Summary [CRA calculation]

	Cost per manhour	Scenario A) Cost regardless of number of duct	
		All segments	
		time	cost
	QAR/h	h	QAR
CRA	166	13.46	2,237

Table 28 Route Access Request Costing – Summary [CRA calculation]

370. The CRA also notes that the above charges shall be subject to the decision finally adopted with regards to the possibility of implementing a glidepath for the wholesale charges proposed for the cost per hour, as already anticipated in section 2.6.4.5.

Second CD - Question 13	Do stakeholders agree with the CRA's proposed Wholesale Charges for the AAR and RAR?

2.6.6 Access Request (AR) for the IAA

First CD - Question 28: Do stakeholders agree with the CRA's proposed Wholesale Charges for "Access Request", i.e. calculation of the AR as a sum of AAR and RAR, using the man-hour cost as per CRA's calculation and a charge for an average number of duct segments?

2.6.6.1 CRA's position in the first Consultation Document

371. The CRA consulted on the following proposed Wholesale Charges for the regulation of "Access Request (AR) for the IAA":

	Cost per manhour	Scenario A) Cost regardless of number of duct		Scenario B) Cost per 100 duct segments			
		All segments		First 100 segments		additional 100 segments	
		time	cost	time	cost	time	cost
	QAR/h	h	QAR	h	QAR	h	QAR
Ooredoo	466	19.53	9,103	19.70	9,160	15.24	4,994
Qnbn	115	30.06	3,457	24.30	2,795	12.30	1,415
CRA	166	24.79	4,121	22.00	3,657	12.30	2,044

Table 29 Access Request Costing – Summary [CRA calculation]

372. Whether to charge per 100 duct segments or to use a figure for an average request, CRA prefers a charge on an average basis. This will ease the burden of administration and increase the predictability of the revenues for Ooredoo and of the costs for the OLOs.

2.6.6.2 Ooredoo's response to the first Consultation Document

373. "*It is not clear to Ooredoo what the CRA seeks to achieve at Question 28*".

374. "*The terminology of AAR and RAR has been introduced as part of the CRA request for a reference offer for duct access from Ooredoo. The terminology RAR does not exist within the IAA. The IAA includes terminology that includes area access request and provisioning requests*."

375. "*The CRA is aware that the IAA has been a commercially negotiated agreement between Ooredoo and QNBN, and has been in operation since 2012. That agreement*

was arrived at by both parties without regulatory direction, although the CRA has been fully cognizant of and integral to that agreement. The rates within that agreement were not reflective of actual costs, again something the CRA has not been concerned with since 2012."

376. "*If the task at hand is to determine regulated rates for the reference duct offer, it is unclear why the CRA seeks to aggregate the AAR and RAR, rather than keep those items separate as stated within the reference offer. Ooredoo would contend that the CRA should not be seeking to impose regulated rates on what are commercial agreements between two licenses. The only mechanism to do so is through the reference offers*."

2.6.6.3 Vodafone's response to the first Consultation Document

377. "*Vodafone Qatar strongly objects to this charge. Vodafone Qatar cannot understand why the CRA is proposing to re-introduce a charge which the CRA itself has removed as part of the RIAO proceedings in 2015 and 2016 after various consultation rounds*."

2.6.6.4 Qnbn's response to the first Consultation Document

378. "*Qnbn disagrees with the introduction of the concept of the AR and the proposed charge associated with it. The CRA itself, in the RIAO proceeding and resulting agreement for the marketplace, did away with the AR and replaced it with the AAR and the RAR. There is no valid point in reconsidering the AR once again*."

2.6.6.5 CRA's position in the second Consultation Document

On Ooredoo's comments:

379. The CRA has the power to amend Wholesale Charges included in wholesale commercial agreements signed between Service Providers. Hence, the fee for the Access Request under the IAA will also be approved in this proceeding for setting the Wholesale Charges.

On Vodafone's comments:

380. The CRA clarifies that the IAA is still in force. The IAA includes the AR, whose fee shall be set by the CRA. The RIAO does not include the AR but different services (i.e. the AAR and the RAR) whose fees will be also set by the CRA.

On Qnbn's comments:

381. The CRA refers Qnbn to the above comment. Until Qnbn stays with the IAA the AR is applicable.

Proposed Decision:

382. This fee is needed for the IAA where processes are different from those approved by the CRA for the RIAO;

383. The fee depends on both the cost per manhour (ref. section 2.6.4 above) and the time needed to perform the activities.

384. Pending the outcomes of Ooredoo Audit Review and the site visit to Ooredoo's premises to follow live the access requests (ref. section 2.6.4 above), the CRA confirms the approach proposed in the First Consultation Document. In absence of the above deliverables, the CRA will use its own calculations.

385. The table below shows the Wholesale Charges proposed by the CRA.

Cost per manhour	Scenario A) Cost regardless of number of duct		
	All segments		
	time	cost	
	QAR/h	h	QAR
CRA	166	24.79	4,121

Table 30 Access Request Costing – Summary [CRA calculation]

386. The CRA also notes that the above charges shall be subject to the decision finally adopted with regards to the possibility of implementing a glidepath for the wholesale charges proposed for the cost per hour, as already anticipated in section 2.6.4.5.

Second CD - Question 14 Do stakeholders agree with the CRA's proposed Wholesale Charges for the AR?

2.6.7 Successful and Unsuccessful Blockage Clearance products

First CD - Question 29: Do stakeholders agree with the CRA's proposed approach for the Successful and Unsuccessful Blockage Clearance products?

2.6.7.1 CRA's position in the first Consultation Document

387. CRA proposed to charge these products "at documented cost incurred by Ooredoo", based on the currently applicable approach.

2.6.7.2 Ooredoo's response to the first Consultation Document

388. "*Ooredoo agrees*."

2.6.7.3 Vodafone's response to the first Consultation Document

389. "*Vodafone Qatar has no objection to a time and material approach with documented cost, although we are concerned that they may not be reflective of an efficient operation and hence could lead to inefficiencies being passed on to competitors by Ooredoo*."

2.6.7.4 Qnbn's response to the first Consultation Document

390. "*Qnbn agrees with the CRA proposal for the 'Documented cost incurred by Ooredoo' PROVIDED such cost do not exceed the duct blockage fees given in the IAA for clearing blockages in the different types of roads (see IAA schedule 4 clause 7*)."

2.6.7.5 CRA's position in the second Consultation Document

On Vodafone's comments

391. The CRA notes that it will be at the SPs' disposal to solve any issue that may arise in case any inefficiency is identified by the seeking operator during the provision of these services.

Proposed Decision

392. The CRA notes that the three stakeholders agree on the proposed approach by the CRA for the Successful and Unsuccessful Blockage Clearance products.

393. In conclusion, the CRA shall decide to keep the approach proposed in the First Consultation Document for "Successful and Unsuccessful Blockage Clearance products" services, which is "at documented cost incurred by Ooredoo".

2.6.8 Transportation charge product

First CD - Question 30: Do stakeholders agree with the CRA's proposed approach for Transportation charge product?

2.6.8.1 CRA's position in the first Consultation Document

394. CRA proposed to keep the currently applicable charge of 150 QAR/vehicle/day (or part thereof) for this service.

2.6.8.2 Ooredoo's response to the first Consultation Document

395. "*Ooredoo agrees*."

2.6.8.3 Vodafone's response to the first Consultation Document

396. "*Vodafone Qatar does not have strong objection with this charge*."

2.6.8.4 Qnbn's response to the first Consultation Document

397. "*Qnbn agree with the CRA's proposed approach for the Transportation charge product*."

2.6.8.5 CRA's position in the second Consultation Document

Proposed Decision

398. The CRA notes that the three stakeholders agree on the approach proposed by the CRA for the "Transportation charge product".
399. In conclusion, CRA shall approve the charge proposed in the First Consultation Document for "Transportation charge product", which is 150 QAR/vehicle/day or part thereof.

2.6.9 Miscellaneous Expenses product

First CD - Question 31: Do stakeholders agree with the CRA's proposed approach for the Miscellaneous Expenses product?

2.6.9.1 CRA's position in the first Consultation Document

400. CRA proposed to charge these products "at documented cost incurred by Ooredoo", based on the currently applicable approach.

2.6.9.2 Ooredoo's response to the first Consultation Document

401. "*Ooredoo agrees*."

2.6.9.3 Vodafone's response to the first Consultation Document

402. "*Vodafone Qatar has no objection to a time and material approach with documented cost, although we are concerned that they may not be reflective of an efficient operation and hence could lead to inefficiencies being passed on to competitors by Ooredoo*."

2.6.9.4 Qnbn's response to the first Consultation Document

403. "*Qnbn agree with the CRA 's proposed approach for the Miscellaneous Expenses product*."

2.6.9.5 CRA's position in the second Consultation Document

On Vodafone's comments

404. The CRA notes that it will be at the SPs' disposal to solve any issue that may arise in case any inefficiency is identified by the seeking operator during the provision of these services.

Proposed Decision

405. The CRA notes that the three stakeholders agree on the approach proposed by the CRA for the "Miscellaneous Expenses product".

406. In conclusion, CRA shall keep the approach proposed in the First Consultation Document for "Miscellaneous Expenses product", which is "at documented cost incurred by Ooredoo".

2.7 Review of the Wholesale Charges (Review Clause)

First CD - Question 32: Do stakeholders agree with the CRA's proposed review clause?

2.7.1 CRA's position in the first Consultation Document

407. CRA proposed to include in the Order approving the Wholesale Charges a review clause. This clause would allow SPs to request for a review of the Wholesale Charges subject to a material change in e.g. costs.

2.7.2 Ooredoo's response to the first Consultation Document

408. "*There are number of uncertainties that may affect the economy of Qatar and the cost inputs for Ooredoo and other Service Providers within Qatar in the near future, e.g. inflationary uplifts, cost of capital increase etc. These events represent potential triggers for a review of wholesale charges. Ooredoo therefore reserves its right to review all wholesale charges as required by the evolving economic circumstances*."

2.7.3 Vodafone's response to the first Consultation Document

409. "*Vodafone Qatar agrees that a review clause could be warranted to accommodate material changes. However this should be on an exceptional basis and should not constitute a back door to permanent renegotiation of charges*."

2.7.4 Qnbn's response to the first Consultation Document

410. "*Qnbn agree with the CRA's proposed approach for a review clause provided any revision is mutually agreed to before being applicable. Further any review should be on the basis of 24 months as some period of certainty on charges is both required and beneficial*."

2.7.5 CRA's position in the second Consultation Document

On Ooredoo's comments

411. The CRA confirms that the review clause shall provide the operator with the right to require a revision of the applicable charges. However, Ooredoo shall not be in position of introducing changes in the wholesale charges previously set, without the approval of the CRA.

On Vodafone's comments

412. The CRA also confirms that this clause is expected to go into effect only in extraordinary situations and always that any required change is supported by an objective justification and relevant cost data. If deemed appropriate by the CRA, interactions with stakeholders may also be required.

On Qnbn's comments

413. The CRA outlines that the revision of the wholesale charges shall not be subject to a mutual agreement between the requesting and the providing parts, and instead, the only approval by the CRA shall be sufficient.

Proposed Decision

414. The CRA appreciates Ooredoo's, Vodafone's and Qnbn's contributions and notes that the three stakeholders agree on the inclusion of a review clause.

415. In conclusion, in the Order approving the Wholesale Charges for the financial years 2018, 2019 and 2020, the CRA shall include a review clause stating "*Ooredoo, Vodafone or both may request for a review of the Wholesale Charges subject to a material change in network costs in relation to the relevant services which shall be no earlier than 12 months from the implementation date of this Order. Such a request shall be supported by an objective justification and relevant cost data. For clarification, principles which have been defined upon during the consultations stages will not be subject to review, for example, wholesale mark up, retail mark up, cost of capital etc*."

3 Part III: CRA's responses to the Second Consultation Document along with the final positions of the CRA informing the decision on the Wholesale Charges (ref. Order CRARAC 2018/05/08)

416. This Part:

416.1 Summarizes the responses submitted by the SPs to the Second Consultation Document;

416.2 Contains CRA's comments on the responses provided by the SPs;

416.3 Provides CRA's findings and the final position of the CRA.

3.1 Guiding Principles to set Wholesale Charges

3.1.1 Cost Base and Cost Standard

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

3.1.1.1 CRA's position in the second Consultation Document

417. The CRA opts for using a top-down model based on Historical Cost Accounting with Fully Distributed Costs (HCA/FDC), applying a forward-looking approach (i.e. projecting the HCA/FDC cost for the next years).

3.1.1.2 SPs further comments

418. SPs did not provide further comments.

3.1.1.3 CRA's finding and final decision

419. The CRA confirms the approach as proposed in the First Consultation Document (ref. paragraph 52 above) and opts for using a top-down model based on Historical Cost Accounting with Fully Distributed Costs (HCA/FDC), applying a forward-looking approach (i.e. projecting the HCA/FDC cost for the next years).

3.1.2 Non Discrimination and Proportionality Test (PT)

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

3.1.2.1 CRA's position in the second Consultation Document

420. To ensure that Wholesale Charges of products sold to Access Seekers are non-discriminatory in relation to the Network Cost of functionally similar products provided internally (to the retail arm of the SP), the CRA will apply the PT before translating the cost in wholesale charges.

3.1.2.2 SPs further comments

421. SPs did not provide further comments.

3.1.2.3 CRA's finding and final decision

422. The CRA confirms the approach as proposed in the First Consultation Document (ref. paragraph 66 above) and applies the PT before translating the cost in wholesale

charges.

3.1.3 Price / Margin Squeeze Test methodology (PMS)

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments

3.1.3.1 CRA's position in the second Consultation Document

423. The margin squeeze test shall be used by the CRA to ensure that competing SPs can replicate retail services provided by dominant SPs, by means of wholesale services acquired to them. For the avoidance of doubt, this test could also be used for approving the Tariffs and for assessing ex-post competition cases.

3.1.3.2 Ooredoo's response to the second Consultation Document

424. "*… Ooredoo cannot agree with inclusion of CRF in PMS test, as this approach completely lacks support in international regulatory precedence. Ooredoo notes that the CRA failed to provide relevant references to the international regulatory practice where the CRF would be used in PMS. Ooredoo thus asks the CRA to provide relevant reference to international practice in this respect. Moreover, if the CRA believes CRF it is needed to cover for inaccuracies in forecasting – then it should be included everywhere else, due to inaccuracies in forecasting or other uncertainties – this would imply all costs and benchmarking rates should be uplifted.*"

425. "*Ooredoo notes that the CRA in the referenced excel file (CRA/RAC-T/115/2017) performs MST for mobile services provided by Ooredoo. We want to point out that MST in case of mobile service is only relevant in cases when there is an MVNO in the market relying on the access to mobile infrastructure (for mobile origination services). We are not aware of any regulator that would perform the MST for mobile service in the market that is defined by infrastructure-based competition, as is the case in Qatar. ... The MST as performed by the CRA for Ooredoo mobile service is much stricter test of potential price abuse than the proper cross-subsidy test. ...*"

3.1.3.3 Vodafone's response to the second Consultation Document

426. "*Vodafone Qatar kindly requests the CRA to provide further details on the Price Margin Squeeze ('**PMS**') and its relevant parameters when applied for products like duct access, leased lines and fixed broadband. This is critical to ensure economic replicability by a new entrant and efficient investment. We note that, at present, the example referred to by the CRA relates to mobile and do not include any network cost.*"

3.1.3.4 CRA's finding and final decision

While this topic was already closed by the CRA in the Second Consultation Document, Ooredoo and Vodafone have submitted additional comments.

On Ooredoo's comments

427. On the CRF, the CRA reiterates that this parameter is utilized to mitigate the risks of forecasting costs and volumes.

428. The CRA is of the view that its approach is consistent with the best regulatory practices which require to adhere to the principle of caution when setting wholesale charges. The same approach was also used to set the wholesale charges for the years 2015, 2016 and 2017.

On Vodafone's comments

429. Regarding the inclusion of leased line and duct wholesale inputs in such test, at this stage the CRA is not concerned because of the high profitability of the leased lines shown by Ooredoo RAS. This leaves Vodafone with an ample margin for competing

with Ooredoo.

430. With regards to the consideration of broadband services in MST, the CRA notes that these services are out of the scope of this process.

Final Decision

431. The CRA confirms the approach as proposed in the First Consultation Document (ref. paragraph 80, 81 and 82 above).

432. Hence, the margin squeeze test described above has been used by the CRA to ensure that competing SPs can replicate retail services provided by dominant SPs, by means of wholesale services acquired to them. For the avoidance of doubt, this test could also be used for approving the Tariffs and for assessing ex-post competition cases.

3.2 Mechanism for setting the Wholesale Charges

3.2.1 Applicable timeframe

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

3.2.1.1 CRA's position in the second Consultation Document

433. The CRA will set the New Wholesale Charges for the calendar years 2018, 2019 and 2020.

434. The current Wholesale Charges shall be applied until the new charges are approved.

3.2.1.2 Vodafone's response to the second Consultation Document

435. "*For planning purposes, Vodafone Qatar requests that the CRA allows a period of 2 to 3 months from the date of issuance of the final decision before the new rates become applicable.*"

436. "*To remove uncertainty, Vodafone Qatar would like the CRA to clarify in its final decision that regulated charges shall remain in place beyond the three-year time period in the event that rates are not set before the end of the three-year period.*"

3.2.1.3 CRA's finding and final decision

437. While this topic was already closed by the CRA in the Second Consultation Document, the CRA confirms that it will set the New Wholesale Charges for the calendar years 2018, 2019 and 2020.

438. The Order approving the Wholesale Charges (ref. CRARAC 2018/05/08) specifies:

438.1 The date from when the approved wholesale charges will enter into force; and

438.2 The timeframe for the approved Wholesale Charges to remain in force.

3.2.2 Overall methodological approach

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

3.2.2.1 CRA's position in the second Consultation Document

439. The CRA will set the Wholesale Charges for the calendar years 2018, 2019 and 2020 striking a balanced solution among the various conflicting goals. Further details are provided in section 2.2.2.4.

3.2.2.2 Ooredoo's response to the second Consultation Document

440. "*Ooredoo is disappointed by the fact that the CRA has not reflected on Ooredoo's and Vodafone's concerns regarding the grave negative impact that the CRA's intended aggressive reduction in wholesale charges will have on the telecommunications sector, service providers and their shareholders and the long-term interest of end users in Qatar.*"

441. "*Ooredoo, in response to the CRA's first consultation document on Setting Wholesale Charges, provided an estimate of impact that the regulatory interventions proposed by the CRA would likely have on the total telecom market revenues and margins. … Ooredoo has updated these estimates and submits the amended impact calculations in the accompanying excel file.*"

442. "*… In summary should the CRA succeed in achieving its objectives behind the proposed regulatory interventions, we estimate that total market revenues (wholesale and retail) would drop by 2.56 B QAR*[31] *in cumulative terms over the next three years. This revenue drop would translate to the cumulative cash flow reduction of 2.35 B QAR over the same time period. … This cash flow is used by SP's to expand their operations, invest in new products and technologies, pay dividends and meet debt repayment obligations and thus would no longer be available for these critical activities. As service providers strive to meet their debt payment obligations and shareholder expectations, the revenue drop induced reduction in cash flow will make a cost reduction imperative. … Hence, the proposed regulation is posed to substantially impair future investment capacity of SP's and related customer benefits and lead to the reduction in dynamic market efficiency.*"

443. "*Implementation of any regulation should be preceded by the clear articulation of the objectives it aims to achieve and the identification of the market failure it aims to address. … We note that first consultation on wholesale charges completely fails to meet these criteria. In the second consultation the CRA attempted to provide some justifications for the proposed regulatory interventions. However, as this comes only after well-reasoned challenge from service providers, this attempt serves more as an excuse for contemplated regulatory intervention rather than as a well-articulated and thought through strategic objective. …*"

444. "*Given that there is no market failure at the retail level for mobile services, the reason for wholesale regulation is unclear and is contrary to stated CRA policy. Furthermore, the CRA's use of Article 29 of the Law as means to justify its intervention is an incorrect application of the law as this article concerns the regulation of retail tariffs – not wholesale charges. Whilst higher wholesale rates can feed into retail rates – there is no evidence that the mobile retail prices in Qatar are excessive. … It is Ooredoo's view that the CRA has not determined the market failure it seeks to address in this case or, if the regulatory remedy it proposes is the most optimum, and whether blindly following a uniform cost based formulae helps achieve the broader aims of the Law.*"

445. "*As explained and substantiated by detailed data evidence in below, the proposed reductions in termination rates will have an immediate negative impact on service providers, which will result in a negative impact on customers (in terms of higher prices for international calls) and the wider economy (in terms of reduced investment levels and reduction of benefits that unimpaired levels of investment would yield otherwise in the absence of this regulation) in the medium and longer term. …*"

446. "*Ooredoo believes the CRA regulation is ill thought out and ill timed. The economic blockade has already negatively affected the sector, with service providers suffering from reduced roaming and international calling revenues. …*"

447. "*Furthermore, the definition of sound regulatory remedy should be based on the*

[31] These calculations assume that the CRA will adopt Option 1 for regulation of termination rate for inbound international voice calls.

