2018/9 Review of Mobile Termination Rates in Jersey

Draft Decision

Channel Islands Competition and Regulatory Authorities

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1. Introduction

1.1 Telecommunications networks, both fixed and mobile, need to be connected to one another in order that customers of those different networks are able to call each other. Telecommunications regulators around the world have a role in ensuring the adequate connection of those networks.

1.2 To support the connection of those networks, one of the services that network operators offering voice services provide to each other is call termination. Call termination means the completion of a call from a customer of another network. Mobile Call Termination (**MCT**) is a particular type of call termination service provided by a Mobile Network Operator (**MNO**). It enables the originating network operator, which could be fixed or mobile, to connect a call through to a customer of an MNO. The originating operator pays an amount, known as the mobile termination rate (**MTR**), to the MNO providing the wholesale MCT service.

1.3 Regulators in many European countries have identified a need to ensure that MTRs are set at a level that reflects the efficient costs of providing those services because MNOs typically have the ability and incentive to raise charges above that level, to the potential detriment of consumers calling the MNOs' networks. The European Commission has set out its view that there is a significant benefit in national regulatory authorities (**NRAs**) moving towards setting MTRs based on the long run incremental cost (**LRIC**) of provision[1].

1.4 The European Commission notes that high termination rates are ultimately recovered through higher call charges to end-users; and can also give rise to competition problems. It takes the view that harmonized termination rates based on an efficient cost standard (which it equates with LRIC) would promote efficiency, sustainable competition and maximise consumer benefits in terms of price and service offerings[2].

1.5 In 2010, the Jersey Competition Regulatory Authority[3] (the **JCRA**) found that there were distinct markets for the termination of calls on each mobile network in Jersey[4] and that each MNO held significant market power (**SMP**) for the termination of traffic on its own network. This conclusion has formed the basis of subsequent decisions by the JCRA to impose a price control on MTRs in Jersey[5].

1.6 In September 2014, the JCRA issued a Final Notice in Jersey (which is still in force) that an MTR of 4.11 pence per minute (**ppm**) should be applied to MNOs in Jersey. 4.11ppm is now very significantly higher than other countries in Europe; and, given studies elsewhere, is likely to be well in excess of the efficient costs to MNOs of providing those services, as measured by the LRIC standard.

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[1] Commission Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU (**Commission Recommendation**).
[2] Commission Recommendation, recital (7).
[3] The JCRA and the Guernsey Competition and Regulatory Authority (the **GCRA**) together make the Channel Islands Competition and Regulatory Authorities (**CICRA**).
[4] Decision on the Holding of Significant Market Power in Various Telecommunications Markets - http://cicra.gg/_files/100420%20market%20review%20decision.pdf
[5] The relevant legal powers of the JCRA are set out in Section 4.

1.7 In October 2017 the JCRA issued a Final Notice in Jersey following a market review (CICRA 17/28) (the **2017 Final Notice**). The Final Notice again found that there were distinct markets for the termination of calls of each of the mobile networks in Jersey and that each MNO held SMP for the termination of traffic on its own network.

1.8 In December 2018 the JCRA commenced its review into MTRs by issuing a Call for Information (CICRA 18/52) (the **Call for Information**). Responses were received from four operators. This document addresses those responses and sets out the proposed Draft Decision for future MTRs.

1.9 The JCRA now reports in this document on its provisional conclusions following a consideration of the responses to the Call for Information. These conclusions will now be the consultation to allow all interested parties to express their views.

1.10 As explained below, the JCRA provisionally concludes that the LRIC approach recommended by the European Commission, and adopted in the great majority of European countries, can be expected to bring benefits to local consumers and businesses in Jersey and is the right approach to take. In a competitive retail market, we would expect reductions in MTRs to be passed on, in whole or in part, to those who call mobile numbers. This may in turn increase their willingness to call mobile numbers and the length of such calls, bringing benefits to called parties in Jersey. It is for reasons of this kind that regulators across Europe have reduced MTRs markedly over the last decade. By contrast, Jersey MTRs have remained static since 2014, and are now many multiples of the rates prevailing in most other European countries.

1.11 We therefore recommend revising the existing price control applicable to Jersey MTRs so as to bring MTRs down to a level that, based on the available evidence, is likely to be a much closer approximation of Jersey MNOs' LRIC costs and is more closely aligned with the prevailing levels of MTRs in the UK and other European countries.

1.12 In developing our proposals, we have taken careful account of the comments already received from operators. We have, for example, included a proposal to apply a glidepath, so as to allow time for operators to implement the new MTRs in a phased manner. We believe that the package of measures proposed in this document represents a reasonable and proportionate intervention, and accords with our statutory duties, some of which are set out in Annex A.