*principle of proportionality. As stated in the Accounting Separation Framework document published by Saudi Arabia regulator referenced by the CRA's Consultation Document: '**Principle of Proportionality** shall mean that the [regulatory] measures applied in a decision are appropriate and limited to what is necessary to achieve the pursued regulatory objective.'…"*

448. "*In its first consultation document, the CRA failed to identify the specific market failures it aims to address by the proposed steep reductions in termination rates and did not even attempt to quantify the costs and benefits of the proposed regulations. The CRA uses article No. 29 from the Law to justify its position that termination rates should be 'low cost' when in fact this article makes no reference to such a requirement. Furthermore, the application of this article is clearly intended for the retail market.*"

449. "*With the respect to the fixed voice termination rate reduction and benefits this proposed drop shall deliver we note that the CRA has not attempted to define the specific market failure it aims to address nor has demonstrated any causal relationship between the proposed regulation and the ideal market outcome nor has it not provided any quantification of the benefits this regulation aims to deliver. …*"

3.2.2.3 Vodafone's response to the second Consultation Document

450. "*Vodafone Qatar considers that this question is not closed. Regrettably the arguments and comments made by Vodafone Qatar have been largely ignored by the CRA. Our view, supported by the ARF is that the CRA is not required under the ARF to mechanistically set wholesale charges to cost. The CRA is required under the ARF to take into account other duties and hence there is a margin of appreciation when setting wholesale charges, they do not need to be at cost. A key consideration for the CRA in applying its judgement is whether the charge relates to mobile or fixed given the stark contrast between mobile and fixed markets*".

451. "*The market dynamics and situation in fixed are indeed completely different with access to bottlenecks, such as duct, still a distant reality. We believe that for fixed bottlenecks close alignment of rates with cost is the correct approach as this will foster efficient investment and competition in downstream markets while avoiding inefficient duplication of infrastructure. …*"

452. "*The situation in mobile is completely different where good market outcomes, thanks to competition, are observed in terms of prices, quality of services and innovation. In setting MTR, the CRA must exercise its discretion as granted to it by the ARF and consider a range of factors, including the potential benefits of its proposals. Our view, based on empirical evidence from Qatar is that benefits in terms of further price decline (Qatar compares well with its peers and with OECD countries) and increased demand for domestic calls are likely to be minimal. Those minimal benefits must be balanced against key considerations affecting the mobile sector, including:*

452.1 *flat underlying revenue growth;*

452.2 *difficult geopolitical and macroeconomic environment negatively impacting growth opportunities and revenues such as roaming;*

452.3 *the industry having to incur additional cost and face significant additional operational complexities as a result of the external environment; and*

452.4 *dynamic efficiency gains which come from investment in new technologies. 4G brought dramatic increase in throughput and significant decline in cost per MB. A new technology cycle is about to start with 5G and lowering further MTR does not support the Government objective to ensure that 5G is introduced in the country as early as possible. Priority should be given to long term efficiency gains and not to potential short term price reduction.*"

453. "*In CD#2, the CRA attempts to justify the further lowering of MTR on the basis that lower MTR leads to increased competition as measured by the HHI. We invite the CRA to consider data from Qatar which shows that there is no such relationship in Qatar –*

see below graph which demonstrates that the HHI in Qatar has remained fairly constant while MTR have dropped significantly."

Source: Vodafone Qatar analysis – Q1 2015 = 100

454. "*Overall Vodafone Qatar submits that the CRA must recognize and take into account the overarching objectives placed on it in the Telecommunications Law and the Emiri Resolution in setting MTR. The CRA is not required to mechanically set the end of the glide path for MTR at cost. …*"

3.2.2.4 CRA's finding and final decision

On Ooredoo's comments

455. On the Excel file submitted and the impact that reductions in wholesale charges will have on the telecommunication sector and the negative consequences that such regulation will ultimately yield for service providers, customers, and the wider economy in Qatar, the CRA outlines the following:

455.1 **On national wholesale services**. The CRA reiterates that the weight of national regulated wholesale services is not significant (around 1% of revenues over total industry revenues, as indicated in section 1). Additionally, considering that in a two-way interconnection service, wholesale costs incurred by the national industry are netted, the reduction in revenues would equally be reflected in the incurred costs, without substantial impact on the profit. This fact has been ignored by Ooredoo in its arguments.

455.2 **On national retail services**. Even though the calculation for the impact on retail revenues for national services submitted by Ooredoo presents a number of assumptions that could be somehow questionable, the impact on Ooredoo's revenues calculated for the period 2018-2020 is million QAR what represents a 1% of the total revenues expected by the operator in that period. Therefore, the CRA considers that the reduction of wholesale charges is not likely to introduce any damage on the operator's performance. On the contrary, customers might benefit from the reduction of the retail prices.

455.3 **On the termination for inbound international calls**. The CRA has extensively analyzed comments provided by SPs and has finally decided not to regulate this service (ref. section 3.3.4.4 below) for the time being.

456. On the objectives and benefits of the proposed regulation, the CRA outlines that they were already explained throughout the Second Consultation Document. Moreover, since the setting of wholesale charges based on a cost-oriented approach is an obligation imposed by the Qatari Telecommunication Law, it is worth noting that the CRA is basically fulfilling its obligations as regulatory authority. The CRA also outlines that Ooredoo has enjoyed in the past years a surplus in revenues perceived for wholesale services, as it is demonstrated in the following exhibit for the MTR:

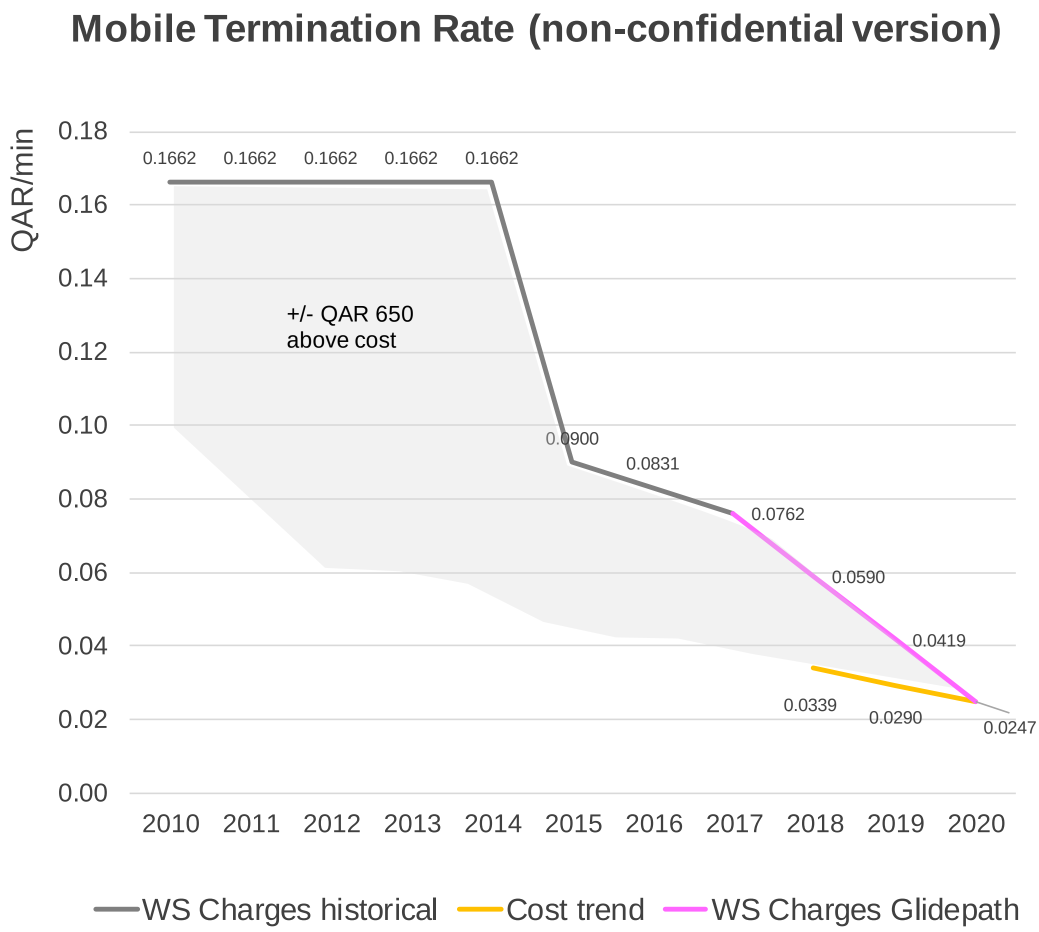

Figure 3.1 MTR vs cost [Ooredoo's RAS and CRA calculation]

457. It is worth noting that, as a consequence of the application of the glidepath, a similar situation will take place in the future period 2018-2020. The glidepath mechanism has been considered appropriate by the CRA to strike a balance between objectives of the regulation and to avoid distortions in the Qatari market (ref. section 3.2.4).

458. On the fact that no market failure has been identified, the CRA outlines that, according to outcomes of the 2016 MDDD Review process, Ooredoo was designated as DSP (Dominant Service Provider) in a number of markets due to, among others, the existence of high entry barriers in the Qatari telecom market. This would be mitigated by cost oriented wholesale charges.

459. On the setting of wholesale prices based on a cost-oriented approach, the Law clearly states that rates must be cost-based, as in fact demonstrated by Article 50 of the By-law, and the CRA sees no room for further discussion.

460. Additionally, the CRA also refers Ooredoo to responses given in the Section 3.3 below, for each of the regulated wholesale services, where further details and explanations have been submitted.

On Vodafone's comments

461. On the setting of wholesale prices based on a cost-oriented approach, the CRA refers to the response given above to Ooredoo.

462. Regarding Vodafone's view that different approaches could be used for fixed and mobile services, the CRA outlines that Article 50 of the By-law does not differentiate between the fixed and mobile services, being the obligation of setting cost-oriented wholesale charges required for both markets.

463. In addition, the CRA notes that the application of the glide-path mechanism along with the cost of capital set at the highest possible value (ref. Order CRARAC 2017/12/06) allows the CRA to meet other objectives (e.g. development of the sector, incentivize the investments, etc.) than the sole cost orientation (ref. chart above in point 456).

464. On the HHI Index, the CRA notes that when reaching a stable duopoly, the variations in HHI are not material, being the entrance of new operators the typical approach to improve competition levels.

Final Decision

465. In conclusion, the CRA has set the Wholesale Charges for the calendar years 2018, 2019 and 2020 based on the methodological approach described in the First Consultation Document (ref. section 2.2.2.1) and striking a balanced solution among the various goals of regulation.

3.2.3 Use of benchmarks

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

3.2.3.1 CRA's position in the second Consultation Document

466. The CRA will use relevant benchmarks: As a cross-check; and / or where information is not reliable or available.

3.2.3.2 SPs further comments

467. SPs did not provide further comments.

3.2.3.3 CRA's finding and final decision

468. The CRA has used relevant benchmarks as a cross-check and / or where information is not reliable or available.

3.2.4 Application of glide paths

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

3.2.4.1 CRA's position in the second Consultation Document

469. The CRA shall set the Wholesale Charges for the calendar years 2018, 2019 and 2020 based on a mechanism of glide path.

3.2.4.2 SPs further comments

470. SPs did not provide further comments.

3.2.4.3 CRA's finding and final decision

471. The CRA has set the Wholesale Charges for the calendar years 2018, 2019 and 2020 based on a mechanism of glide path.

3.2.5 Alternative approaches

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

3.2.5.1 CRA's position in the second Consultation Document

472. For the coming price control period, the CRA shall abstain to adopt zero-rating or alternative approaches.

3.2.5.2 Zero Rating

3.2.5.2.1 SPs further comments

473. SPs did not provide further comments.

3.2.5.2.2 CRA's finding and final decision

474. The CRA has not used the 'zero rating' (or 'bill-and-keep') mechanism for the regulation of wholesale services for the calendar years 2018, 2019, 2020.

3.2.5.3 Other approaches

3.2.5.3.1 SPs further comments

475. SPs did not provide further comments.

3.2.5.3.2 CRA's finding and final decision

476. The CRA is not happy with the lack of alternatives proposed by the SPs. However, for the coming price control period, the CRA has not adopted alternative approaches.

3.3 Wholesale Charges: Conveyance Services

3.3.1 Fixed Call Termination Service to Geographic Numbers

Second CD - Question 1 - FTR: Which of the options proposed by the CRA (1 or 2) do you suggest to use and why?

3.3.1.1 CRA's position in the second Consultation Document

477. The table below shows the 2 options of Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale charges, which pass the PT (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0119	0.0063	0.0006
Change to previous year			-32%	-47%	-90%
Option 2 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0150	0.0125	0.0100
Change to previous year			-14%	-17%	-20%

Table 31 Fixed Call Termination Service to Geographic Numbers – Wholesale Charges [CRA calculation]

478. The CRA is minded to set the Wholesale Charge for this service consistent with the Option 1 above, as;

478.1 The same approach was used to set the Wholesale Charge for the years 2015, 2016 and 2017;

478.2 The Wholesale Charge would be forward looking from a technical and economic perspective, anticipating the convergence of the Fixed and Mobile Networks, which process is on-going;

3.3.1.2 Ooredoo's response to the second Consultation Document

479. "*As a matter of fact, Ooredoo sells the fixed voice calls at a zero marginal price and its access service for standalone voice lines is also priced below cost and is subsidized from other Ooredoo's services.*"

480. "*The CRA thus appears to be very selective in the implementation of the specific articles from Law No. 34. While the CRA is adamant about implementing Article 29 (Excessive fees) of the Law it continues to ignore Article 37 (Universal Service) of the Law and its responsibility to implement Universal Service Policy. The fact that the CRA decided to approve Ooredoo's fiber tariffs only under the condition that broadband data services from relevant market M1c generate enough margin to cover the Ooredoo's loss from standalone voice services cannot be considered a formal Universal Service Policy or adequate resolution of access deficit. …*"

481. "*Ooredoo thus in the case of fixed termination rate regulation observes striking misalignment between market reality and the guiding principles the CRA has set to follow in setting wholesale charges, and which it outlined in section 45 and 46 of the first consultation document: 'In a perfectly competitive market, prices should be naturally driven towards costs when meeting the demand … It is also often observed that competitive pressures alone are not sufficient to ensure that new entrant operators have access to interconnection services at a fair price that allows them to compete with the incumbent's operations'. '**Consequently, the regulation of Wholesale Charges is usually necessary in order to promote competition or to approximate it in the telecommunications sector.**' We note that Vodafone and Ooredoo have already established fixed network interconnection and are not disputing rates for fixed*

call termination services. There is also no need to further reduce retail prices for retail fixed voice services as these services are already sold below costs. …"

482. "*In case the CRA decides to regulate this service regardless of the above comments, Ooredoo's position is that the CRA should adopt Option 2 to enable Ooredoo to recover the cost of this service. The mobile switch is the only connection between Ooredoo and Vodafone, so the call has to be passed to the mobile network before being transferred to the Vodafone fixed network. For a direct connection to the Vodafone fixed network both companies would have to invest in additional connections, and as the volume of calls is expected to be low, the unit cost of this would be much higher than using the mobile switch. There are no plans to change this interconnection solution in the future.*"

3.3.1.3 Vodafone's response to the second Consultation Document

483. "*We refers the CRA to our Submission dated 12 November 2017 and in particular to our points on*:

    483.1 *the magnitude of the difference between an on-net call and two termination charges (paragraph 29), and hence the delta between Option 1 and Option 2; and*

    483.2 *the level of FTR proposed by the CRA relative to benchmarks with CRA FTR 2020 proposal being a quarter of the current EU average (paragraphs 30-31 and graph page 8).*"

3.3.1.4 CRA's finding and final decision

On Ooredoo's comments

484. On the cost recovery, Ooredoo is very well aware that the CRA approves Retail Tariffs ensuring the profitability of the fiber broadband access network as a whole. However, nothing prevents Ooredoo to propose a price increase of standalone retail fixed voice services.

485. On the current technical interconnection solution for fixed call termination, agreed between Ooredoo and Vodafone, the CRA outlines again that the evolution of Ooredoo's network towards an integrated network, where fixed and mobile calls will follow the same routing, will produce lower cost per unit.

On Vodafone's comments

486. The CRA refers Vodafone to responses given in the Second Consultation Document (ref. section 2.3.1.4).

Final Decision

487. The CRA has decided to set the Wholesale Charge for this service consistent with the Option 1 (which passes the PT) as:

    487.1 This approach follows the principle of non-discrimination and is aligned with CRA's scope to create a fair competitive field, permitting the OLOs to compete with Ooredoo. This approach is also forward looking given that Ooredoo is installing a unified network, where fixed and mobile calls will be routed in the same way. Hence, in the medium term the current routing will be obsolete and cost per unit will decrease from the current one (ref. Option 2). It is also worth noting that this option is based on the Audited RAS of Ooredoo (i.e. Retail internal cost for fixed call). In addition to that, under the Option 1, the CRA has allowed the FTR to be higher than the Retail internal cost for a fixed call, having introduced a leeway of 20% (ref. section 2.1.2 above).

    487.2 The same approach was used to set the Wholesale Charge for the years 2015, 2016 and 2017 (ref. CRA Order 2015/31/05F).

    487.3 Regarding the impact of the proposed reduction in the FTR, the CRA has evaluated the weight of revenues generated by wholesale services over total revenues of Qatari SPs. The revenues generated by the FTR have very low relevance (around 1% of the total wholesale revenues, ref. Figure 1.1). Hence, the CRA is confident that the proposed charges will neither introduce any material distortion in the market nor substantially affect the revenues of the SPs.

488. The table below shows the Wholesale Charges approved by the CRA, including the new cost of capital (10.45%).

		Previously approved charges	Newly approved charges		
		2017	2018	2019	2020
Option 1 – Wholesale charges, which pass the PT (with Glide Path)					
Fixed Call Termination Service to Geographic Numbers	QAR/min	0.0175	0.0119	0.0063	0.0006
Change to previous year			-32%	-47%	-90%

Table 32 Fixed Call Termination Service to Geographic Numbers – Wholesale Charges [CRA calculation]

3.3.2 Mobile Call and Video-Call Termination Service

Second CD - Question 2 - MTR: Do stakeholders agree with the CRA's proposed Wholesale Charge for Mobile Call and Video-Call Termination Service?

3.3.2.1 CRA's position in the second Consultation Document

489. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
QAR/min		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Mobile Call and Video-Call Termination Service	QAR/min	0.0762	0.0561	0.0360	0.0158
Change to previous year			-26%	-36%	-56%

Table 33 Mobile Call and Video-Call Termination Service – Wholesale Charges for consultation [CRA calculation]

3.3.2.2 Ooredoo's response to the second Consultation Document

490. "*In response to the SP's comments regarding this mechanistic approach to rate setting and in absence of the quantification of benefits the proposed reduction in mobile termination is supposed to yield, the CRA in the section 4.2.2.4*[32] *of the second consultation document attempted to justify the proposed steep MTR reduction by asserting causality between MTR reduction and increase in competitiveness (measure by HHI) and pointing to the increase in customer benefits in terms of lower prices and the increased volume of mobile voice calls. … We see major shortcomings in the CRA's conclusions … and as a result we have to conclude that the CRA has failed to provide sound a regulatory and economic justification for this market intervention.*"

491. "*… Regulation of MTRs is relevant when there is an asymmetry of mobile operator market shares and power – and there is concern that the dominant operator uses higher MTRs to accentuate club effects, which are to its advantage. In Qatar, the interconnection traffic between Ooredoo and VFQ is more or less balanced and by CRA order, there are no on-net and off-net retail price differentials that would allow for*

[32] Ooredoo refers to the point 101.1 in this Document.

accentuation of network effect. Furthermore, both service providers have argued that the CRA should not interfere in this market. The same rational that existed in the EU does not exist in Qatar."

492. *"There does not seem to be any economic or social support for the CRA's desire to regulate these termination rates at this time. Furthermore, neither SP is complaining about the existing negotiated agreements. … It is only when service providers cannot agree on the terms and conditions that they seek regulatory intervention. We note that a similar process is followed in Kuwait and Bahrain and that the Telecommunications Law in Qatar foresees application of similar process (refer to the Law articles 18 and 20). We note that these cases apply where there is no SPs is designated as dominant, which is the case of mobile relevant market in Qatar. "*

493. *"In Figure 2 on the page 18 of Consultation Document the CRA shows that the reduction in MTR is associated with an increase in competitiveness, captured by a decline in Herfindahl Hirschman Index (HHI), observed on the sample of OECD countries. The use of HHI in a duopoly market is not really appropriate. In any case there will be a host of factors that would determine the HHI, none of which may be related to the MTR. The influence of these additional factors will vary over time. So using examples of changes to MTR over time must first rule out changes to network coverage over time, must rule out distortionary regulatory instruments that may help increase the competitive ability of smaller entrants[33]; or other pro-consumer regulatory instruments, such as the introduction of MNP, shorter consumer contracts etc., which would all contribute to the ability of smaller operators to capture market share from the larger, more heavily regulated operator. The CRA must first remove these externalities before it can claim a causality link in the HHI from changes in MTR."*

494. "*The data below demonstrates that there is no causal relationship between MTR and competitiveness. …*"

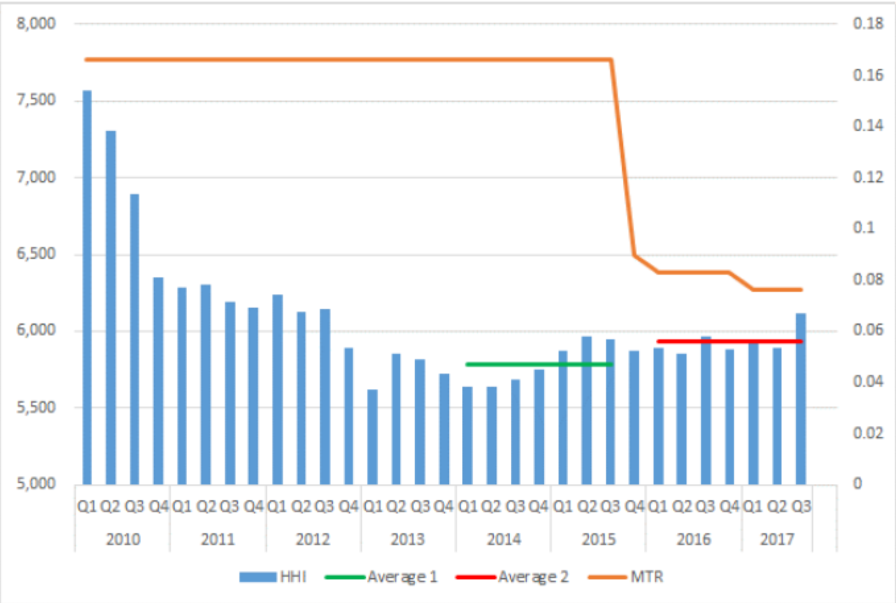

Figure 1: Lack of causality between MTR and HHI – Qatar

495. "*The HHI for mobile market in Qatar has declined significantly during the time period of stable MTR (Q1/2010 – Q3/2015). Moreover when comparing a period of seven quarters before and after the MTR was reduced in Qatar in October 2015, as an*

33 Consider the following example of regulatory induced changes to HHI. In the UK, the regulator effectively gave EE a head start with rolling out 4G. This resulted in customers switching to EE, and its market share increasing relative to the other dominant operators. This kind of market intervention will increase the HHI – but has nothing to do with the MTR rates.

outcome of Wholesale Charges Regulation, we see that the average value of HHI has actually slightly increased after MTR declined (refer to the green and red lines in the Figure 1). This effectively disproves the hypothesis suggested by the CRA that the drop in MTR is required in order to increase competitiveness (i.e. decrease the value of HHI) .... "

496. "… *Another problem with HHI is that its value minimization does not automatically guarantee maximization of market efficiency. There is a host of theoretical and empirical economic studies indicating that the relationship between innovation / investment and competitive intensity follows an inverse U-shape curve. Economic research demonstrates that both markets with too little and markets with too much competition may generate weak innovation performance. Especially in industries with significant sunk costs (e.g. telecommunications), empirical studies have shown that loose oligopoly rather than perfect competition is most conductive to investment and innovation*[34]. "

497. "*Ooredoo does not dispute the fact that a drop in MTR allows for further reductions in retail prices. However, Ooredoo cannot agree with the CRA's assertion in section 115.3*[35] *of the consultation document stating '… the increase in traffic tends to compensate for reduction of retail prices'. …* "

498. "*The CRA attempts to underscore the negative impact that the reduction in MTR and retail price for mobile voice calls can have by painting a false picture with selective use of Ooredoo mobile voice termination traffic data in Figure 6 of the Consultation Document. Based on a trend of MTR's and mobile termination voice volumes for time period of 2014-2017 the CRA aims to create an impression that the decline in MTR's has stimulated rapid increase in national mobile call traffic from Ooredoo to Vodafone Qatar as it has increased faster than population growth. … The actual 2017 number is much lower than forecasted. … There has been significant increase in the volume of mobile termination call traffic even in the time period when the MTR has been constant. In fact, during the time period 2010-2014 (before MTR reduction) this volume increased on average by 73% per annum (much faster than population growth in Qatar). This annual growth has actually dropped to only 13% for the period 2015-2017, i.e. the period affected by the MTR reduction. …*"

499. "*The CRA's selective use of data that suggests that lower MTR's leads to higher usage is misleading. … Reductions in MTRs in mature markets cannot automatically be assumed to result in higher volumes of usage – certainly not to the extent that the reductions offset the lost revenues".*

500. "*As a matter of fact, available data from EU and Qatar demonstrate that retail price reductions in mobile voice calls lead to declines in retail mobile call revenues to the degree that even increasing retail revenues from mobile data service cannot prevent total telecommunication revenues (and margin) decline. … Moreover, as Figure 3 shows, the EU also lags significantly behind the US in terms of total telecom revenues even though its population is smaller than that of the EU. As demonstrated in Figure 5 below, during the same time period 2013-2017, the revenue drop in the EU has resulted in a significant decline in terms of both profitability (EBITA) and investments (CAPEX) and that the similar gap between EU and US as seen in terms of revenues can be observed as well in terms of profitability and investments. It is important to note that the US mobile markets operate under receiving party pay principle and hence the termination rates are not regulated, instead prices for incoming calls are freely set by SPs. As highlighted above the right to voluntarily negotiate interconnection contracts*

[35] Ooredoo refers to the point 101.3 in this Document.

is essential premise in numerous regulatory jurisdictions.“

501. “*We note that the historical gap in investment performance between the US and the EU has already translated to the current gap in related market outcome and customer benefits in the form of a much lower penetration of 4G service in EU compared to that of the US or Qatar*[36]*. Hence, if we assume the CRA’s position that MTR reduction leads to corresponding reduction in retail prices, this market outcome demonstrates that MTR reduction can also lead to the reduction of future customer benefits via reduced investments in innovation and new technologies. …*”

502. “*The more general trade-off between higher prices (reduction in static efficiency) and higher investment (enhancement in dynamic efficiency) has also been confirmed in the empirical study by Christos Genakos, Tommaso Valletti, Frank Verboven ‘Evaluating market consolidation in mobile communications’ CEPR Discussion Paper No. DP12054, 22 May 2017*[37]*. …*”

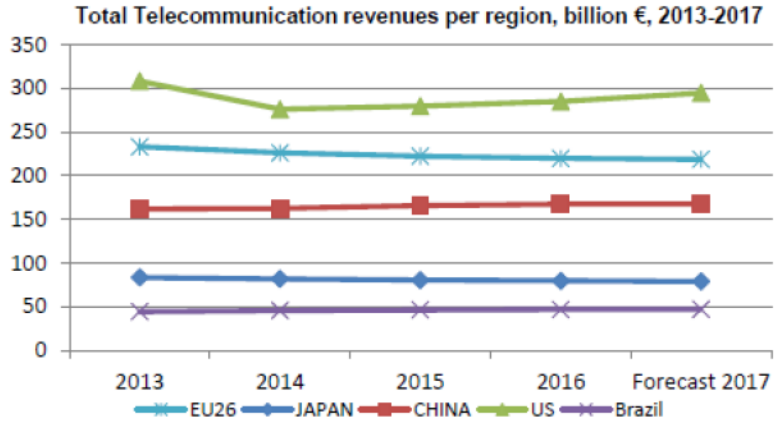

Figure 3: Telecommunication revenues decline fastest in the EU region despite increase in mobile data revenues

36 By the end of 2017, 4G penetration in EU stood at 43% while for USA at 75%. (Source: Ovum WCIS World Cellular KPI’s. 4G penetration is measured in terms of 4G enabled devices on a 4G in service network.) Ooredoo internal data show that ✂ of Ooredoo mobile subscriber actively used 4G services as of December 2017.

37 The summary of this article can be found on: http://voxeu.org/article/investment-and-market-consolidation-telecoms

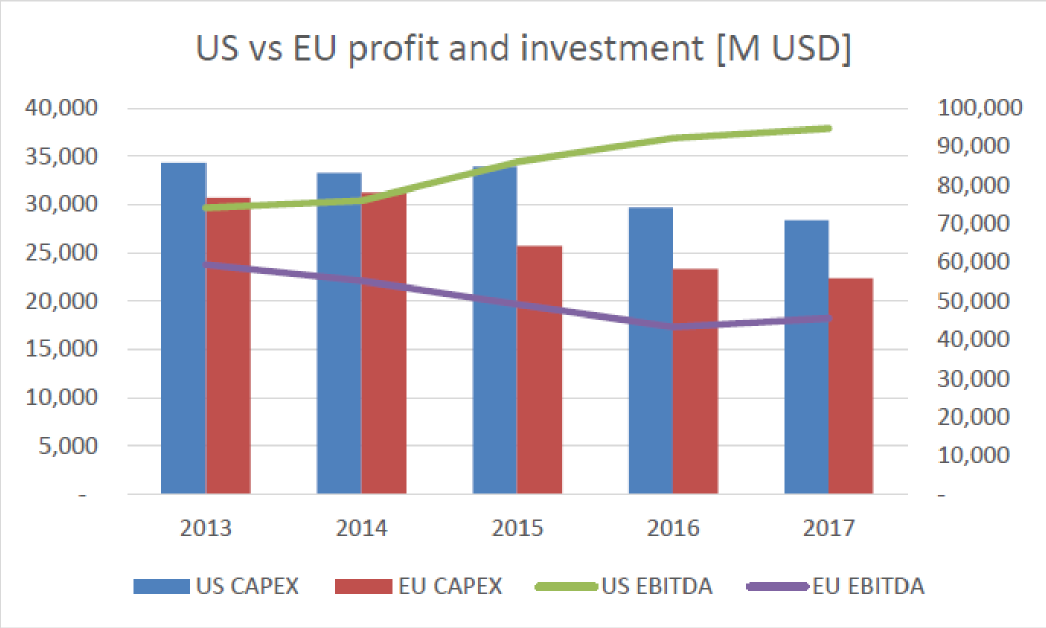

Figure 5: EU lags behind US in terms of telecom sector's profit and investments
Source: Ovum WCIS World Cellular KPI's

503. "*Moreover, the similar revenue trends seen in EU area can already be observed in Qatar as shown in Figures 6 and 7 below. While retail price reduction for national mobile voice calls has led to the increase in demand and hence in the volume of national mobile voice calls this increase has not been large enough to compensate for the decline in retail prices and has resulted in a decline in national mobile voice call revenues despite an increase in the number of mobile subscriptions on Ooredoo's network[38]. Furthermore, as demonstrated by Figure 7 below, a drop in mobile termination rates in 2015 was followed by stagnation and a subsequent decline in total telecommunications service revenues. The drop in mobile voice revenues has thus resulted in overall decline in national mobile revenue (voice + data revenues for Ooredoo and Vodafone) as the increase in mobile data revenue has failed to compensate for a drop in mobile voice revenues. … It appears that the CRA for the sake of a relatively minor customer benefit (partial increase in volume of mobile calls) does not mind sacrificing a substantial loss of future revenues and margins and thus impairing the future investment capacity of the SPs in Qatar and related consumer benefits.* "

Figure 6: Mobile Voice Revenues Declined as Retail Price Declined

Figure 7: Total national mobile (voice + data) revenues in Qatar started to decline after reduction in mobile termination rate in 2015.

504. "…*Ooredoo notes that the CRA has as part of the latest MDDD process concluded*

[38] This data is specific to Ooredoo network and are available to the CRA via MDDD reports submitted to the CRA by Ooredoo on quarterly basis.

that relevant retail mobile markets are competitive. Hence, as per the CRA's conclusion that market forces alone should ensure efficient market outcome in mobile markets. The retail price benchmark study published by the CRA in 2017 does not indicate that there is a market failure in terms of 'excessively' high mobile retail prices[39], which would serve as grounds for proposed MTR regulatory intervention. Moreover, the 4G service penetration (on Ooredoo's) network is higher than that of the EU or the US. Ooredoo had also already introduced the VoLTE service prior to the publication of the CRA's consultation document contrary to the concerns raised by the CRA in this respect[40]. ..."

505. "*Based on the above evidence we conclude that dramatic MTR reduction proposed by the CRA is posed to have a tangible detrimental impact on the future benefits of mobile subscribers and the overall welfare the ICT sector in Qatar can generate, which is likely to outweigh the limited benefits the CRA seeks to achieve. ….*"

506. "*We conclude that in the context of current and emerging market structures the further MTR reduction is an obsolete regulatory measure likely posed to produce negative net impact on the overall market efficiency. …"*

3.3.2.3 Vodafone's response to the second Consultation Document

507. "*Vodafone Qatar does not agree with the proposals of the CRA and calls on the CRA to adopt a more reasonable approach to MTR reduction, if any, taking into account:*

  507.1 *Cost: MTR should not be set below reasonable cost;*

  507.2 *Benchmark: MTR should remain in line with benchmarks;*

  507.3 *Current market outcomes and uncertain benefits: prices in Qatar compare well and there is limited scope for further increase in domestic traffic;*

  507.4 *Current geopolitical and macro-economic context;*

  507.5 *Industry transformation; and*

  507.6 *The approach permitted by the ARF.* "

Estimates of MTR cost

508. "*We have estimated our MTR cost using a Top-Down Historical Cost Accounting with Fully Distributed Cost ('**TD-HCA-FDC**') approach. Our high level model has involved the following steps (see details in the Excel file provided as requested by the CRA):*

  508.1 *Identification of cost information;*

  508.2 *Removal of irrelevant cost;*

  508.3 *Calculation of return on capital employed;*

  508.4 *Traffic analysis; and*

  508.5 *Allocation of cost to MTR and derivation of unit cost.* "

Model results and commentary

509. "*Our estimates are set out in the below table. It shows that the CRA's proposal based solely on Ooredoo cost at this point in time would lead to MTR significantly below our cost (CRA proposal of 0.0158 vs our cost of ✂ by 2020). This would lead to a significant under-recovery of cost and will conflict with Article 19(1) of the Telecommunications Law in so far as 'low cost interconnection' obviously does not mean below cost interconnection charges. Further by setting MTR below Vodafone Qatar's cost, the CRA will be failing to meet its objective set out in Article 2 of the Telecommunications Law which include amongst others encouraging competition and*

39 Refer to report published at the CRA web site: http://cra.gov.qa/en/document/international-retail-price-benchmarking-report

40 The CRA's argument in section 200 that: "very high margins for traditional interconnection services would provide limited incentives for migrating to newer and more cost-efficient technologies such as, VoLTE (Voice over LTE)" is thus simply not valid.

sustainable investment. "

MTRs	FY 2017	FY 2018	FY 2019	FY 2020
CRA proposal	0.0762	0.0561	0.0360	0.0158
Vodafone Qatar MTR cost				

Benchmarks

510. Vodafone has provided equivalent comments to those submitted by the operator in its responses to the First Consultation Document (ref. 2.3.2.3).

Current market outcomes and potential benefits

511. "*The expected consumer benefits of the proposed MTR cut are not clear and far less obvious than suggested by the CRA.*"

512. "*In terms of market outcomes, the own benchmarking of the CRA*[41] *shows that mobile markets in Qatar are delivering strong outcomes for consumers with prices comparing favourably with its peers in the region and well with OECD benchmarks. The Report also shows that Vodafone Qatar is consistently cheaper than Ooredoo. ….*"

513. "*Vodafone Qatar does not dispute the proposition that reductions in MTRs when taking place from a very high level, could have a positive effect on consumer surplus in terms of driving higher demand and lower retail prices. However the question is now what could be the incremental benefits going forward given the already low retail prices and demand characteristics.*"

514. "*We have looked at the empirical relationship between MTR and domestic mobile traffic using actual data submitted to the CRA on a quarterly basis. To control for the effect of change of customer numbers on traffic, we have used traffic per subscriber as the relevant indictor. As can been since from the graph below there is no clear and systematic relationship between the level of MTR and domestic traffic per subscriber. Whereas MTR declined by 54% between Q2 2015 and Q3 2017, domestic mobile traffic per subscriber , i.e. it did not increase. Given current usage levels, the widespread use of free alternatives and the lack of a clear empirical relationship between MTR and usage in Qatar, Vodafone Qatar submits that there are limited and hypothetical benefits, in terms of higher demand from further significant decline in MTR.*"

Source: MDDD Vodafone Qatar data – 2015 Q2 figure = 100

Current geopolitical and macro-economic context

515. "*In setting MTR, the CRA must be cognisant of the current geopolitical and macro-economic context which is negatively impacting growth opportunities and revenues. …*"

516. "*Lowering MTR will further depressed overall industry revenues which is a key indicator affecting share prices and credit ratings. It could lead to increase in financing cost which in turn will need to be passed on to consumers.*"

Industry transformation

517. "*Another element which, in our view, should be taken into account by the CRA when setting MTRs are the structural changes observed in the industry. As we explained in*

[41] CRA, Qatar Telecom Pricing 2016 – International Benchmarking Report, comparing prices in Qatar with other GCC countries, released July 2017.

our Submission dated 25 May 2017the structural changes observed in the industry, and notably the exponential growth of data traffic relative to voice and our revenue mix which remain heavily dependent on voice revenue, called for a cautionary approach by the CRA in setting MTR."

518. "*The telecommunications industry is indeed in the midst of unprecedented changes which have profound implications for operators. For Vodafone Qatar specifically, our traffic and revenue mix has changed dramatically in the past few years and continues to do so. Key trends which have a significant bearing on the CRA's deliberations are:*

    518.1 *Mobile data has grown exponentially in the past few years: our network carried* ✂*.*

    518.2 *OTTs such as Whatsapp are impacting (voice and SMS) traffic and revenues. In FY2017 our international voice traffic* ✂ *and associated revenues* ✂*.*

    518.3 *As a consequence, about* ✂ *of the traffic carried by our network is data (using a 1 MB = 1 minute of voice conversion factor). However, revenues from data have not grown at the same pace to compensate for the erosion of voice revenues. As a percentage of services revenues, data represented* ✂ *in FY 2017 compared to* ✂ *in FY 2014.*"

519. "*These structural changes give rise to a real challenge to appropriately allocate cost between voice and data.*"

The approach permitted by the ARF

520. "*Please refer to the section above titled 'Overall methodological approach (CD#1 Question 5)'.*"

Conclusion on MTRs

521. "*For the reasons above, we do not support the CRA's proposal to drop MTR by 80% (from QAR 0.0762 to 0.0158) in a three-year time horizon as this would result in MTR falling well below our reasonable cost. … It will bring MTR in Qatar largely out of steps with benchmarks and will further depressed industry revenues in a challenging macro-economic and political context with uncertain net consumer benefits. The ARF requires the CRA to exercise its judgment when setting MTR to an acceptable level balancing the different objectives of the CRA assigned to it in Article 2 of the Telecommunications Law as they relate in particular to the promotion of the sector and investment. …*"

522. In addition, according to the Executive Summary submitted in the letter, Vodafone states: "*Regarding MTR, we disagree with the proposed confirmation of MTR cut. We have developed a cost model which shows that the CRA's proposal would result in MTR well below our reasonable cost in 2020 and completely out of step with benchmarks. This would be contrary to various provisions of the Applicable Regulatory Framework ('**ARF**'), including the promotion of sustainable investment. We estimate the impact to be in the range of QAR* ✂ *over three years alone, this represents about* ✂ *of our annual revenues. …*"

3.3.2.4 CRA's finding and final decision

On Ooredoo's comments

523. On the argument that the CRA should not interfere in this market, the CRA first notes that this proceeding is foremost aimed to ensure compliance with the requirement of cost oriented wholesale charges. Specifically, Article 29 of the Telecommunication Law requires low cost interconnection charges for telecommunications services based on the cost of efficient service provision (ref. section 2.1.1.1 above). Therefore, CRA used operators' costs as reference for setting wholesale charges, applying adjustments when considered relevant.

524. Moreover, both Ooredoo and Vodafone, were designated as DSP (Dominant Service Provider) in the mobile termination market in outcome of the 2016 MDDD Review process. Thus, with the current update of the wholesale charges, the CRA is actually

implementing a measure already discussed and consulted on in a previous proceeding.

525. On the relationship between the MTR and the HHI Index, the CRA highlights that the comparison shown in the Second Consultation Document was not based on the Qatari mobile market (with only two relevant players), but on information from an extensive list of OECD countries where, in general, markets presented a higher number of operators.

526. The CRA acknowledges Ooredoo's comments on different regulatory instruments used in Kuwait and Bahrain (ref. point 492 above). However, contrary to Ooredoo, the CRA (as the very most majority of the Regulatory Authorities) sees high MTRs as a limit for the entrance of new operators.

527. On Ooredoo's comment "*Economic research demonstrates that both markets with too little and markets with too much competition may generate weak innovation performance. Especially in industries with significant sunk costs (e.g. telecommunications), empirical studies have shown that loose oligopoly rather than perfect competition is most conductive to investment and innovation*", CRA notes the following:

527.1 In the first place, regulatory objectives appear often conflicting. In this sense, while the increase in innovation and investments is a regulatory objective, it will not necessarily be the ultimate one. Ooredoo appears to propose to sacrifice competition in the market - generally meaning benefits for subscribers - to the benefit of the investment. However, the CRA has never indicated that this is the desired scenario.