2. Purpose and Structure of this Draft Decision

2.1 Following extensive consultation with the operators particularly during 2018, which in turn resulted in its Call for Information, the Authority is issuing this non-statutory Draft Decision (the **Draft Decision**)[6] with regards to MTRs applied by MNOs in Jersey.

2.2 In the Call for Information, the Authority consulted on a reduction to the current MTR level of 4.11ppm. The Authority received four submissions. Having considered those representations, assessed the economic rationale for reviewing MTRs and analysed what an appropriate MTR level is for Jersey, the Authority remains of the view that the MTR of 4.11ppm is significantly higher than many other countries and is likely to be significantly above the efficient costs of providing a service, judged by the LRIC standard.

2.3 Accordingly, this Draft Decision consults on proposed reductions in the level of MTRs over a three year period, starting from 1 January 2020. The proposal is to introduce the reductions in a phased and gradual manner on the basis of the following schedule or "glidepath":

Effective Date	**MTR Rate (ppm)**
Current rate	4.11
1 January 2020	3.11
1 January 2021	1.11
1 April 2022	0.7

Table 1: Proposed MTR rate

2.4 The remainder of this draft decision is structured as follows:

- First, we address responses received to the Call for Information (section 3);
- Second, we carry out an assessment of whether it is appropriate to reduce MTRs and if so to what level and on what glidepath (section 4);
- Third, based on the analysis undertaken in sections 3 and 4, we set out the directions as proposed by the Authority (section 5);
- Fourth we set out a summary of our conclusions and outline next steps (section 6).

2.5 The draft decision is also accompanied by two annexes:

- Annex 1 explains the legislative and licensing background;
- Annex 2 provides further detail of the Authority's benchmarking analysis.

2.6 In this paper we refer to the JCRA and CICRA as "**the Authority**" save for where specific reference to the JCRA or CICRA is required.

[6] For further information on the CICRA consultation process see Section 6

2.7 The Authority is issuing this Draft Decision to provide interested parties with a further opportunity to comment on the proposed directions, prior to the Authority issuing its Final Decision as part of the pre-statutory process.

2.8 Interested parties are invited to submit comments to the Authority in writing or by email on the matters set out in this paper to the following address:

CICRA
2nd Floor, Salisbury House
1-9 Union Street
St Helier
Jersey
JE2 3RF

Email: info@cicra.je

2.9 All comments should be clearly marked "*2018/9 Draft Decision on the Review of Mobile Termination Rates (MTRs) in Jersey*" and should arrive by **5pm on 2 August 2019**.

2.10 In line with the Authority's consultation policy, the Authority intends to make responses to the consultation available on the Authority's website (www.cicra.je), the combined website of the GCRA and JCRA. Any material that is confidential should be put in a separate annex and clearly marked as such so that it may be kept confidential. The Authority regrets that it is not in a position to respond individually to the responses to this consultation.

2.11 **Disclaimer** – *This document does not constitute legal, technical or commercial advice; the JCRA is not bound by this document and may amend it from time to time. This document is without prejudice to the legal position or the rights and duties of the JCRA to exercise regulator powers generally.*

3. Call for Information responses

Introduction

3.1 A total of four responses were received to the Call for Information – from JT (Jersey) Limited (**JT**), Sure (Jersey) Limited (**Sure**), Jersey Airtel Limited (**Airtel**) and Clear Mobitel (Jersey) Limited (**Clear Mobitel**).[7]

3.2 In this section we address the submissions made by those parties to the questions posed in the Call for Information and, based on our assessment, set out our considered conclusion.

Question 1: Does the respondent agree that the SMP decision contained in the *Final Notice – Mobile Call Termination 2017 - Market Definition and Dominance*[8] is still valid? If the respondent has alternative views or evidence the respondent is asked to explain those and provide all of its analysis and assessment relating to this matter to inform CICRA's considerations and next steps.

Responses received

3.3 All four operators agreed that the SMP decision contained in the 2017 Final Notice is still valid. Additional submissions made by Sure and Airtel on this particular question are of note.

3.4 JT agreed that there are distinct markets for the termination of calls on each mobile network and that each MNO held SMP for the termination of traffic on its own network.

3.5 Sure stated that it was grateful for the clarification that the market definitions only apply once the originated call reaches the on-island switch of the MNO in question and therefore the conveyance of the call from the originating operator and any costs associated with that conveyance are not included within the scope and definition of MCT. "*That is, the MCT service, and the charges for the service, only relate to the conveyance of the call from the on-island switch to the termination point on the relevant MNO's network …" and that "… the MTR is not available to international operators, who instead agree commercial rates for the end-to-end conveyance of their calls from their customers to the Channel Islands' MNOs through commercial negotiations*".