527.2 The Figure 2 of the document mentioned by Ooredoo (ref. footnote 37 above) is as follows:

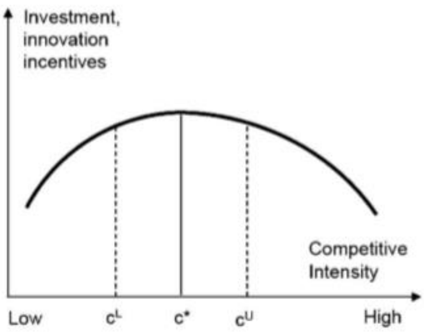

Fig. 2. Competitive intensity and investment/innovation incentives.

The Qatari mobile market, with two players (and in this sense presenting a reduced level of competition) would be currently placed at the beginning of the axis "Competitive Intensity". This indicates that the level of investments may be still far from the maximum. While according to the exhibit above, perfect competition could lead to similar levels of investments as the current state, it is worth noting that in Qatar there is still a long way to go in order to reach that scenario. In addition, before reaching that point, the Qatari mobile market should have passed through the maximum of the curve, being the optimal point.

528. The CRA and Ooredoo agree on the fact that a drop in MTR generally allows for further reductions in retail prices for voice services.

529. On the evolution of mobile termination traffic growth over the period 2010-2014[42] [43] and 2015-2017[44], the CRA draws attention that the comparison and arguments provided by Ooredoo are clearly forgetting the fact that Vodafone gained the majority of its market share during the former period when Ooredoo was still designated as DSP in the Relevant Retail Mobile Markets.

530. On the potential negative impact in revenue and profit due to the reduction of the MTR, the CRA reiterates that the MTR represents only around 1% of the total revenue. Hence, the reduction of the MTR proposed by the CRA is not likely to introduce any substantial damage on the revenue of the SPs. In addition, the traffic for mobile calls is nearly balanced between Ooredoo and Vodafone . Hence, the reduction in revenues would almost be equally reflected in the incurred costs without substantial impact on the profit. This latter statement, already included in the Second Consultation Document, has been ignored by the SPs in their responses.

531. On the evolutions observed in US and EU countries in terms of both investments and revenues, the CRA indicates that there is a relevant number of factors affecting the evolution of the telecom market in each country (e.g. economic and social developments, entry of new operators, etc.). The MTR reductions in EU are not proven to be the cause of decreasing investments and margins for European SPs over the period 2014-2017. In fact, a 55% increase in EU mobile investments was observed between 2009 and 2014[45], while average MTR dropped by 75%[46].

532. On comments related to the market situation (about the current level of retail prices, potential impact in revenues and investments, the future development of the 5G technology, etc.), the CRA reiterates its position that the proposed wholesale charges are not likely to introduce any damage on the operators' performance (ref. point 455 above).

533. The CRA highlights that, over the course of this proceeding, Ooredoo has updated its traffic volume forecasts for the mobile termination traffic. More specifically, Ooredoo has presented three different sets of data:

533.1 **First set**. In the initial information sent to the CRA (ref. paragraph 2 above), Ooredoo forecasted an increase of mobile termination traffic over the period 2017-2019, with a CAGR by value of 10%.

533.2 **Second set**. In response to the first CD (ref. paragraph 5 above), Ooredoo delivered an Excel file showing a slightly decline trend for the mobile termination traffic, with a CAGR by value of -3% over the period 2017-2020.

533.3 **Third set**. In response to the second CD (ref. paragraph 8 above), Ooredoo submitted an updated forecast showing a slightly increase trend for the mobile termination traffic, with a CAGR by value of +2% over the period 2017-2020.

The evaluation of the MTR with the above three set of data is shown in Figure 3.2 below.

On Vodafone's comments

534. On the model submitted by the operator and results produced, after having analyzed it, the CRA notes:

534.1 **Elimination of cost related to fixed services**
Vodafone has excluded a proportion of costs associated to fixed services from the different cost categories. The elimination is "*based on fixed revenues*".

[42] Constant MTR, with a 73% of annual growth in termination traffic

[43] It has also been noticed that the value for the year 2012 shown in the figure 2 submitted by Ooredoo does not match the value presented in the Excel file reported.

[44] Reduction of MTR, with a 13% of annual growth in termination traffic

[45] According to the estimations from the European Commission: "Assessment of the 2009 Termination Rates Recommendation and costing methodologies for estimating termination rates". Available at: http://ec.europa.eu/newsroom/dae/document.cfm?doc_id=40953

[46] "Termination rates at European level January 2017", available at: http://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/7095-termination-rates-at-european-level-janu_0.pdf

Even if this approach is simplistic, the CRA has performed a sensitivity analysis and noted that the impact of this approach on the cost of the MTR is very limited.

534.2 **Traffic forecast**

Vodafone has provided three sets of data. In this regard, it must be noted that even if the forecasts for all traffic services have been updated under the three submissions, special attention must be paid to the mobile data service:

a) **First set** of data employed an annual growth rate in the period 2017 – 2020 of ✂ for the mobile data service based, according to the operator, on its long-range plan. The CRA considers this assumption extremely conservative. Comparing to the global industry expectations and Vodafone's historical trend, the growth rate applied is completely misaligned with the reality of the market. This also contradicts Vodafone's statement that "*Mobile data has grown exponentially in the past few years: our network carried ✂ MBs in FY2017, compared to just ✂ MBs in FY2014"* (ref. point 518.1 above). This represents a CAGR of 143%[47].

b) **Second set** of data is consistent with data provided to the CRA for assessing the Transfer of Control of Vodafone. This shows an annual growth rate in the period 2017 – 2020 of ✂ for mobile data traffic, which is more credible.

c) **Third set** of data has been provided as part of the updated version of the model submitted by Vodafone responding to the second CD. Similar to the second set of data, this submission shows a growth rate of ✂ for the period 2017 – 2020 in the case of the mobile data traffic.

The evaluation of the MTR with the above three set of data is shown in ✂ ✂ Figure 3.2 below.

534.3 **Attribution of the cost to the services**

The entire cost base is allocated to the services based on equivalent minutes. The CRA notes that some of the cost of network elements could have been directly attributed to specific group of services (voice, SMS, data, etc.). However, the model is relevant for the CRA to check that the approved MTR is not below the cost as calculated by Vodafone itself.

534.4 **Duration of the license**

Vodafone has been granted with an extension of the duration of its mobile license (additional 40 years). The cost model initially submitted by Vodafone had not considered this extended duration of the license, which reduced the cost for the amortization of the license and, in turn, the cost of the termination service. However, in the updated version of the model provided by Vodafone (see third submission referred to in point 534.2 above), the effect of extending the mobile license has been considered.

535. On Vodafone's comments related to the benchmark, being the same as in the responses submitted by the operator to the First Consultation Document, the CRA refers to answers previously given (ref. section 2.3.2.4).

536. On comments related to the market situation, the CRA refers Vodafone to the responses given to Ooredoo (ref. point 532 above).

Final Decision

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[47] For instance, the telecom company CISCO, recognized internationally as reference in the forecasting of traffic consumption, expects a 65% of CAGR over the period 2016-2021 for the region of Middle East and Africa (ref. "Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2016–2021 White Pape". Available at: https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/mobile-white-paper-c11-520862.html). In addition to that, it is still more surprising to the CRA the low annual growth employed in contrast with the high expectations for data traffic consumption expressed by the own operator. According to the Head of Segment Marketing of Vodafone Qatar (ref. "Data consumption major driver for telecom growth" The peninsula Qatar, available at: https://www.thepeninsulaqatar.com/article/14/05/2017/Data-consumption-major-driver-for-telecom-growth), Vodafone Qatar expected in May 2017 a *"30 to 35 percent growth yearly on data traffic"*.

537. Article 29 of the Telecommunication Law requires low cost interconnection charges for telecommunications services based on the cost of efficient service provision (ref. section 2.1.1.1 above). Therefore, the CRA used operators' costs as reference for setting wholesale charges, applying adjustments when considered relevant.

538. The CRA also notes that, in March 2017, as part of this proceeding, information requests were addressed to the SPs, with the objective of gathering SPs' information about their future plans, and given the relevance for the CRA of such data when establishing the future wholesale charges. It is worth noting that no robust data was provided by the SPs at that time.

539. In the same context, the CRA highlights that, over the course of this proceeding, Ooredoo and Vodafone have constantly updated traffic volume forecasts.

540. The following chart shows the MTR calculated for Ooredoo and Vodafone based on the various set of volumes received along the process. It is clear that the level of the MTR is very dependent on the output volume:

Figure 3.2 Unit cost of Ooredoo's and Vodafone's mobile termination service (voice and video) based on the various data sets submitted [Source: CRA based on SPs' information]

541. In light of the above, the CRA has decided to set the MTR for the year 2020 at 0.0247 QAR/min, based on the new information provided by both operators. The following table shows the Wholesale Charges approved by the CRA, including the new cost of capital (10.45%).

		Previously approved charges	Newly approved charges		
QAR/min		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
Mobile Call and Video-Call Termination Service	QAR/min	0.0762	0.0590	0.0419	0.0247
Change to previous year			-23%	-29%	-41%

Table 34 Mobile Call and Video-Call Termination Service – Wholesale Charges [CRA calculation]

542. In comparison to the initial proposal of the CRA this results in an increase of termination costs in 2020 from 0.0158 to 0.0247 QAR/min (+56%). This is a very conservative approach that reduces risks that termination is below cost by 2020. The CRA also notes that new volumes proposed by Ooredoo are reasonable and in line with the historic trend. This level allows both Ooredoo and Vodafone to recover the full cost of the termination.

International Benchmarks

543. The MTR approved by the CRA for the **year 2018** is notably above the average and median of the benchmarked values, as shown below:

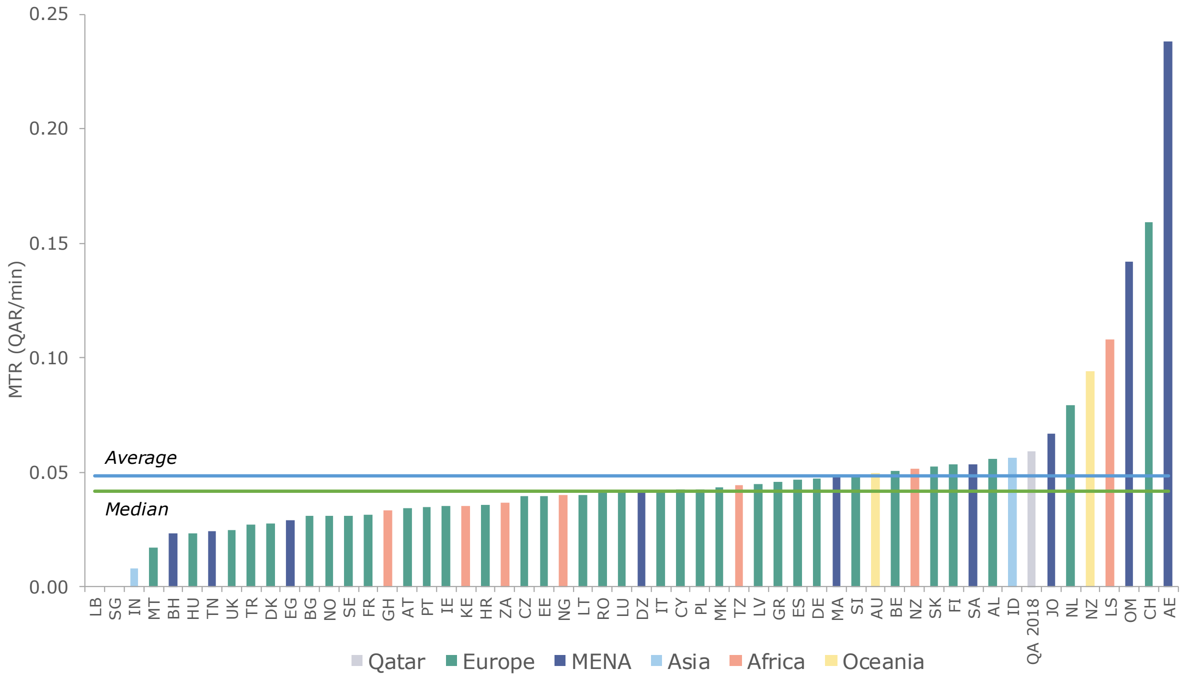

Figure 3.3 Benchmark of currently applicable MTRs vs approved charges in Qatar for 2018 [CRA research]

543.1 Looking at the countries that have already announced the MTR for the **year 2020**, the CRA approved MTR for the 2020 is well in the range of that approved by other countries.

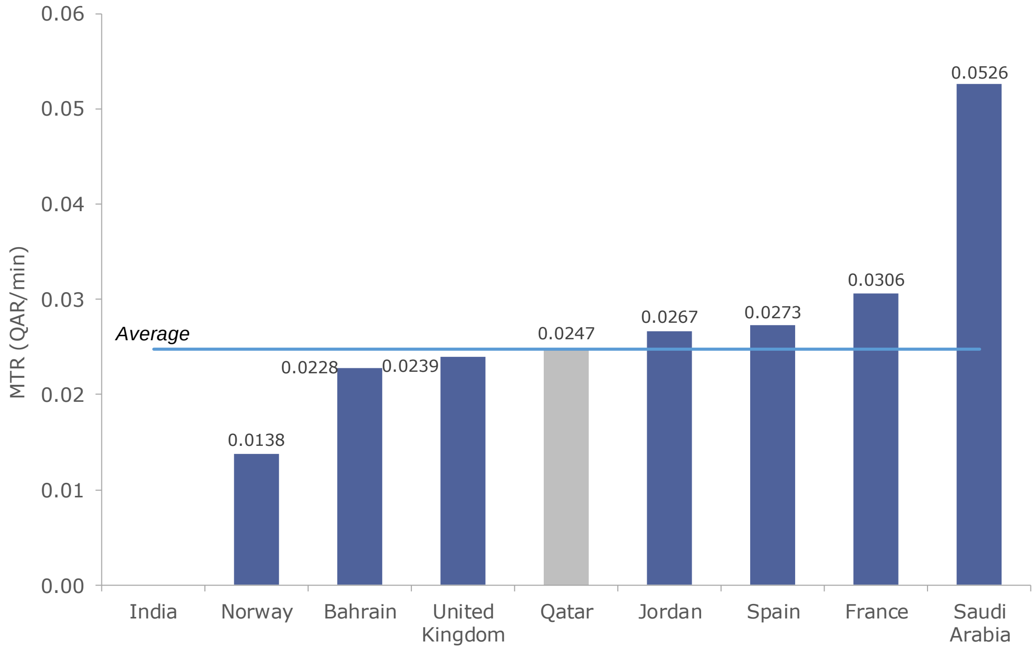

Figure 3.4 Benchmark of approved MTRs for 2020[48] [CRA research]

544. In addition, the CRA also reiterates that operators have enjoyed MTR higher than cost for the period 2015 – 2017 and will enjoy the same for the period 2018 – 2019, as it is demonstrated in the following exhibit:

48 In the case of Bahrain and Saudi Arabia, while values for MTRs have been recently updated, NRAs have not confirmed if these values could be updated again before the year 2020.

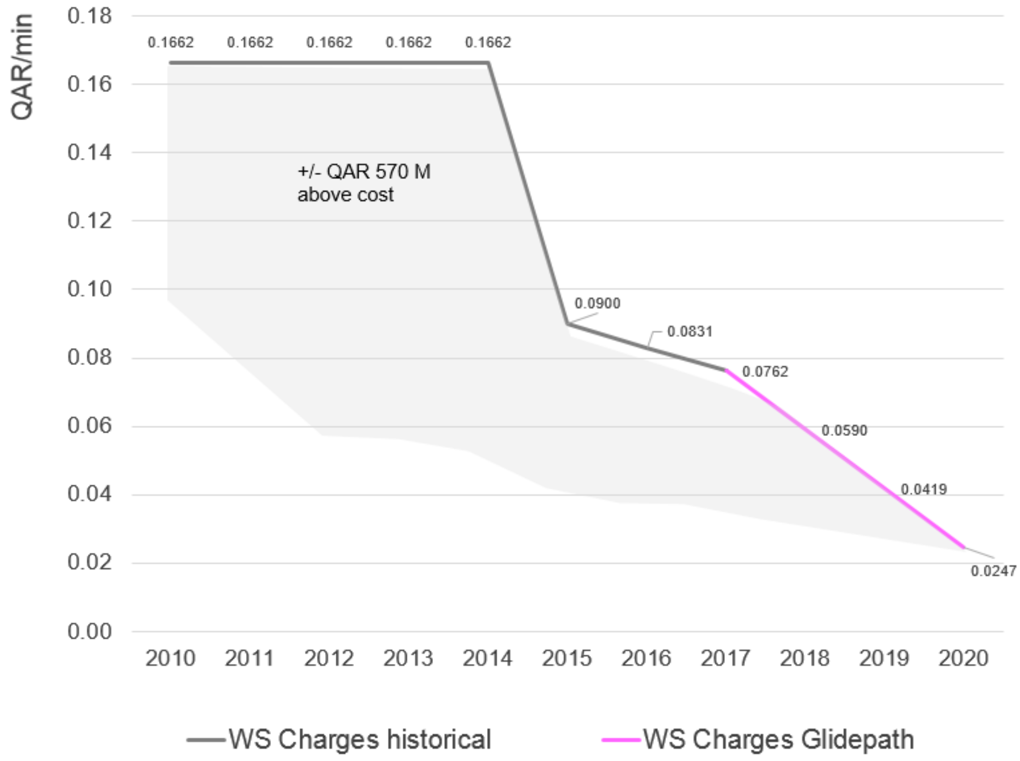

Figure 3.5 MTR vs cost [Ooredoo's RAS, Vodafone Cost Model and CRA calculation]

3.3.3 Call Termination Service to Toll-Free Numbers (reverse charge) for fixed and mobile

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

3.3.3.1 CRA's position in the second Consultation Document

545. The CRA will set the wholesale charges for this service at the same level as the "Mobile Call and Video-Call Termination Service".

3.3.3.2 SPs further comments

546. SPs did not provide further comments.

3.3.3.3 CRA's finding and final decision

547. The CRA has set the wholesale charges for this service at the same level as the "Mobile Call and Video-Call Termination Service" (see section 3.3.2).
This represents a prudent approach by the CRA, granting the higher charge to the SPs.

3.3.4 Call Termination Services to Numbers for Inbound International calls

Second CD - Question 3 - Inbound International Termination: Please provided your reasoned responses. Which of the proposed Options is the most beneficial for the State of Qatar for the coming period?

3.3.4.1 CRA's position in the second Consultation Document

548. The CRA is of the view that 4 Options are available to regulate this service:

548.1 **Option 1**. International termination set at the **same level** as national termination.

548.2 **Option 2**. International termination calculated as the **national termination plus a mark-up**, due to differences in costs.

548.3 **Option 3**. International termination based on **specific policy strategies**.

548.4 **Option 4**. **Non-regulation**. Service providers are free to negotiate applicable charges, based on commercial agreements reached with service providers from other jurisdictions.

549. The CRA sees merits in any of the above Options and it is in principle not opposed to stay with the current option 4 (non-regulation).

550. If the CRA would continue not to regulate the Charges of Inbound International Termination this would be under the obligation that OTT services remain unimpeded by Qatari service operators. The CRA will continue to monitor the market and may issue a regulatory instrument to detail this subject matter in future.

3.3.4.2 Ooredoo's response to the second Consultation Document

551. "*It is obvious that the CRA particularly struggles to identify solid objective and to quantify concrete benefits to substantiate regulation / reduction of termination rates for inbound international calls. This is particularly concerning as given its asymmetric nature, this regulation poses substantial risk of detrimental effect on service providers and customers in Qatar while benefiting service providers outside of Qatar. The CRA's reasoning in this case is simply not reflecting the actual market reality, is highly confusing as it changes over time from first to second Consultation Document and contradicts previous CRA's 2016 MDDD decision that market for mobile international calls is competitive. Furthermore, it is questionable if the CRA actually has any legal ground to regulate interconnection relationship involving entities not licensed in Qatar."*

552. "*… As detailed previously Ooredoo offered reduction in termination rate for incoming international traffic to Qatar to SP's abroad under condition that they will reduce their retail rates for calls to Qatar (to pass the cost saving benefit to customers) and thus increase volume of incoming calls. This proposition was however, refused by Ooredoo counterparts abroad*[49]*. We note that the fact that termination rates reduction do not apply automatically at reciprocal basis has been recognized by the EU regulatory authorities and they let service providers to set commercially negotiated rates for calls incoming from non EU countries."*

553. "*In the first consultation document, the CRA created an impression that its objective linked to reduction of termination rate for incoming international voice calls is to reduce volumes of OTT calls by stating: 'A logical effect is that customers rather use OTT services for international calls rather than (inflated) retail telecommunication services…'. In the second consultation document however, the CRA appears to contradict this objective by expressing its strong support for OTT services: 'OTTs are integral component of the information society, widely adopted by the consumers and exert a positive influence on the competiveness of the wider ICT eco system. …'*"

554. "*In the second Consultation Document the CRA thus appears to abandon its original objective, which this regulation was supposed to achieve, i.e. 'reduce the drain of international calls to OTT providers'. … We however observe that in the section 246 of Consultation Document the CRA states that it 'is also first of all cognizant of the various unwanted effect high and imbalanced IOTs bring (see e.g. point 236*[50] *above).' … We address these 'unwanted effects' in sequel*."