3.6 Airtel stated that, whilst it is true that a telecom operator has SMP for the number it owns for the purpose of MCT, the termination of calls is actually a monopoly of the terminating operator as no other person/entity can reach that number unless the terminating operator allows the same. Airtel considers that "*every big operator will therefore have a tendency to charge more for terminating calls unless it is regulated*". It also notes that, "*in a free market scenario, the regulators thereby define MTR and mandatory interconnection so that this SMP cannot be misused by the terminating operator. Interconnection regulation therefore required mandatory*

[7] Each party is a licensed operator in Jersey, with JT, Sure and Airtel being three of the four mobile operators currently providing mobile services. The fourth mobile operator to which this consultation applies is Marathon Telecom Limited (**Marathon**).

[8] https://www.cicra.gg/media/597685/t1236gj-final-notice-mobile-call-termination-2017-market-definition-and-dominance.pdf

interconnection and payment of MTR to the terminating operator. The MTRs are therefore fixed at cost so that, while the terminating operator is compensated for the work done in call termination, the subscribers on other network are not denied access to subscribers in terminating operators network." Airtel concludes by stated that it "*is of the firm belief, that incumbency has to be a major determiner in deciding overall SMP, and in setting any MTRs*."

CICRA Analysis

3.7 In all the submissions received, the respondents considered that an MNO does have SMP on the termination of mobile calls onto its own network.

3.8 Sure suggested that "*MTR is not available to international operators*": see paragraph 3.5 above. Sure's understanding is incorrect, and does not follow from the markets defined by the Authority for MCT in relation to which each MNO has been found to have SMP. Under the directions proposed by the Authority, if adopted, each MNO will be required to provide MCT to any operator, whether international or otherwise, at rates not exceeding those imposed by the Authority. The proposed requirement, if adopted, will apply irrespective of whether the operator purchases other conveyance services from the MNO in question or from a third party or self-supplies those other services.

3.9 Airtel submitted that SMP comes from incumbency: see paragraph 3.6 above. In reviewing SMP for the termination of mobile call the Authority found that **all** mobile network operators hold SMP for the termination of mobile calls on their own networks. The position of incumbency in the mobile market or holding the largest market share in the mobile market does not affect the finding of SMP on the market for the termination of calls on the MNO's own network.

CICRA Conclusion

3.10 All respondents agree in principle that the SMP decision contained in the 2017 Final Notice is still valid.

3.11 Airtel's argument on incumbency does not take away from the fact that Airtel holds SMP for the termination of calls on its own network. Airtel did not provide any alternative argument or evidence on this matter. The finding of SMP was fully set out in the 2017 Final Notice on this matter.

3.12 The Authority therefore concludes that in deciding on whether any remedies are required for the MTR market the Authority's finding of SMP on the relevant market, contained in its 2017 Final Decision, is the correct and appropriate basis.

Question 2: Does the respondent agree with CICRA's provisional views that *ex-post* competition law would be insufficient to address the lack of effective competition in the markets defined and prevent the problems identified in this consultation? If the respondent does not agree with CICRA's provisional view the respondent should provide all of its analysis and assessment.

Responses received

3.13 JT, Sure and Clear Mobitel agreed with the Authority's provisional view that ex-post competition law would be insufficient to regulate MTRs effectively. Sure noted that no other regulator has adopted that approach. Clear Mobitel observed that without ex-ante regulation, MNOs would be able to set termination charges without regard to the possible harmful effects on consumers. It stated that the (retail) mobile market in the Channel Islands has a dominant operator on each island and thus terminating traffic is asymmetric. This would disadvantage smaller operators and cause consumer harm by distorting competition.

3.14 Airtel however did not agree with the Authority's provisional views that ex-post competition law would not provide a sufficient alternative to ex-ante regulation. On the contrary, Airtel considered there to be a good level of the competition in the Jersey telecoms market, with three pan Channel Island 4G operators with over 95% demographic coverage for a population of 170,000 which it considers is a major win for the islands and for CICRA.

CICRA Analysis

3.15 JT, Sure and Clear Mobitel agreed that ex post competition law would be insufficient to address the lack of effective competition in the markets defined.

3.16 Airtel disagreed as it considers that the Channel Islands is a competitive market for mobile operators. The Authority is of the view that the Channel Islands are very fortunate to have a competitive mobile market at the retail level. The Authority considers, however, that even in the case of a competitive retail market there is the potential for harm if the MTR is set above the incremental cost of termination of a call on the individual wholesale markets for MCT on each MNO's own network. Such harms, as set out by the Authority in its Call for Information, are not addressed by ex post remedies. This matter is specifically discussed later in this Draft Decision.