555. *"Point 236.2*[51] *seems to indicate that the CRA's objective behind the reduction in*

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[49] Ooredoo footnote states "Note that this is simply a reciprocal condition imposed by SP's abroad on Ooredoo as any reduction of termination rates granted to Ooredoo by SP's abroad was conditioned by the fulfillment of Ooredoo's commitment to increased volume of outbound international traffic to given SP's via reduction in Ooredoo's retail prices".

[50] Ooredoo refers to the point 222 in this Document.

[51] Ooredoo refers to the point 222.2 in this Document.

termination rate for incoming international voice calls is to increase voice traffic from abroad to Qatar. The CRA here appears to confirm its recognition of the relationship between termination rate and volume of international calls. …"

556. "*Ooredoo does not oppose the CRA's observation that the reduction in termination rate for international calls incoming to Qatar may potentially lead to an increase in volumes of incoming voice traffic from abroad. Indeed as demonstrated by Ooredoo's previous submission the change in the relative termination rates does lead to the change in the terms of trade in international minutes as far the retail prices follow the drop in termination rates. …*"

557. "*… Indeed as the CRA learned from that data (as demonstrated by figure 10*[52] *of Consultation Document) the reduction of termination rate for international calls abroad allowed for reduction in retail price for this service in Qatar and sequentially lead to increased traffic volumes from Qatar to abroad destinations. The CRA thus acknowledges (by the very regulatory intervention it proposes, i.e. the reduction in termination rate for incoming international calls) that the ratio of the termination rates for international calls can serve as a predictor for the ratio of incoming and outgoing international calls.*"

558. "*The data on international calls trade submitted by Ooredoo in the response to the first Consultation Document demonstrate that the higher the ratio of incoming termination rate to outgoing termination rate is (i.e. higher is the rate paid by SP's abroad to terminate voice call in Qatar relative to the rate paid by SP's based in Qatar to terminate calls abroad) the lower is the ratio of incoming to outgoing volume of international voice calls (i.e. the smaller is the volume of calls from abroad to Qatar than the call volumes in opposite direction).*"

559. "*Indeed when applying the regression analysis to the same data with the in-out ratio of the volume of international voice calls as dependent variable and in-out ratio of termination rates as an explanatory variable we see that the inverse relationship between these variables is indeed statistically significant and that more than 75% of the variation in in-out traffic ratio is explained by the variation in the in-out termination rate ratio*[53]*. This result confirms the CRA hypothesis that the termination rate reduction could lead to the change in the in-out ratio via increase in the volume of the incoming voice calls from abroad to Qatar. The Figure 8 captures this inverse relationship and regression results.*"

✂

Figure 8: Regression analysis of in-out traffic ratio (y) and in-out termination rate ratio (x) expressed in natural logarithm terms

560. "*We note that the regression equation predicts that the reduction of termination rate for inbound international calls in Qatar to the level proposed by the CRA for national voice call termination (i.e. Option 1) would effectively reverse current in-out termination rate ratio and would result in the in-out ratio for international voice calls of* ✂[54] *from the point of view of SP's abroad. …*"

561. "*It is important to note that data used in the above regression were generated by the process in which reductions in termination rates abroad were closely followed by*

[52] Ooredoo refers to the Figure 2.9 in this Document.

[53] Refer to the attached updated excel file "Impact of CRA proposed WS charges 2018 to 2020_confidential_updated". Note that, in a line with general econometrics practice we used natural logarithm of the regression variables to estimate equation parameters. This transformation is done to ensure the distributional assumptions of regression methodology are met in order to improve the statistical quality of estimated parameters.

[54] This result makes intuitive sense. After reduction in termination rate in Qatar to 0.056 (Option 1) it will be ✂ times more expensive to terminate calls from Qatar to abroad than vice versa in comparison with today situation when it is ✂ times more expensive to terminate calls from abroad to Qatar than vice versa (assuming termination rate abroad would not change). If the retail price for international calls to Qatar would indeed be reduced by the SP's abroad to fully pass on the cost savings (granted to these SP's by the CRA's decision) to their retail customers via reduced retail prices, the in-out traffic ratio would likely change significantly, and could change from current ✂ from the point of view of SP's in Qatar to ✂ from the point of view of SP's abroad.

Ooredoo's retail price reductions for international calls from Qatar. Indeed the above predicted value of in-out traffic volume ratio would materialize only in case that the drop in termination rate in Qatar would be matched by the corresponding reduction in retail price for international calls from abroad to Qatar and that customers abroad would respond by increasing demand for these calls with similar retail price elasticity as did customers in Qatar. We could debate the prediction of the magnitude of change in the in-out traffic ratio for long, but that is not the point."

562. "*The main point here is that given asymmetric nature of this regulation the more successful the CRA will be in achieving its objective of increasing the volume of incoming international calls to Qatar the larger detrimental impact this 'success' will have on SP's in Qatar (earning lower profits) and their customers (paying higher prices for outbound international calls)*[55]*. In case that there is no decrease in retail prices abroad the negative impact would be limited to simple wealth transfer from SP's in Qatar (reduction of call termination revenues) to SP's abroad (reduction in cost of terminating int'l calls to Qatar). …*"

563. "*The negative effects of this asymmetric regulatory intervention are the main reasons why there is a lack of similar regulatory precedence; a conclusion, which is actually reinforced by the CRA's comparative references to the practices of regulators in other countries. In our review of the benchmarks provided by the CRA, we are concerned that none of the comparators provide any meaningful support for the CRA's proposed intervention in this case. …"*

564. "*…Ooredoo is confused with respect to the actual position the CRA has towards OTT voice calls. Moreover, it appears that the CRA's position is to penalize licensed operators in Qatar to benefit unlicensed OTTs providers from abroad – which are deemed illegal under the Law.*"

565. "***Point 236.4***[56] *Ooredoo does not require CRA to impose high termination rates. Instead the full rate setting freedom is preferred to maintain balanced commercial relationships between domestic SP's and SP's abroad.*"

566. "***Point 236.5***[57] *The SIM Boxes and similar unwanted practices are illegal practices and should be dealt with through controls at customs (including equipment type approvals by the CRA) and other legal enforcement rather than the CRA trying to create economic regulatory measures to address these practices. Indeed general effective security provisions limit this kind of criminal behavior in Qatar to minimum in comparison with other countries.*"

567. "*Finally, Ooredoo wants to express its concern regarding perceived controversy in the CRA's regulatory view of the retail market for international calls. In the point 244*[58] *of Consultation Document the CRA states: 'The CRA also recognizes the relevance that OTT services are acquiring in Qatar in the last years as alternative product for international voice calls. This alternative option available to Qatari customers reduces the risk that Qatari operators use their market power to unreasonably increase retail tariffs, against customers' interests.' However, as per latest CRA's decision regarding MDDD the CRA concluded that the (mobile) retail market for mobile international calls is competitive and hence SP's have no market power in this market. It is thus not clear what market power the CRA refers to the in the point 244*[59] *of their Consultation Document. Moreover as demonstrated by Ooredoo in response to the CRA 2016 MDDD consultation (Ref: OQ/Ref-4414/2016-03) OTT calls already represent majority*

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55 Recall that reduced termination rates paid by Ooredoo to SP's abroad are conditioned on the specific traffic volume commitments, which Ooredoo will fail to deliver once outbound traffic, will be replaced by inbound traffic. As a result, the international calls termination rates paid by Ooredoo to SP's abroad will increase and hence will increase the retail rates paid for international calls by customers in Qatar.

56 Ooredoo refers to the point 222.4 in this Document.

57 Ooredoo refers to the point 222.5 in this Document.

58 Ooredoo refers to the point 230 in this Document.

59 Ooredoo refers to the point 230 in this Document.

of total outbound international calls generated in Qatar."

568. "*As demonstrated above the one-sided asymmetric regulation of incoming international call termination rate would put SP's in Qatar at competitive disadvantage against their counterparts abroad, would result in detrimental impact on customers in Qatar in terms of increase in retail prices for international outbound calls, and reduced future investments. Note that SP's in Qatar do not have more market power on the market for international voice call termination than their counterparts abroad do. Rather opposite could be said given relative size of the overall Qatar market vs. much larger markets, in which vast majority of SP's abroad operate. In the absence of compelling evidence to the contrary and complete lack of quantification of the benefits, which the Options 1-3 proposed by the CRA would yield, the CRA should refrain from implementing any of these first three regulatory options for international voice calls termination rate*[60]*.*"

569. "*We thus conclude that to avoid any negative welfare impact on the telecommunication sector in Qatar the CRA should adopt Option 4 – No regulation of international calls termination.*"

570. Additionally, in the General Observations submitted in the letter, Ooredoo notes: "*We appreciate the fact that as a reflection of the evidence submitted by Ooredoo in its response to the first consultation, the CRA in the second consultation document appears to recognize the complexity of international call termination rate regulation… in the case where the CRA lacks regulatory control over termination rates outside of Qatar, the reduction in termination rates for incoming international calls to Qatar will more likely result in harm to the Qatari telecommunications market (both consumers and SPs), which we believe is not the CRA's intention with the proposed regulation. As such, we strongly encourage the CRA to refrain from regulating termination rates for incoming international calls. This fact has been clearly recognized by the EU, where the termination rates for international calls exchanged within EU are symmetrically regulated but where SP's are free to set termination rates for international calls from non-EU countries. While reduction in termination rate can produce welfare enhancement when applied symmetrically in the given set of the countries (i.e. countries within EU area subject to the harmonized regulation) it is prone to reduce welfare in the country (like Qatar) that would be subject to asymmetrical rate regulation on a stand-alone basis.*"

571. "*This is the case for two simple reasons: 1) there is no guarantee that SP's abroad will reduce retail price in response to reduced termination rates in Qatar and hence will simply pocket higher profits to the detriment of SP's in Qatar and 2) there is no mechanism available that would ensure that SP's abroad would reduce their termination rate on reciprocal basis.* "

572. "*As explained previously, if SP's abroad do reduce their retail prices, it is more likely that termination rate abroad will actually increase (as a consequence of change in trade balance) causing the retail price for international calls in Qatar to go up to the detriment of Qatari customers. The outcome of this regulation would thus at least represent direct value transfer from Qatar to other countries and very likely lead to the increase in retail prices for international calls for retail customers in Qatar, contrary to the objective the CRA should aim to achieve for the sector. This remedy would thus simply reduce overall social welfare the international voice call services generate in Qatar, leading to reduction in Ooredoo's contribution to state budget both in the terms of License and Industry fee and in terms of dividends paid to shareholders (note that*

[60] Ooredoo understand that termination rates in the case of Option 2 would lead to similar percentage rate reduction as in the case of Option 1 and hence the Option 2 would result in similar negative welfare impact as Option 1. Ooredoo refrain from commenting on the Option 3 as CRA fails to specify what the term "specific policy strategy" in the context of Qatar means. We do not want to make any assumptions here that could be challenged by the CRA as was the case of Ooredoo's assumption made for level of termination rate the CRA would set for incoming termination rate made as part of our response to first consultation. However, in a case that Option 3 would result in some degree of reduction in the termination rate for incoming international voice calls to Qatar it would likely result in corresponding degree of welfare reduction as reasoned and supported by evidence above.

the state of Qatar is the majority Ooredoo shareholder) in the time of continued economic austerity. …"

3.3.4.3 Vodafone's response to the second Consultation Document

573. "*Vodafone Qatar supports the continuation of the current arrangements and welcomes the position of principle of the CRA to not oppose the continuation of the status quo. In our view the current arrangements are the most beneficial for the State of Qatar in so far as they avoid value transfer to foreign operators (including operators from blockading countries), maintain the influx of foreign currency while market forces and competitive constraints from OTTs continue to operate and ensure competitive retail prices for out-bound calls.…*"

574. "*The table below sets out Vodafone Qatar's further comments against each option*"

CRA's options	Vodafone Qatar's comments
Option 1: Regulation: Apply local MTR to international in-bound calls	• Will lead to value transfer to foreign operators, including participants to the siege with no corresponding benefits to consumers. • Remove negotiation power of domestic operators to negotiate commercial agreements with far-end operators and hence will hinder the ability of domestic operators to offer low retail prices to consumers in Qatar.
Option 2: Regulation: Local MTR + mark-up	• Same as option 1 (only "mark-up" retained in country").
Option 3: Regulation: specific policy strategies	• No clear benefits of regulation above and beyond Option 4. • Regulation may lead to unintended consequences.
Option 4: No regulation	• Most beneficial to the State of Qatar. • Avoid value transfer to foreign operators, maintain influx of foreign currency. • Qatari consumers continue to avail of competitive prices for international calls. • Competitive constraint from OTTs remains effective for both retail prices and wholesale rates.

Table 35 Vodafone Qatar's comments on the four options proposed by CRA [Source: Vodafone]

575. "*Regulating international inbound termination rates at local MTR would be against the interest of Qatar and would hurt domestic operators without providing benefits to consumers in Qatar in so far as the economic surplus generated by domestic operators on international inbound will benefit foreign operators and would lead to a lower influx of foreign currency. As such it would be against the duties of the CRA set out in Article 2.1 of the Telecommunications Law to 'promot[e] the telecommunications sector in order to consolidate national, social and economic development'.*"

576. "*As we explained in our Submission dated 12 November 2017, for Qatari consumers to benefit from the regulation of inbound international calls at the local MTR level would require two conditions to be met. First, the far-end operator will need to pass on the full reduction in termination rate at the retail level leading to lower price to call Qatar AND an increase of calls (the assumed benefit to consumers in Qatar being the additional calls received). This is highly unlikely as pricing for international calls tend to be by zone (e.g. similar price across GCC countries)*[61] *and the extent of pass through will depend on competitive forces in the country of origin of the call. Further the limited volume of calls to Qatar is unlikely to lead to differentiated pricing. Overall, any potential benefit (i.e. hypothetical increase in in-bound calls) would be trivial and need to be balanced against cost as foreign operators will benefit from lower termination rates by retaining the savings while domestic operators will suffer from lower income*

[61] For example: BT has three zones (with all GCC countries in Zone C), Orange Egypt groups all Arab countries together with the USA; O2 in the UK has seven zones with none specific for Arab or GCC countries which fall in the catch-all category of "Rest of the world"; Bharti Airtel lumps together Africa, GCC, Europe mobile and the Rest of the world together.

from international inbound calls."

577. "*Second, a lower rate for international in-bound calls to Qatar will need to translate into a corresponding decrease for the termination rate for calls destined outside of Qatar. The benefit to consumers will be lower out-bound international calls. However, regulation will constrain our negotiating hand and hence lower MTR for international in-bound calls is unlikely to result in a corresponding decrease in the rate applied by the far-end operator.*"

578. "*To conclude Vodafone Qatar supports a continuation of the current arrangements as these are the most beneficial to the State of Qatar.*"

3.3.4.4 CRA's finding and final decision

CRA Comments

579. The CRA appreciates the comments provided by both Ooredoo and Vodafone, which have contributed to set a clear picture of the current situation of the market of international calls, along with the potential effects of regulating this service.

580. The CRA recognizes that the high number of variables at play make difficult to estimate the impact of regulating this service on the traffic and revenues of international calls. In summary:

    580.1 The CRA understands from the submissions that these termination charges are not set by operators on a symmetrical basis. Hence, there is no guarantee that a reduction imposed on the termination charge for international inbound calls will lead to reductions on the termination charge for outbound international calls on a reciprocal basis.

    580.2 The above situation may produce two potential (extreme) scenarios:

    (i) Foreign SPs decide to keep their current levels of retail prices for international calls to Qatar. This would increase the profit of the Foreign SPs margins, meaning a wealth transfer from Qatar to abroad.

    (ii) Foreign SPs decide to reduce their existing retail prices for international calls to Qatar. This situation could motivate a trade balance, leading to an increase of incoming international calls to Qatar to the detriment of the outgoing international calls. Under this scenario, a direct (net) revenue loss would affect Qatari SPs leading, once again, to a wealth transfer from Qatar to abroad. In addition to that, Qatari SPs would also be in a weaker position to negotiate termination charges with foreign SPs given that, as explained by Qatari SPs, traffic volumes are a key parameter for the negotiation. In order to compensate this revenue loss, Qatari SPs would be forced to increase their retail prices for outgoing international calls, harming customers interest and contrary to CRA's objective.

581. Among other objectives, the CRA is pursuing to safeguard the interest of Qatari consumers. In this sense, the CRA's goal is to guarantee that they benefit from affordable prices for making international calls, independently of the technical means consumers use for such calls. To achieve such goal, the CRA should ensure there is proper competition for making international calls, including access to OTT providers such WhatsApp, Skype, etc.

In the same context, the CRA outlines that lower wholesale charges could reduce the risk of unwanted practices, such as the SIM Boxes, for which SPs have complained in the past.

If, as a consequence of the non-regulation of international inbound termination rates, retail prices for international calls using the traditional telephony increase, or are in the eyes of the consumer too high, the customers should be able to select alternative options within the wider ICT eco system (e.g. OTT services).

This vision is aligned with the concept of Net Neutrality, according to which service providers are not allowed to intentionally block online content.

Therefore, the CRA notes that an impediment of OTT services could be considered a risk to international calls competition levels, which may force CRA to take actions such as the regulation of the international call termination.

582. As already indicated in the responses given by CRA in the Second CD (see further details in section 2.3.4.4), at the present time, Qatari operators are enjoying positive net revenues due to the higher termination charges received for international calls terminated in their networks compared to those paid for outgoing international calls.

Final Decision

583. Based on Qatari SPs' comments and insights, the CRA has analyzed thoroughly the situation of the market of international incoming calls, as well as the potential implications of the each of the 4 options proposed in the Second Consultation Document.

584. Outcomes of the analysis show that the market is running properly, based on commercial agreements among domestic and abroad operators. Customers are benefiting from decreasing prices associated to competition levels observed currently for outgoing international calls, including services provided by OTT companies.

585. Thus, the CRA opts for not regulating this charge.

586. However, the CRA will review this decision, in case:

586.1 Ooredoo or Vodafone restrict or impeded OTT services.

586.2 The CRA observes inappropriate practices which may deteriorate customers welfare and harm the market development.

3.3.5 Termination Emergency Services

3.3.5.1 CRA's position in the second Consultation Document

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

587. The CRA will set the charge of the "Termination Emergency Services" at the same level as the FTR.

3.3.5.2 SPs further comments

588. SPs did not provide further comments.

3.3.5.3 CRA's finding and final decision

589. The CRA has set the charge of the "Termination Emergency Services" at the same level as the FTR (see section 3.3.1.4).

3.3.6 SMS Termination

Second CD - Question 4 - SMS termination: Do stakeholders have further comments or alternative suggestion? Do stakeholders have a legal rationale to not regulate the charge of this product?

3.3.6.1 CRA's position in the second Consultation Document

590. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
SMS Termination	QAR/SMS	0.0130	0.0091	0.0052	0.0013
Change to previous year			-30%	-43%	-75%

Table 36 SMS Termination – Wholesale Charges for consultation [CRA calculation]

3.3.6.2 Ooredoo's response to the second Consultation Document

591. "*Regulation is not done because the legal framework supports it but because it aims to improve economic efficiency by addressing specific market failure. Ooredoo notes that the CRA failed to provide any specific objective it aims to achieve with further reduction of mobile SMS termination rate, failed to demonstrate this regulation is necessary to achieve that objective and failed to provide quantification of its impact. As such, Ooredoo do not consider this regulation to be proportional. Moreover, the CRA in their reference to the Articles 29 of the Law and Article 50 of By-Law relies on the regulatory measures that are addressing retail tariffs and are not relevant for the wholesale charges regulation.*"

592. "*Moreover, the CRA neglects that most of the mobile messaging activity today is taking place via OTT services (MMS, instant messaging, push email and email through Internet) which represent effective substitute for the SMS termination service. Hence, the SMS termination market fails to meet the three criteria test and as such, it is not a relevant market that should be subject to regulation, as SP's in Qatar cannot be deemed to have a dominant position in this market. Note that that penetration of mobile data services is ✂ and penetration of 4G services ✂ on Ooredoo's network. Furthermore, we want to point out that the SMS termination market is not among relevant markets defined by the European Commission. EU countries who in past established SMS termination market as relevant market (France, Denmark and Spain[62]) have recently concluded that markets of SMS termination on each mobile network were not relevant for ex-ante regulation recognizing OTT messaging service as effective substitutes[63].*"

3.3.6.3 Vodafone's response to the second Consultation Document

593. "*We reiterate our comments that while SMS traffic is declining at very fast pace driven by OTT alternatives, Vodafone Qatar does not support such a drastic cut. They would set Qatar further out of line with benchmarks.*"

594. "*Vodafone Qatar's position is for termination rates for SMS to be kept constant for the next regulatory period as the service is increasingly immaterial, its price is constrained by competitive pressures from free alternatives and it is already very low relative to benchmarks.*"

595. "*Vodafone Qatar also notes that the legal instrument[64] on which the regulation of SMS is based makes no mention of SMS or MMS services. In its definition of the relevant product markets and analysis of competition therein, the CRA has not included any reference to SMS and MMS services. It has not specified that SMS and MMS are parts of any relevant markets and has not analyzed competitive conditions.*"

596. "*For the above reasons, Vodafone Qatar submits that should the CRA decides to*

[62] See e.g. Analysis Mason document "Impact of OTT services on regulatory market definitions in Europe" available at: https://nca.org.gh/assets/Uploads/Omar-Bouhali-Impact-of-OTT-services-on-regulatory-market-definitions-7-7-2016.pdf

[63] We note that EC in the review of the proposed SMS termination rate decision by French Regulator ACREP commented: "The Commission therefore fears that ARCEP's approach could lead to persistent overregulation impeding structural market developments, which would have taken place absent regulation in the market, and therefore does not meet the regulatory objectives as expressed in Article 8 (2) b) of the Framework Directive." See Commission decision of 28 November 2014 available at: https://circabc.europa.eu/sd/a/ba26039d-db58-4f79-8dd2-f6b9eccecec5/FR-2014-1668-1669-1670%20ADOPTED_EN%20FOR%20PUBLICATION.pdf

[64] See Notice and Orders, Designation of Ooredoo Q.S.C. and Vodafone Qatar Q.S.C. as Dominant Services Provided in Specified Relevant Markets, 9 May 2016. Please also refer to accompanying Economic Analysis and Response Document.

regulate SMS and MMS, despite the lack of solid legal and economic bases, it should keep charges constant."

3.3.6.4 CRA's finding and final decision

On Ooredoo's comments

597. On the regulation of the SMS termination, the CRA indicates that in the 2016 MDDD Review process, both Ooredoo and Vodafone were designated as DSP (Dominant Service Provider) in the market `M14 - Wholesale termination on individual mobile networks´. In this regard, the CRA notes that the wholesale regulation, being a remedy imposed to them a result of that process, shall not be subject to further discussions.

598. On Ooredoo's statement "*Articles 29 of the Law and Article 50 of By-Law relies on the regulatory measures that are addressing retail tariffs and are not relevant for the wholesale charges regulation*" the CRA outlines that this statement is erroneous.

In fact, Article 50 of By-Law:

598.1 Is included in the Chapter Four of the By-Law, dedicated to "Interconnection and Access", demonstrating that it is relevant for wholesale regulation;

598.2 Refers to Article 29 of the Law when stating "*The General Secretariat may require that interconnection or access charges of any Dominant Service Provider be subject to Article (29) of the Law …*" demonstrating that Article 29 is also relevant for wholesale regulation.

599. On the SMS termination as relevant market, the CRA notes that, in the regulatory document CRA 2015/05/12/NC[65], issued by the CRA in 2015, it is clearly specified that the market `M14 - Wholesale termination on individual mobile networks´ includes (but not limited to) voice calls, **SMS**, MMS and video calls.

On Vodafone's comments

600. Regarding Vodafone's argument on the drastic cut, being the same as in the responses submitted by the operator to the First Consultation Document, the CRA refers to answers previously given (ref. section 2.3.6.4).

601. On the non-specification of SMS and MMS as part of any relevant market, the CRA refers Vodafone to the responses given above to Ooredoo on this same topic, where it is demonstrated that Market 14 includes termination of SMS and MMS as relevant services.

Final Decision

602. In conclusion, the CRA regulates "SMS Termination" based on the approach proposed in the First and Second Consultation Documents.

603. Additionally, in order to keep consistency with the increase approved for the glidepath of the MTR (see ref. 3.3.2.4), the CRA is of the view that the same increase should be applied to the SMS termination service. As such, an increase by value of 56% has been introduced in the final year of the glidepath (2020). Subsequently, the increase is also translated to the years 2018 and 2019, by means of the application of equal steps from the current chart (2017) to the final year of the glidepath (2020). The table below shows the Wholesale Charges approved by the CRA, including the new cost of capital (10.45%).

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65 "Market Definition and Dominance Designation in Qatar. Public Consultation". Available at: http://cra.gov.qa/sites/default/files/MDDD%202016%20Consultations%20Responses%20and%20Orders%202015%20-2016.pdf

		Previously approved charges	Newly approved charges		
		2017	2018	2019	2020
Option 1 – Wholesale Charges cost oriented to 2020 adjusted by MTR increase (with Glide Path)					
SMS Termination	QAR/SMS	0.0130	0.0093	0.0057	0.0020
Change to previous year			-28%	-39%	-65%

Table 37 SMS Termination –Wholesale Charges approved by the CRA [CRA calculation]

3.3.7 MMS Termination (Picture and Video)

Second CD - Question 5 - MMS Termination: Do stakeholders have further comments or alternative suggestion? Do stakeholders have a legal rationale to not regulate the charge of this product?

3.3.7.1 CRA's position in the second Consultation Document

604. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
MMS Termination (Picture and Video)	QAR/MMS	0.4300	0.2936	0.1572	0.0208
Change to previous year			-32%	-46%	-87%

Table 38 MMS Termination – Wholesale Charges for consultation [CRA Calculation]

3.3.7.2 Ooredoo's response to the second Consultation Document

605. "*Ooredoo notes that MMS termination service is not regulated in other jurisdictions. The CRA neglects that most of the mobile messaging activities today are taking place via OTT services which represent effective substitute for the MMS termination service and hence SP's do not truly have DSP position on MMS termination market as it does not meet the three criteria test. The CRA should hence refrain from regulating this market. Any decision to the contrary would simply be an example of bad regulatory practice. As mentioned above vast majority of mobile subscribers are active data users and benefit from the use of OTT application, which thus represent effective substitute to MMS termination service.*"

3.3.7.3 Vodafone's response to the second Consultation Document

606. "*While MMS traffic is largely immaterial, Vodafone Qatar does not support such drastic cut which will not drive customer usage.*"

607. "*See above response on SMS.*"

3.3.7.4 CRA's finding and final decision

On Ooredoo's comments

608. On the non-DSP position of Ooredoo in the MMS termination market, the CRA notes that Ooredoo was designated in May 2016 as DSP in the market `M14 - Wholesale termination on individual mobile networks´. As already indicated in section 3.3.6.4, this market includes termination of (but not limited to) voice calls, SMS, **MMS** and video calls. Thus, the regulation of the MMS termination service was an obligation imposed to Ooredoo.

On Vodafone's comments

609. Regarding Vodafone's argument, being the same as in the responses submitted by the operator to the First Consultation Document, the CRA also refers to answers

previously given (ref. section 2.3.7.4).

Final Decision

610. In conclusion, neither Ooredoo nor Vodafone provided the CRA with updated data relevant to change CRA's estimates.

611. Hence, the CRA regulates "MMS Termination" based on the approach proposed in the First and Second Consultation Documents.

612. The table below shows the Wholesale Charges approved by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
MMS Termination (Picture and Video)	QAR/MMS	0.4300	0.2936	0.1572	0.0208
Change to previous year			-32%	-46%	-87%

Table 39 MMS Termination – Wholesale Charges approved by the CRA [CRA Calculation]

3.3.8 Outgoing International Call Conveyance

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments

3.3.8.1 CRA's position in the second Consultation Document

613. The "Outgoing International Call Conveyance" service is not used since Ooredoo and Vodafone have their own network connections. If this product is used in future, the CRA expects the Access Provider and the Access Seeker to agree on the various charges as per country destination. In case no agreement can be reached, the Access Provider and/or the Access Seeker can bring the case in front of the CRA.

3.3.8.2 SPs further comments

614. SPs did not provide further comments.

3.3.8.3 CRA's finding and final decision

615. The CRA confirms the approach as expressed in the First and Second Consultation Documents. The "Outgoing International Call Conveyance" service is not used since Ooredoo and Vodafone have their own network connections. If this product is used in future, the CRA expects the Access Provider and the Access Seeker to agree on the various charges as per country destination. In case no agreement can be reached, the Access Provider and/or the Access Seeker can bring the case in front of the CRA.

3.4 Interconnection Links

3.4.1 Interconnection Links (monthly charges and one-off fees)

Second CD - Question 6 - Do stakeholders agree with the CRA's proposed Wholesale Charges for the Interconnection Links?

3.4.1.1 CRA's position in the second Consultation Document

616. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
E1 (distance independent)	QAR/E1/month	326	229	133	37
Change to previous year			-30%	-42%	-72%
Km (distance dependent)	QAR/E1/km/month	64	54	43	32
Change to previous year			-17%	-20%	-25%
Connection Fee	QAR/link	5,000	5,000	5,000	5,000
Change to previous year			0%	0%	0%
Disconnection/reconfiguration Fee	QAR/link	950	950	950	950
Change to previous year			0%	0%	0%

Table 40 Interconnection Links – Wholesale Charges for consultation [CRA calculation]

3.4.1.2 Ooredoo's response to the second Consultation Document

617. "*Given the past and expected future decline in the volume of sold / deployed SDH leased lines, Ooredoo expects that unit costs for the SDH based services will increase within the regulatory period of 2018-2020. In order to avoid setting the wholesale charges below costs, Ooredoo recommends the CRA does not reduce the current wholesale charges for interconnection links and SDH leased lines any further.*"

618. "*Moreover, if VFQ had considered the charges to be excessive, they would have built their own interconnection link using QNBN – they have chosen not to do so for a good reason – the charges are in fact very reasonable.*"

3.4.1.3 Vodafone's response to the second Consultation Document

619. "*Vodafone Qatar supports the proposals of the CRA for this product for which there is limited scope for competitive pressure and which is a direct input cost for competitors to Ooredoo. We note that one-off charges do not appear to bear any relation with underlying cost: for an STM1 the connection charge amount to QAR 315.000. We kindly ask the CRA to provide details regarding the activities and associated costs which justify the QAR 315.000 charge.*"

3.4.1.4 CRA's finding and final decision

On Ooredoo's comments

620. Regarding Ooredoo's arguments, being the same as in the responses submitted by the operator to the First Consultation Document, the CRA refers to answers previously given (ref. section 2.4.1.4).

On Vodafone's comments

621. The CRA acknowledges Vodafone's support for CRA's proposed approach.

622. On the comment on one-off charges, in the second Consultation Document, the CRA asked Vodafone to clarify its position about the QAR 315.000 charge. However, Vodafone has failed to provide any further explanation. In fact, the operator continues to mention a QAR 315.000 charge whose derivation is unknown to the CRA, since the one-off charge proposed for interconnection links is 5,000 QAR/link, far from the value proposed by Vodafone.

Final Decision

623. The CRA has decided to regulate the Wholesale Charges following the approach proposed in the First and Second Consultation Documents.

624. The table below shows the Wholesale Charges approved by the CRA, including the new cost of capital (10.45%).

		Previously approved charges	Newly approved charges		
		2017	2018	2019	2020
Option 1 – Wholesale Charges oriented to 2020 projected cost per unit (with Glide Path)					
E1 (distance independent)	QAR/E1/month	326	229	133	37
Change to previous year			-30%	-42%	-72%
Km (distance dependent)	QAR/E1/km/month	64	54	43	32
Change to previous year			-17%	-20%	-25%
Connection Fee	QAR/link	5,000	5,000	5,000	5,000
Change to previous year			0%	0%	0%
Disconnection/reconfiguration Fee	QAR/link	950	950	950	950
Change to previous year			0%	0%	0%

Table 41 Interconnection Links – Wholesale Charges approved by the CRA [CRA calculation]

625. In the case of the one-off fees (connection, disconnection and reconfiguration), the CRA also indicates that link refers to one physical connection between access seeker's and access provider's locations, regardless of the capacity of such connection.

3.5 Transmission Links

3.5.1 Transmission Links based on SDH – monthly rental

Second CD - Question 7 - Do stakeholders agree with the CRA's proposed Wholesale Charges for the SDH Transmission Links?

3.5.1.1 CRA's position in the second Consultation Document

626. The table below shows the Wholesale Charges that the CRA shall approve.

	Transmission Link SDH	Current wholesale charge (CY 2017) BM based	Benchmark		
2	Nominal Distance	Current Wholesale Charge	2018	2019	2020
3	km	QAR/month	QAR/month	QAR/month	QAR/month
4					
5	**for E1 (no differentation for SLAs)**				
7	00-10	1,418	1,240	1,158	1,081
8	11-20	1,478	1,314	1,226	1,145
9	21-30	1,538	1,387	1,295	1,209
10	31-40	1,598	1,460	1,363	1,273
11	41-50	1,658	1,534	1,432	1,336
12	50 and above	1,868	1,790	1,671	1,560
13	**for E3 (no differentation for SLAs)**				
15	00-10	8,164	7,089	6,617	6,177
16	11-20	8,224	7,162	6,686	6,241
17	21-30	8,284	7,235	6,754	6,305
18	31-40	8,344	7,309	6,823	6,369
19	41-50	8,404	7,382	6,891	6,433
20	50 and above	8,614	7,639	7,131	6,657
21	**for STM1 (no differentation for SLAs)**				
23	00-10	12,438	10,794	10,076	9,406
24	11-20	12,498	10,867	10,145	9,470
25	21-30	12,558	10,941	10,213	9,534
26	31-40	12,618	11,014	10,282	9,598
27	41-50	12,678	11,087	10,350	9,662
28	50 and above	12,888	11,344	10,590	9,886
29	**for STM4 (no differentation for SLAs)**				
31	00-10	20,645	17,910	16,719	15,607
32	11-20	20,705	17,984	16,788	15,671
33	21-30	20,765	18,057	16,856	15,735
34	31-40	20,825	18,130	16,925	15,799
35	41-50	20,885	18,204	16,993	15,863
36	50 and above	21,095	18,460	17,233	16,087
37	**for STM16 (no differentation for SLAs)**				
39	00-10	36,881	31,987	29,860	27,874
40	11-20	36,941	32,060	29,928	27,938
41	21-30	37,001	32,134	29,997	28,002
42	31-40	37,061	32,207	30,065	28,066
43	41-50	37,121	32,280	30,134	28,130
44	50 and above	37,331	32,537	30,373	28,353

Table 42 SDH Transmission Links – Monthly Rental for consultation [CRA calculation]

3.5.1.2 Ooredoo's response to the second Consultation Document

627. "*As outlined above, Ooredoo agrees with the use of benchmark for setting wholesale charges for the SDH leased lines. Also for the reasons explained in the response to the previous question, the actual unit costs of SDH lines are expected to be at the level recorded in 2015 during the 2018-2020-time period. This fact does not support the CRA's trend used for proposed charges and as an outcome the future wholesale charges risk being set below cost. Ooredoo recommend the CRA does not reduce the current wholesale charges for SDH leased lines any further.*"

3.5.1.3 Vodafone's response to the second Consultation Document

628. "*In CD#2, the CRA maintains its CD#1 position regarding wholesale charges for SDH based services. Vodafone Qatar does not agree with the proposed charges and refers the CRA to its Submission dated 12 November 2017.*"

629. "*Vodafone Qatar reiterates its serious concerns with the regulatory accounts of Ooredoo which, according to the CRA, cannot be used to derive the cost of SDH based transmission links despite audited regulatory accounts being in place for eight years. This contributes to calling into question the reliability and veracity of the regulatory accounts of Ooredoo.*"

3.5.1.4 CRA's finding and final decision

On Ooredoo's comments

630. Regarding Ooredoo's arguments, being the same as in the responses submitted by the operator to the First Consultation Document, the CRA also refers to answers previously given (ref. section 2.5.1.4).

On Vodafone's comments

631. For Vodafone's first argument, the CRA also refers to answers previously given (ref. section 2.5.1.4).

632. On Vodafone's concern about Ooredoo's RAS, the CRA reiterates that the regulator is making all necessary efforts - together with Ooredoo and the auditors - for solving issues related to leased lines services identified in previous audit reviews. Therefore, until issues identified in Ooredoo's RAS are solved, the CRA considers appropriate to apply the benchmark methodology.

Final Decision

633. In conclusion, the CRA confirms the Wholesale Charges as proposed in the First and Second Consultation Documents.

634. The table below shows the Wholesale Charges that the CRA has approved.

1	Transmission Link SDH	Current wholesale charge (CY 2017) BM based	Benchmark		
2	Nominal Distance	Current Wholesale Charge	2018	2019	2020
3	km	QAR/month	QAR/month	QAR/month	QAR/month
4					
5	for E1 (no differentation for SLAs)				
7	00-10	1,418	1,240	1,158	1,081
8	11-20	1,478	1,314	1,226	1,145
9	21-30	1,538	1,387	1,295	1,209
10	31-40	1,598	1,460	1,363	1,273
11	41-50	1,658	1,534	1,432	1,336
12	50 and above	1,868	1,790	1,671	1,560
13	for E3 (no differentation for SLAs)				
15	00-10	8,164	7,089	6,617	6,177
16	11-20	8,224	7,162	6,686	6,241
17	21-30	8,284	7,235	6,754	6,305
18	31-40	8,344	7,309	6,823	6,369
19	41-50	8,404	7,382	6,891	6,433
20	50 and above	8,614	7,639	7,131	6,657
21	for STM1 (no differentation for SLAs)				
23	00-10	12,438	10,794	10,076	9,406
24	11-20	12,498	10,867	10,145	9,470
25	21-30	12,558	10,941	10,213	9,534
26	31-40	12,618	11,014	10,282	9,598
27	41-50	12,678	11,087	10,350	9,662
28	50 and above	12,888	11,344	10,590	9,886
29	for STM4 (no differentation for SLAs)				
31	00-10	20,645	17,910	16,719	15,607
32	11-20	20,705	17,984	16,788	15,671
33	21-30	20,765	18,057	16,856	15,735
34	31-40	20,825	18,130	16,925	15,799
35	41-50	20,885	18,204	16,993	15,863
36	50 and above	21,095	18,460	17,233	16,087
37	for STM16 (no differentation for SLAs)				
39	00-10	36,881	31,987	29,860	27,874
40	11-20	36,941	32,060	29,928	27,938
41	21-30	37,001	32,134	29,997	28,002
42	31-40	37,061	32,207	30,065	28,066
43	41-50	37,121	32,280	30,134	28,130
44	50 and above	37,331	32,537	30,373	28,353

Table 43 SDH Transmission Links – Monthly Rental approved by the CRA

3.5.2 Transmission Links based on Ethernet technology – monthly rental

Second CD - Question 8 - Do stakeholders agree with the CRA's proposed Wholesale Charges for Ethernet based Transmission Links?

3.5.2.1 CRA's position in the second Consultation Document

635. The table below shows the Wholesale Charges that the CRA shall approve.

	[A]	[B]	[E]		
1	Transmission Link Ethernet		Benchmark (Average distance of 15km) Monthly Rental		
2	speed	speed	2018	2019	2020
3			QAR/month		
4	speed				
5	256 KB	256	722	684	648
6	512 KB	512	891	844	799
7	1 MB	1,000	1,098	1,040	985
8	2 MB	2,000	1,267	1,200	1,136
9	4 MB	4,000	1,717	1,626	1,540
10	8 MB	8,000	2,159	2,045	1,937
11	16 MB	16,000	2,724	2,580	2,443
12	24 MB	24,000	3,124	2,958	2,802
13	32 MB	32,000	3,444	3,262	3,089
14	50 MB	50,000	4,340	4,110	3,893
15	100 MB	100,000	6,891	6,526	6,181
16	200 MB	200,000	7,875	7,458	7,064
17	500 MB	500,000	8,859	8,390	7,946
18	1 G	1,000,000	9,127	8,644	8,186

Table 44 Ethernet Transmission Links– Monthly Rental for consultation

3.5.2.2 Ooredoo's response to the second Consultation Document

636. "*No, Ooredoo does not agree with the CRA proposal. As a part of the CRA's NOTICE AND ORDERS DESIGNATION OF OOREDOO Q.S.C. AND VODAFONE QATAR Q.S.C. AS DOMINANT SERVICE PROVIDERS IN SPECIFIED RELEVANT MARKETS (Ref: CRARAC 09/05/2016 A) issued on 9 May 2016 the CRA defined two distinct relevant markets for wholesale leased line: M10 - National trunk segment of (national and international) wholesale leased lines services and M11 - Terminating segment of (national and international) wholesale leased lines services. The CRA's proposed Wholesale Charges for Ethernet transmission links does not correspond to the service definition established by the above CRA order.*"

637. "*Moreover, Ooredoo is in the progress of developing more robust leased line service cost information as part of the RAS 2016. In case that CRA decides to set rates for Ethernet leased lines as part of this consultation process Ooredoo reserves the right to revise these charges in case they would not allow Ooredoo to recover the actual costs of this service.*"

3.5.2.3 Vodafone's response to the second Consultation Document

638. "*In CD#2, the CRA maintains its CD#1 position regarding wholesale charges for SDH based services. Vodafone Qatar does not agree with the proposed charges and refers the CRA to its Submission dated 12 November 2017.*"

639. "*Vodafone Qatar is concerned with the contradiction where, on the one hand the CRA indicates that it is in the position to review with confidence the retail charges of leased lines (including Ethernet based products) of Ooredoo, while in the context of wholesale charges, the CRA indicates that the regulatory accounts cannot be relied upon. These two positions cannot be reconciled as the network elements cost at the wholesale and retail levels should not be different.*"

3.5.2.4 CRA's finding and final decision

On Ooredoo's comments

640. On the definition of Markets 10 (National trunk segments) and 11 (Terminating segments), the CRA highlights that the nomenclature Trunk/Terminating does not refer to the technology employed for the provision of leased lines services but to the connection points on which the leased line is installed. In fact, the 2016 MDDD Review defined leased lines markets as "*independent of technology used to deliver these services*"[66]. Hence Ooredoo has obligations on the above relevant Markets regardless the technology used to provide the services.

641. On the possibility of revising Ethernet charges in case they do not allow Ooredoo to recover the actual costs of this service, the CRA indicates that it would be pleased to modify applicable wholesale charges by making use of the review clause proposed in this Document (ref. section 3.7).

On Vodafone's comments

642. In the case of Vodafone's first argument, the CRA also refers to answers previously given (ref. section 2.5.2.4).

643. On the comment about retail and wholesale charges for Ethernet based products, the CRA first notes that Ooredoo's RAS does not present a differentiated service for Wholesale Ethernet products. Additionally, the CRA also indicates that it has opted for the use of benchmark values for both SDH and Ethernet products, in order to keep consistency between them.

Final Decision

644. The CRA is of the view that Ooredoo is obliged to offer Transmission Links based on Ethernet Technology, if this service is required by any Licensed Operators.

645. This is consistent with CRA's request to Ooredoo for putting forward a Wholesale Reference Offer for Leased Lines (any-to-any -but not only network site-to-network site – including Ethernet based Leased Lines) (ref. CRARAC 2016/06/30, dated June 30, 2016). Ooredoo did not comply with CRA's request.

646. The CRA confirms the Wholesale Charges as proposed in the First and Second Consultation Documents are deemed applicable.

647. The table below shows the Wholesale Charges that the CRA has approved.

	[A]	[B]	[E]		
1	Transmission Link Ethernet		Benchmark (Average distance of 15km) Monthly Rental		
2	speed	speed	2018	2019	2020
3			QAR/month		
4	speed				
5	256 KB	256	722	684	648
6	512 KB	512	891	844	799
7	1 MB	1,000	1,098	1,040	985
8	2 MB	2,000	1,267	1,200	1,136
9	4 MB	4,000	1,717	1,626	1,540
10	8 MB	8,000	2,159	2,045	1,937
11	16 MB	16,000	2,724	2,580	2,443
12	24 MB	24,000	3,124	2,958	2,802
13	32 MB	32,000	3,444	3,262	3,089
14	50 MB	50,000	4,340	4,110	3,893
15	100 MB	100,000	6,891	6,526	6,181
16	200 MB	200,000	7,875	7,458	7,064
17	500 MB	500,000	8,859	8,390	7,946
18	1 G	1,000,000	9,127	8,644	8,186

Table 45 Ethernet Transmission Links– Montly Rental approved by the CRA

66 "Market Definition and Dominance Designation in Qatar. Public Consultation".
Available at: http://cra.gov.qa/sites/default/files/MDDD%202016%20Consultations%20Responses%20and%20Orders%202015%20-2016.pdf

3.5.3 Transmission Links: one-off fees

Second CD - Question 9 - Do stakeholders agree with the CRA's proposed connection fees?

3.5.3.1 CRA's position in the second Consultation Document

648. The table below shows the Wholesale Charges proposed by the CRA.

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Connection, disconnection - For all speeds and distance	QAR/connection or disconnection	3,036	3,036	3,036	3,036
Change to previous year			0%	0%	0%

Table 46 Transmission Links – One off fees for consultation [CRA calculation]

3.5.3.2 Ooredoo's response to the second Consultation Document

649. "*Ooredoo does not object to the proposed charges (flat 3,036 QAR for 2018-2020). However we reserve the right to review these charges shall the actual cost of the service surpass the proposed wholesale charges.*"

3.5.3.3 Vodafone's response to the second Consultation Document

650. "*Vodafone Qatar refers the CRA to our Submission dated 12 November 2017.*"

3.5.3.4 CRA's finding and final decision

On Ooredoo's comments

651. The CRA acknowledges Ooredoo's support for the proposed approach.

652. On the review of the proposed charges, please refer to section 3.7 where the option of the review clause is considered.

On Vodafone's comments

653. The CRA also refers Vodafone to the response given by the regulator in the Second Consultation Document (ref. section 2.5.3.4).

Final Decision

654. In conclusion, the CRA sets the Wholesale Charges following the approach proposed in the Second Consultation Document.

655. The table below shows the Wholesale Charges approved by the CRA.

		Previously approved charges	Newly approved charges		
		2017	2018	2019	2020
Connection, disconnection - For all speeds and distance	QAR/connection or disconnection	3,036	3,036	3,036	3,036
Change to previous year			0%	0%	0%

Table 47 Transmission Links – One off fees approved by the CRA [CRA calculation]

631. The CRA also indicates that connection and disconnection charges will be charged per link, that is, one charge considers the two ends of the link. Additionally, these charges are defined regardless of the speed.

3.6 Duct Products

656. The CRA's final decision is that the current wholesale charges (ref. Annex 4 of the RIAO approved with Order CRA 2016/06/22) remain in force until reviewed by the CRA (ref. Order CRARAC 2018/05/08).

657. The charges of the Duct Products as calculated by the CRA are however left in this Response Document.

3.6.1 Duct Access Product

Second CD - Question 10: Do stakeholders agree with the CRA's proposed charge for the Duct Access Product?

3.6.1.1 CRA's position in the second Consultation Document

658. The table below shows the Wholesale Charges as calculated by the CRA, including the new cost of capital (10.45%):

		Approved Charge	Charges for consultation		
		2017	2018	2019	2020
Duct Access	QAR/cm2/meter/month	0.1200	0.1170	0.1139	0.1109
Change to previous year			-3%	-3%	-3%

Table 48 Duct Access – Wholesale Charges for consultation [CRA calculation]

659. The CRA is cognizant of the major construction works, for e.g. the World Cup are ongoing. This and the related duct re-routings might have some influence on the cost. Also various changes in duct managers might have a cost impact. Hence, the CRA is minded to keep this charge at the current level (0.12 QAR/cm2/meter/month).

3.6.1.2 Ooredoo's response to the second Consultation Document

660. "*The actual 2015 RAS network costs alone for duct service is QAR ✂ /m2/m/month. The preliminary 2016 RAS network cost plus wholesale costs are QAR ✂ /m2/m/month. Ooredoo therefore considers the proposed CRA's charges for duct access to be below RAS costs. We also note that as per the CRA's benchmark data, there is a variation in the wholesale mark-up demonstrating that NRA's in other jurisdiction are mindful in reflecting actually incurred wholesale costs when setting the wholesale charges.*"

661. "*Ooredoo's recommendation is to increase the wholesale charge for duct access to ensure costs recovery going forward.*"

662. "*We also note that the QNBN assertion that it does not have a universal service obligation is contrary to its license requirements.* "

3.6.1.3 Vodafone's response to the second Consultation Document

663. "*Vodafone Qatar disagrees with the proposals of the CRA:*

663.1 *<u>Ducts as an economic bottleneck</u>: Ducts are an enduring economic bottleneck controlled by Ooredoo which continue to refuse to give access to Vodafone Qatar in breach of the ARF. Without effective access to duct there cannot be efficient investment and competition in fixed. As a non-replicable asset on which downstream competition is dependent on, charge should cost-based. As we have previously indicated (see our letter dated 2 February 2017) this requires cost to be valued on an historical cost basis with fully depreciated assets removed from the asset base. Such an approach is necessary to foster efficient use of this bottleneck and avoid over-recovery of cost. Maintenance charges and one-off charges should reflect the efficient cost of provision.*

663.2 <u>*Cost estimates*</u>*: unfortunately there is no transparency regarding key parameters including: the asset lives used for duct, the treatment of depreciated assets, how additions and disposals are dealt with. The cost estimates and trends raise a number of questions. The cost trend (-8%) in three years does not seem correct: year-on-year one would expect a steeper decline given the capital intensity of duct. Through the normal depreciation process the capital employed and return on capital should decline. In turn, this should lead to a reduction in the annual cost of a larger magnitude than the -8% over three years. Further Vodafone Qatar submits that any additions year-on-year should be small relative to the asset base in so far as Ooredoo does not incur any cost with re-routing (it is Ashgal which picks up those cost) and in greenfield areas there will either be CRA ducts or no excavation cost for Ooredoo.*

663.3 <u>*Benchmark*</u>*: Ooredoo's duct charges are well above the benchmarks of the CRA. There are two to five times more expensive that Spain and Portugal, two best-in-class countries in Europe for duct access where Vodafone has extensively deployed fiber using ducts.*"

664. "*As a position of principle Vodafone Qatar recommends setting the duct charge at cost. However, and in light of the large gap with benchmarks and the issues related to the cost estimate, the CRA should consider placing weight on benchmarks from best-in-class countries for competing fiber roll-out based on duct access, i.e. Spain and Portugal.*"

3.6.1.4 Qnbn's response to the second Consultation Document

665. "*Qnbn agrees with the CRA's proposed Wholesale Charge for the Duct Access Product provided that there is no minimum space leased. As noted above, the current minimum 3cm2 should not apply but rather reference should be to the actual utilized space. In this regard Qnbn notes a similar discussion which was accepted by the CRA during the RIAO Consultation*".

666. Furthermore, Qnbn also notes in the submitted letter: "*…As the CRA is well aware Ooredoo has been found to be engaging in unlawful activity as a result of anti-competitive practices with respect to access to its duct infrastructure. The CRA has issued two Decisions in this regard and multiple Orders with which Ooredoo does not comply. Additionally, the CRA has undertaken a lengthy regulatory proceeding which resulted in a Reference Offer for access to Ooredoo ducts. The CRA issued multiple Orders to Ooredoo to make the Reference Offer for ducts available to the marketplace. Again, Ooredoo fails to comply. Qnbn invested significant time, effort and resources in these proceedings. All to no avail; access to Ooredoo ducts or any Dominant Service Provide products is not a reality in the State of Qatar.*"

667. "*The CRA is addressing the economics of services which Ooredoo has no intention of making available to the marketplace. Unless and until the CRA can enforce its Decisions and Orders on duct access, it seems that in this proceeding, the CRA will have successfully addressed the charges for duct products; but duct products and services from the incumbent Dominant Service Provider will still not be on offer in the marketplace. …*"

668. "*For the empirical and substantive reasons which will follow Qnbn can no longer accept Ooredoo's failure to abide by the Decisions and Orders issued by the CRA January 7, 2014 and September 18, 2016 (and other Interim Decisions) stemming from Ooredoo's anti-competitive conduct and its ever ongoing violation of Instructions pertaining to Access and Instructions pertaining to anti-competitive practices. These violations have severely and negatively impacted Qnbn in fiber deployment, obtaining ongoing customers, frustrated fixed line competition and significantly impacted the State of Qatar immeasurably. Further the financial impact upon Qnbn has been in the hundreds of millions of Qatari Rials. This does not take into account the impacts upon Vodafone, the State of Qatar and the loss of new technologies being introduced. …*"

669. “*Given the introduction of Law No. 17 of 2017 (amending Law no. 34 of 2016) the CRA most adopt a sense of urgency and relentless focus upon righting the access marketplace, enforcing all of its Decisions and Orders wherein Ooredoo has engaged in anti-competitive conduct and initiate the building blocks for a truly competitive fixed line marketplace. Qnbn appreciates that this will require a strong and persistent sense of purpose and resolve by key members of CRA personnel.*”

670. “*On various occasions in meetings with Qnbn the CRA has explicitly stated that it has in hand a prepared court action against Ooredoo for its various failures to abide by CRA Decisions and Orders. Qnbn encourages the CRA to initiate appropriate legal action.*”

671. “*Additionally, the CRA should immediately (before the end of Q1) create the Financial Sanctions Committee conveying the seriousness of Ooredoo's violations and the consequences on fixed line competition. …*”

672. “*Qnbn does wish to add some precision to the duct access charge stated by the CRA, at pages 47-48, as applicable for the State of Qatar. The duct access charge in Qatar is 0.12 QAR/m/ cm2. However, it is more precise to state that the minimum charge is 0.36 QAR/m as the minimum leased space is 3 cm2.*”

673. “*Given that the proposed charges are proposed for 2018 and onwards Qnbn looks forward to receipt of a final disposition of this consultation in the next several weeks and some form of retroactive application*”.

3.6.1.5 CRA’s finding and final decision

On Ooredoo’s comments

674. Regarding Ooredoo’s repeated claims that the proposed charge is below cost, the CRA refers to the operator to the response already given in the Second Consultation Document (ref. section 2.6.1.5).

On Vodafone’s comments

675. On the economic bottleneck, the CRA reiterates that it is doing all possible efforts to solve issues identified in the past with regards to the access to Ooredoo’s ducts. Additionally, the CRA outlines that charges proposed are cost-oriented and based on information from Ooredoo’s RAS, which is based on historical cost basis. The CRA also confirms that fully depreciated assets are removed from the cost.

676. On the cost estimate, the CRA reiterates that the charge proposed has been defined based on the audited RAS and, as such, is representative of Ooredoo’s operations.

677. On the benchmarks, the CRA outlines again that even if they have been used as additional information to cross-check the proposed charges with the international practice, wholesale charges must be cost-oriented, in line with the Qatari Telecommunication Law. As such, they have been estimated based on the outcomes of Ooredoo’s RAS.

On Qnbn’s comments

678. Regarding the minimum charge, the CRA refers Qnbn to the response already given in the Second Consultation Document (ref. section 2.6.1.5).

679. On the rest of comments related to the access of alternative operators to Ooredoo’s telecom infrastructure, being the objective of this process the discussion on proposed wholesale charges, the CRA notes that these comments are out of its scope. In any case, the CRA outlines that it will continue its effort to solve issues indicated by Qnbn identified in the past, and of which the CRA was already aware.

Final Decision

680. As proposed in the Second Consultation Document (ref. section 3.6.1.1 above), the CRA keeps the charge for the Duct Access Product at the current level over the future years 2018, 2019 and 2020. The table below shows the Wholesale Charges as approved by the CRA:

		Previously Approved Charge	Newly Approved Charges		
		2017	2018	2019	2020
Duct Access	QAR/cm2/meter/month	0.1200	0.1200	0.1200	0.1200
Change to previous year			0%	0%	0%

Table 49 Duct Access – Wholesale Charges approved by the CRA [CRA calculation]

3.6.2 Duct Access Product – Alternative charging mechanism

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

3.6.2.1 CRA's position in the second Consultation Document

681. The CRA had noted the contributions received by the SPs.

3.6.2.2 SPs further comments

682. SPs did not provide further comments.

3.6.2.3 CRA's finding and final decision

683. For the coming price control period, the CRA shall abstain to adopt alternative approaches.

3.6.3 Facility Hosting

Second CD - Question 11: Do stakeholders agree with the CRA's proposed charge for the Facility Hosting Product?

3.6.3.1 CRA's position in the second Consultation Document

684. The table below shows the Wholesale Charges proposed by the CRA:

		Approved Charge	Charges for consultation		
Facility Hosting		2017	2018	2019	2020
Duct Access	(QAR/Liter)	1.0000	0.7938	0.5877	0.3815
Change to previous year			-21%	-26%	-35%

Table 50 Facility Hosting – Wholesale Charges for consultation [CRA calculation]

3.6.3.2 Ooredoo's response to the second Consultation Document

685. "*Ooredoo notes that fully allocated cost for this service in RAS 2015 and preliminary RAS 2016 are higher than charges suggested by the CRA for 2018-2020 and we recommend keeping the charge at the current level of 1QAR/liter.*"

3.6.3.3 Vodafone's response to the second Consultation Document

686. "*Vodafone Qatar is not in a position to comment on this charge given the information provided in the CD#1 and CD#2.*"

3.6.3.4 Qnbn's response to the second Consultation Document

687. "*Qnbn agrees with the CRA's proposed Wholesale Charge for 'Facility Hosting'.*"

3.6.3.5 CRA's finding and final decision

On Ooredoo's comments

688. Ooredoo continues to argue that costs proposed by CRA are below costs estimated in the RAS, since the operator is considering in the cost the component related to wholesale costs. In this regard, please see CRA's position on paragraph 320 above.

On Vodafone's and Qnbn's comments

689. CRA acknowledges SPs' comments.

Final Decision:

690. The CRA has decided to regulate the Wholesale Charges following the approach proposed in the First and Second Consultation Document;

691. The table below shows the Wholesale Charges approved by the CRA:

		Previously approved charges	Newly approved charges		
Facility Hosting		**2017**	**2018**	**2019**	**2020**
Duct Access	(QAR/Liter)	1.0000	0.7938	0.5877	0.3815
Change to previous year			-21%	-26%	-35%

Table 51 Facility Hosting – Wholesale Charges approved by the CRA [CRA calculation]

3.6.4 Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products – Cost per hour

Second CD - Question 12: Do stakeholders agree with the CRA's proposed Wholesale Charges for the cost per hour? Additionally, stakeholders are invited to provide their views with regards to the possibility of implementing a glidepath for Wholesale Charges proposed for the cost per hour.

3.6.4.1 CRA's position in the second Consultation Document

692. The table below shows the Wholesale Charges proposed by the CRA, including the new cost of capital (10.45%).

		Approved Charge	Charges for consultation		
		2017	**2018**	**2019**	**2020**
Cost per Hour applicable to Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products	QAR/hour	375	166	166	166
Change to previous year			-56%	0%	0%

Table 52 Cost per hour – Wholesale Charges for consultation [CRA calculation]

693. The CRA is also considering the possibility of implementing a glidepath for the wholesale charges of the cost per hour proposed above. Consistently with other services' glidepath, cost per hour glidepath would be gradually applied from the approved charge in 2017 (375 QAR/hour) to the new proposed charge for 2020 (166 QAR/hour).

3.6.4.2 Ooredoo's response to the second Consultation Document

694. "*Ooredoo does not agree with the CRA's proposed charges for cost per hour. These charges do not reflect the actual costs incurred by Ooredoo and would not allow Ooredoo to recover the relevant costs. In the attachment to this response, Ooredoo submits the updated calculation of cost per hour supported by independent audit report, which Ooredoo attached to this response as well. Moreover it is important to*

note that the two cost categories used by the CRA to derive labor cost per hour, i.e. the basic salary and housing allowance combined together, represent only about ✂ of total labor costs actually incurred by Ooredoo."

3.6.4.3 Vodafone's response to the second Consultation Document

695. "*Vodafone Qatar reiterates its position as expressed in its Response dated 12 November 2017. Cost should reflect efficient processes and systems. Access seekers should not face discriminatory charges due to the lack of accuracy of Ooredoo's records or the lack of proper tools.*"

696. "*Regarding supervision which consists of a dedicated Ooredoo resource attending all the work, Vodafone Qatar does not consider it to be necessary for all installation activities. Instead some random visits of say 5% of installation work and after work completion could be undertaken."*

697. "*We ask the CRA to address those issues and not to merely 'note' them. They are fundamental to the access regime the CRA has set for itself to achieve to foster competition in fixed."*

3.6.4.4 Qnbn's response to the second Consultation Document

698. "*Qnbn could agree to the proposed charge (166 QAR/hour) subject to the following conditions:*

    698.1 *The charges will be applicable for field activities only;*

    698.2 *Any office activities (including desktop activities, GIS update, etc.) should be excluded; and*

    698.3 *Such charges should be capped at 166,000 QAR per quarter.*"

699. *Qnbn is not supportive of any glide path. If the correct rate is the proposed charge then the proposed charge should be effective immediately "*

700. **"*Clarification Required in Paragraph 4.6.4.5*** *: 166,000 is for 1000 hours per quarter which is equivalent to 2 dedicated resources for supervision (i.e.2 resources x 8 hours per day x 22 business days per month x 3 months per quarter). This is proposed to prevent any exploitation of this paragraph.* "

3.6.4.5 CRA's finding and final decision

On Ooredoo's comments

701. The CRA refers Ooredoo to the analysis of the cost per hour developed in section 3.6.5.5 for AAR and RAR services.

On Vodafone's comments

702. Regarding Vodafone's repeated argument, the CRA outlines that this process is exclusively addressed to the discussion on wholesale charges.

On Qnbn's comments

703. Regarding Qnbn's repeated comments, the CRA refers to answers previously given (ref. section 2.6.4.5).

704. On capping the charge for the Supervision, despite the calculation presented by Qnbn, the CRA sees no reason to cap it. In particular, it is not clear to CRA why a number of 2 dedicated resources should be considered in the calculation and no clear justifications have been provided by the operator in this regard.

Final Decision

705. The CRA has decided to set the wholesale charge for this service at the same levels as the average price per hour estimated for AAR and RAR services, by value of 367 QAR/hour (ref. point 3.6.5.5 below).

706. The CRA also confirms that no glidepath will be applied for this service.

		Previously Approved Charge	Newly Approved Charges		
		2017	2018	2019	2020
Cost per Hour applicable to Supervision, Field Feasibility Analysis, GIS update, and Ad-hoc engineering support products	QAR/hour	375	367	367	367
Change to previous year			-2%	0%	0%

Table 53 Cost per hour – Wholesale Charges approved the CRA [CRA calculation]

3.6.5 Access Area Request (AAR) and Route Access Request (RAR) for the RIAO

Second CD - Question 13: Do stakeholders agree with the CRA's proposed Wholesale Charges for the AAR and RAR?

3.6.5.1 CRA's position in the second Consultation Document

707. Tables below show the Wholesale Charges proposed by the CRA:

	Cost per manhour	Scenario A) Cost regardless of number of duct	
		All segments	
		time	cost
	QAR/h	h	QAR
CRA	166	11.34	1,884

Table 54 Access Area Request – for consultation [CRA calculation]

	Cost per manhour	Scenario A) Cost regardless of number of duct	
		All segments	
		time	cost
	QAR/h	h	QAR
CRA	166	13.46	2,237

Table 55 Route Access Request Costing – for consultation [CRA calculation]

708. The CRA also notes that the above charges shall be subject to the decision finally adopted with regards to the possibility of implementing a glidepath for the wholesale charges proposed for the cost per hour, as already anticipated in section 2.6.4.5.

3.6.5.2 Ooredoo's response to the second Consultation Document

709. "*Ooredoo refers the CRA to the updated audited AAR and RAR cost models submitted in the attachment to this response document supported by the accompanying independent audit statement. RAR still involves activities, which timing depends on number of processed duct segments and hence has a significant component of variable costs. Ooredoo suggest a follow up meeting with the CRA to address any outstanding CRA queries related to these cost models.* "

710. "*To ensure cost recovery, Ooredoo insists at this time to use RAR charge based on actual number of duct segments processed per each RAR. Once reliable data sample is amassed for RAR's allowing for cost estimate of average RAR request, the option proposed by the CRA could be reconsidered.* "

711. "*Ooredoo does not consider the CRA's suggested benefits stemming from applying charge per average RAR as relevant. Note that access seeker will be able, based on information provided by Ooredoo in response to AAR, to assess the cost / charge per each RAR for the area covered by AAR. Since OLO is not as a part of RIAO required to provide Ooredoo with its longer-term fiber rollout plan in advance, Ooredoo's*

budgeting certainty would not be improved by applying the fixed charge per average RAR. We also note that there is very little additional administrative costs incurred in charging different charge per RAR in comparison with administrative costs incurred when charging uniform charge. "

3.6.5.3 Vodafone's response to the second Consultation Document

712. "*Vodafone Qatar refers the CRA to our Submission dated 12 November 2017 and our responses to Questions 26 and 27. It is regrettable that the CRA elects to 'note' our comments without addressing them. In our view all processing activities (e.g. preparation and sending GIS information, maps and network data including XML files and shape files) should be done through a software management tool similar to the CRA web tool from Ericson. All back-office activities should be automated. An on-line tool is an essential element to level the playing field. Further, to save cost, Ooredoo could use the tool already purchased by the CRA.* "

3.6.5.4 Qnbn's response to the second Consultation Document

713. "*Qnbn agrees with the CRA proposal of 1,884 QAR for the AR and agrees the 2,237 QAR charge for the RAR*".

3.6.5.5 CRA's finding and final decision

On Ooredoo's comments

714. The CRA appreciates Ooredoo's efforts to provide information through the submission of the audited report and the updated cost models for both AAR and RAR services.

715. In this context, after having analyzed the information received, the CRA summarizes below the activities performed by the auditors to review the reasonability of the cost model submitted by Ooredoo:

    715.1 **Review of procedures for providing both services**. This revision has evaluated the required activities to provide the two services. The auditors have interviewed Ooredoo's personnel and assessed the efficiency of the processes in order to detect unnecessary activities and redefine the actual steps for processing AAR and RAR.

    715.2 **Determination of the time needed for completing each step**. The auditors have conducted simulations of processing AAR and RAR services. In this simulation exercise, Ooredoo's personnel have performed the steps of processing AAR and RAR services and the time taken to complete each step has been recorded.

    715.3 **Calculation of the cost per manhour**. Ooredoo has provided cost information from RAS 2015. Firstly, the auditors have identified the cost centers which are responsible for performing the different activities for processing AAR and RAR services. The hourly cost for each cost center has been calculated by dividing the total cost of the cost center by the total man-hours recorded in the cost center. The hourly cost has been projected considering the inflation and a mark-up has been applied to reflect the business sustaining costs.

On the time needed for completing each step

716. The CRA notes that for most of activities, the time recorded by the auditors have demonstrated to be lower than the time initially presented by Ooredoo, as shown in the following table:

Access Area Request

Sl. No:	Activity detail	First Submission Hours required	After the Audit Hours required	Difference %
1	Receive Area Access request for duct sharing and forward the request for further action			-17%
2	Check and verify the area access request complies with RIAO requirements and provide feedback to RPN000			-33%
3	If it doesn't, inform OLO to provide additional information			-33%
4	Check Revised AAR (RAAR) if it meets requirements			0%
5	Request to Issue an Invoice to OLO for the access request fee			-50%
6	Issue Manual Invoice for the access request and send copy to RPN000			-50%
7	1) RPN000 should inform FABN00 for validating the payment made by OLO – Budgeted time of 5 minutes			-17%
7	2) FABN000 checks and inform RPN000 regarding payment validation – Budgeted time of 15 minutes			-17%
7	3) RPN informs PFSH000 for taking further action – Budgeted time of 5 minutes.			-17%
8	Acceptance of AAR			-25%
9	Preparation of maps and network data including shape files.			-38%
10	Collating, verifying and sending GIS information, maps and network data including shape files.			33%
	Total per access request independent of number of duct segments	5,03	3,75	-25%

Route Access Request

Sl. No:	Activity detail	First Submission Hours required	After the Audit Hours required	Difference %
1	Receive and check Route access request from OLO			-73%
2	If it doesn't comply with RIAO, inform OLO to provide additional information			-67%
3	Check updated RAR if it meets the requirements			-70%
4	Inform OLO that original or updated route access request is approved			-67%
4a	Fill the approval form, stamp and sign it and email to OLO			100%
5	*Receive desk survey request from OLO & check if it confirms to the requirements			-100%
6	Develop response to OLO with the requested report and the required details. Once invoice is paid (step 7) provide the information to OLO.			-51%
7	Request to Issue an Invoice to OLO for the access request fee			100%
8	Issue Manual Invoice for the access request and send copy to RPN000			100%
9	1) RPN000 should inform FABN00 for validating the payment made by OLO – Budgeted time of 5 minutes			100%
9	2) FABN000 checks and inform RPN000 regarding payment validation – Budgeted time of 15 minutes			100%
9	3) RPN informs PFSH000 for taking further action – Budgeted time of 5 minutes.			100%
10	Receive site survey request for the relevant network elements as stated in their updated access request & provide access approval for OLO to carry out site survey			-69%
	Check and verify the OLO's site survey results and provide feedback			-100%
	Clarifications required from OLO by PFFI00			-100%
	Clarifications required from OLO by PFSH00			-100%
	Total per access request independent of number of duct segments	16,27	4,95	-70%

Table 56: Time needed for the AAR and the RAR after the Audit performed by BDO

717. Ooredoo did not invite the CRA to its premises to follow the processes as required by the CRA (ref. paragraph 363 above). Hence, the CRA has not had the possibility to check the above times.

On the calculation of the cost per man hour

718. The CRA notes that Ooredoo attempted to calculate a full recharged cost per man hour. To this end, Ooredoo has divided the total cost attributed to the cost centers by the number of hours worked by the staff directly assigned to the provision of AAR and RAR services.

719. The CRA notes that:

719.1 Some of the cost attributed to the cost centers are not relevant and/or cannot be considered an efficient cost in the medium / long term; To correct this aspect, the CRA has removed from the cost the following cost categories: Leased circuit rentals, Marketing costs and sponsorships, Outpayments to international carriers and Repairs and maintenance – network, as well as part of the costs (90%) related to legal activities of the cost center "FABN00";

719.2 Ooredoo has not included any business sustaining costs in its calculation;

719.3 The following tables show the exercise performed by the CRA to adjust the calculation of the cost per man hour:

Table 57: Cost per man hour (CRA calculation)

720. The table below compares Ooredoo's proposed cost per man hour with CRA's calculated one (ref. Table 57).

Table 58: Cost per man hour – CRA's and Ooredoo calculation

721. Additionally, the CRA notes that, from the RAS, there is not a clear trend to forecast the cost for man hour. Hence, the cost per man hour of 2015 shall be used for setting the wholesale charges, without applying the inflation.

On the dependence of the services on the number of ducts requested

722. It is important to highlight that a relevant aspect during the audit has been to evaluate if the provision of these two services is dependent or not on the number of duct segments.

723. The results of the audit are as follows:

723.1 **Access Area Request (AAR)**. Auditors have concluded that the cost of this service is irrespective of the number of duct segments. That is, Scenario A of those proposed by the CRA should be employed for charging this service.

723.2 **Route Access Request (RAR)**. Auditors have concluded that this service should be charged considering:

(i) A fixed rate for the first 100 duct segments

(ii) An incremental cost (variable rate) per 100 ducts

In this case, auditors indicate that the activity "*Provide response to OLO with the requested report and the required details*" has a dependence on the number of duct segments. This activity includes the generation of XML data and duct space records as well as the realization of quality and capacity constrain checks for which the time dedicated would depend on the number of duct segments.

The CRA found that the increment (100 duct segments) is arbitrary.

Neither Ooredoo nor BDO have proven that this increment is representative of the average number of duct segments that an access seeker will include in a RAR.

The risk of using that increment is that an access seeker will pay a higher fee compared to the activities performed by Ooredoo. However, the CRA understands that some of the activities could be variable to the number of the duct segments (specifically activity #6, ref. Table 59).

Hence, to ensure that Ooredoo recovers its cost and that the access seeker pay a fee consistent with what has been requested, the CRA has decided to include a charge variable to the number of duct segments included in the RAR.

724. The tables below show the cost for the AAR and for the RAR calculated using the minutes audited by BDO (ref. Table 56) and the cost per man hour calculated by the CRA for each cost center (ref. Table 58).

725. Additionally, the 10% mark-up has been added to recover the business sustaining costs not included by Ooredoo in its calculation (ref. paragraph 719.2 above).

Access Area Request

#	Activity detail	Cost center owner	Probability	Minutes	Hours required	Per hour unit Cost	Total cost for activity
				#	min	h	QAR/h
1	Receive Area Access request for duct sharing and forward the request for further action	RPN000					296
2	Check and verify the area access request complies with RIAO requirements and provide feedback to RPN000	PFSH00					102
3	If it doesn't, inform OLO to provide additional information	PFSH00					3
4	Check Revised AAR (RAAR) if it meets requirements	PFSH00					4
5	Request to Issue an Invoice to OLO for the access request fee	RPN000					178
6	Issue Manual Invoice for the access request and send copy to RPN000	FABN00					142
7	1) RPN000 should inform FABN00 for validating the payment made by OLO – Budgeted time of 5 minutes	RPN000					59
7	2) FABN000 checks and inform RPN000 regarding payment validation – Budgeted time of 15 minutes	FABN00					142
7	3) RPN informs PFSH000 for taking further action – Budgeted time of 5 minutes.	RPN000					59
8	Acceptance of AAR	PFSH00					76
9	Preparation of maps and network data including shape files.	PFSH00					228
10	Collating, verifying and sending GIS information, maps and network data including shape files.	PFSH00					203
	Cost per AAR - independent of number of duct segments			225	3,75		1.492
	Mark-up for overhead not included in Ooredoo calculation						10%
	Total cost per AAR - independent of number of duct segments						**1.641**

Route Access Request

#	Activity detail	Cost center owner	Probability	Minutes	Hours required	Per hour unit Cost	Total cost for activity
				#	min	h	QAR/h
1	Receive and check Route access request from OLO	PFSH00					41
2	If it doesn't comply with RIAO, inform OLO to provide additional information	PFSH00					1
3	Check updated RAR if it meets the requirements	PFSH00					5
4	Inform OLO that original or updated route access request is approved	PFSH00					25
4a	Fill the approval form, stamp and sign it and email to OLO	PFSH00					76
5	*Receive desk survey request from OLO & check if it confirms to the requirements	PFSH00					0
6	Develop response to OLO with the requested report and the required details.	PFSH00					
7	Request to Issue an Invoice to OLO for the access request fee	RPN000					178
8	Issue Manual Invoice for the access request and send copy to RPN000	FABN00					142
9	1) RPN000 should inform FABN00 for validating the payment made by OLO – Budgeted time of 5 minutes	RPN000					59
9	2) FABN000 checks and inform RPN000 regarding payment validation – Budgeted time of 15 minutes	FABN00					142
9	3) RPN informs PFSH000 for taking further action – Budgeted time of 5 minutes.	RPN000					59
10	Receive site survey request for the relevant network elements as stated in their updated access request & provide access approval for OLO to carry out site survey	PFSH00					127
	Fixed base cost for RAR - independent of number of duct segments			119,00	2,18		855
	Incremental cost for RAR - for each duct segment (To develop response to OLO with the requested report and the required details [step 6])			1,7	0,03	305	8
	Mark-up for overhead not included in Ooredoo calculation						10%
	Total Fixed base cost for RAR - independent of number of duct segments						941
	Total Incremental cost for RAR - for each duct segment (To develop response to OLO with the requested report and the required details [step 6])						9

Average Cost per Man Hour

	QAR/h
Average Cost per Man Hour	**367**

Table 59: Cost for the AAR and the RAR and average cost per man hour

726. The application of the methodology determines a weighted average cost per man hour of around 367 QAR. This is consistent with the cost per man hour agreed between Ooredoo and Qnbn for the IAA (i.e. 375 QAR)

On Vodafone's comments

727. The CRA appreciates Vodafone's recommendation and notes that the purpose of this consultation procedure is the definition of wholesale charges for the period 2018-2020, being Vodafone's arguments out of this scope.

On Qnbn's comments

728. The CRA acknowledges Qnbn's comments.

Final Decision:

729. The CRA has decided to set these charges based on:

729.1 The minutes as proposed by Ooredoo and audited by BDO;

729.2 The cost per man hour as calculated by the CRA.

729.3 The charging method as follows:

(i) Scenario A (independent of the number of duct segments) for AAR

(ii) Scenario B (considering a fixed part independent of the number of duct segments and a variable part dependent on the number of duct segments included in the RAR) for RAR

730. The following table shows the charges approved by the CRA:

		Access Area Request	Route Access Request
Fixed charge independent of the number of duct segments	QAR/request	1,641	941
Incremental cost for RAR - for each duct segment included in the RAR	QAR/duct segment		9

Table 60: Cost for the AAR and the RAR approved by the CRA

731. The CRA notes that these charges needed more information to be accurately set. Also, Ooredoo failed to involve the CRA in checking the times needed to perform the activities. Hence, the charges can be reviewed after the implementation of the RIAO and when robust and data will be available. The Order setting the Wholesale Charges details the requirements for the review.

3.6.6 Access Request (AR) for the IAA

Second CD - Question 14: Do stakeholders agree with the CRA's proposed Wholesale Charges for the AR?

3.6.6.1 CRA's position in the second Consultation Document

732. The table below shows the Wholesale Charges proposed by the CRA.

	Cost per manhour	Scenario A) Cost regardless of number of duct	
		All segments	
		time	cost
	QAR/h	h	QAR
CRA	166	24.79	4,121

Table 61 Access Request Costing – Summary [CRA calculation]

733. The CRA also notes that the above charges shall be subject to the decision finally adopted with regards to the possibility of implementing a glidepath for the wholesale charges proposed for the cost per hour, as already anticipated in section 2.6.4.5.

3.6.6.2 Ooredoo's response to the second Consultation Document

734. "*Ooredoo does not agree with proposal. The cost causality is not observed in the calculation of the proposed wholesale charge for AR. For one AR there can be multiple subsequent route requests and the AR charge is supposed to cover the costs all of these subsequent route requests. The CRA's charge proposal ignores this reality and thus neglects the costs incurred by Ooredoo to perform related tasks. The AR charge proposed by the CRA in scenario (A) correspond to the sum of charges for one AAR and one RAR only as proposed by the CRA for these two type of requests individually (in scenario A) in tables 25 and 26 of the Consultation Document. Hence in case that there will be more than one route request raised by OLO to Ooredoo for any AR, Ooredoo would not be allowed to recover the full cost of processing these route requests.*"

3.6.6.3 Vodafone's response to the second Consultation Document

735. "*Vodafone Qatar has no further comment than those made in its Submission dated 12 November 2017.*"

3.6.6.4 Qnbn's response to the second Consultation Document

736. "*Qnbn only agrees the proposed charges in so far as the proposed charges relate specifically to the IAA and are replacing the AR charges in the IAA*."

3.6.6.5 CRA's finding and final decision

On SPs' comments

737. The CRA refers SPs' to responses given in section 3.6.5.5.

Final Decision

738. The CRA proposed to set these charges based on the sum of costs calculated for the AAR and RAR services (ref. section 3.6.5), as follows:

		Access Request
Fixed charge independent of the number of duct segments	QAR/request	2,582
Incremental cost for RAR - for each duct segment included in the provisioning request	QAR/duct segment	9

Table 62 Access Request – Charges calculated by the CRA [CRA calculation]

739. As already stated at the beginning of this section 3.6, the CRA points out the charges of the Infrastructure Access Agreement ("IAA") between Ooredoo and Qnbn signed on April 25, 2012, are not amended (ref. to the Order approving the Wholesale Charges). The CRA deems this as justified, as the RIAO is now effectively available and this will incentive the SPs to migrate from a privately agreed contract to the RIAO.

3.6.7 Successful and Unsuccessful Blockage Clearance products

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

3.6.7.1 CRA's position in the second Consultation Document

740. The CRA decided to keep the approach proposed in the First Consultation Document for "Successful and Unsuccessful Blockage Clearance products" services, which is "at documented cost incurred by Ooredoo".

3.6.7.2 SPs further comments

741. SPs did not provide further comments.

3.6.7.3 CRA's finding and final decision

742. The wholesale charges for this service are set at "documented cost incurred by Ooredoo".

3.6.8 Transportation charge product

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

3.6.8.1 CRA's position in the second Consultation Document

743. The CRA shall approve the charge proposed in the First Consultation Document for "Transportation charge product", which is 150 QAR/vehicle/day or part thereof.

3.6.8.2 SPs further comments

744. SPs did not provide further comments.

3.6.8.3 CRA's finding and final decision

745. The CRA has set the wholesale charge for this service at 150 QAR/vehicle/day or part thereof.

3.6.9 Miscellaneous Expenses product

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

3.6.9.1 CRA's position in the second Consultation Document

746. The CRA shall keep the approach proposed in the First Consultation Document for "Miscellaneous Expenses product", which is "at documented cost incurred by Ooredoo".

3.6.9.2 SPs further comments

747. SPs did not provide further comments.

3.6.9.3 CRA's finding and final decision

748. The CRA has set the wholesale charges for this service "at documented cost incurred by Ooredoo".

3.7 Review of the Wholesale Charges (Review Clause)

Second CD – The CRA did not put forward questions. However, SPs were free to provide further comments.

3.7.1 CRA's position in the second Consultation Document

749. The Order approving the Wholesale Charges for the financial years 2018, 2019 and 2020, the CRA shall include a review clause stating "*Ooredoo, Vodafone or both may request for a review of the Wholesale Charges subject to a material change in network costs in relation to the relevant services which shall be no earlier than 12 months from the implementation date of this Order. Such a request shall be supported by an objective justification and relevant cost data. For clarification, principles which have been defined upon during the consultations stages will not be subject to review, for example, wholesale mark up, retail mark up, cost of capital etc*."

3.7.2 Vodafone's response to the second Consultation Document

750. *"For the avoidance of doubt, in the event that a review of wholesale charges is approved by the CRA, any changes should be subject to consultation with the SPs. "*

3.7.3 CRA's finding and final decision

On Vodafone's comments

751. The CRA notes that the it will be decided in due course the need of consulting the review of the wholesale charges with the SPs.

Final Decision

752. In conclusion, in the Order approving the Wholesale Charges for the financial years 2018, 2019 and 2020, the CRA shall include a review clause stating:

"*Ooredoo, Vodafone or both may request for a review of the Wholesale Charges subject to a material change in network costs in relation to the relevant services which shall be no earlier than 12 months from the implementation date of this Order. Such a request shall be supported by an objective justification and relevant cost data. For clarification, principles which have been defined upon during the consultations stages will not be subject to review, for example, wholesale mark up, retail mark up, cost of capital etc*."

Annex I Tables and Figures

*** end of document ***