CICRA Conclusion

3.17 JT, Sure and Clear Mobitel agreed with the Authority's provisional view that ex post competition law would be an insufficient approach to address the lack of effective competition in the markets defined and prevent the problems identified in the Call for Information. The submissions made by Airtel do not contain evidence to support the contrary. The Authority concludes that exclusive reliance on ex-post competition law would not provide an appropriate basis for regulating MTRs in the Channel Islands.

Question 3: Does the respondent agree with CICRA's provisional views on *ex-ante* remedies? If the respondent does not agree with CICRA's provisional views the respondent should provide all of its analysis and assessment.

Responses received

3.18 JT agreed that a charge control is the most appropriate remedy as per the Authority's analysis demonstrated in Table 1 of the Call for Information. Clear Mobitel also agreed with Authority's ex-ante proposals, stating that the nature of the MNOs in the Channel Islands means that there is no significant cost differential in operating since effectively only one switch is required by each operator and the number of antennae sites is more or less identical for each provider. Therefore there is little opportunity for the larger operators to claim additional operational costs. In addition the dominant MNOs would also receive the largest portion of terminating traffic.

3.19 Sure in its response commented on each of the four ex-ante remedies put forward by the Authority. Sure's comments are as follows:

1. *Network access obligation - Sure agrees with a requirement to provide the MCT service to any operator that is entitled to receive that service. As Sure noted in Question 1 above, it considers that the MCT service relates only to traffic that is conveyed from an MNO's on-island switch to the terminating point on the relevant MNO's network. Sure stated that CICRA needs to make it clear that when it states that it is likely that a general access obligation will be needed to protect end-to-end connectivity, that it is not suggesting that the MCT service also encompasses the conveyance elements of the call prior to its receipt on an MNO's on-island switch.*

2. *Price transparency obligation - Similarly, Sure agrees with a requirement for all MNOs to publish their MTRs and to notify changes in their MTRs. As is current practice, the rate would form part of the notification of interconnection rates to all relevant operators.*

3. *No undue discrimination obligation - Sure would be comfortable with this obligation. Sure assumes that CICRA would also want to ensure that the same MTR is applied in Guernsey and Jersey, so that there continues to be a common Channel Islands MTR.*

4. *Charge control obligation - Sure is generally supportive of the setting of a maximum MTR for MNOs operating in the respective Bailiwicks. However, for Sure the key questions relate to the methodology for setting that maximum MTR, and the level of that MTR.*

3.20 Airtel did not agree with the Authority's provisional views on ex-ante remedies and stated that "*it is at a loss to understand why the current consultation is needed*". Airtel submitted that there was no current, pertinent evidence in the Authority's consultation for the various types of harm listed. Whilst Airtel was not adverse to the idea of regulated MTRs in general, it considered the Authority had not sufficiently evidenced why the review is needed at this time. In the absence of such evidence, Airtel considered the exercise of deciding what remedy to use could actually result in harm to competition in the telecoms market and create the case for job losses and rates hikes.

CICRA Analysis

3.21 JT and Clear Mobitel agreed with the Authority's approach. Sure's position was broadly supportive of the ex-ante obligations proposed by the Authority. As regards the network access obligation, Sure agreed that this should be imposed, but sought confirmation that the MCT service did not also encompass the conveyance elements of the call prior to its receipt on an MNO's on-island switch (see the first point at paragraph 3.19 above). The obligation that is

proposed would indeed be with respect to call termination and not other conveyance elements. It would require MNOs to offer termination services on an unbundled basis from international conveyance services, which originating operators would be free to procure from the provider of their choice. In connection with the obligation not to discriminate unduly, Sure stated its view that the same MTR should apply in Guernsey and Jersey (see third point above). The Authority's proposal is for the same level of MTR should apply across the Channel Islands. As respects the methodology proposed for setting the maximum MTR, Sure indicated that it had some concerns (fourth point). This issue is addressed in Section 4 of this Draft Decision.

3.22 Airtel did not agree with the Authority's approach. Airtel was concerned as to why this current consultation was necessary. In this Draft Decision, the Authority sets out its reasons for considering regulation to be needed, and why it considers that MTR levels to be set by reference to a LRIC cost-based measure. These are further developed in section 4 below.

CICRA Conclusion

3.23 Taking into account all of the comments and responses received to this question, the ex-ante remedies set out in the Call for Information are, in the Authority's considered view, correct and appropriate for MTR markets in the Channel Islands.

Question 4: Does the respondent agree with CICRA's provisional findings on the justification for a LRIC approach to the setting of the MTR? If the respondent does not agree with CICRA's provisional findings the respondent should provide all of its analysis and assessment.

Responses received

3.24 Responses to this question were received from JT, Sure and Airtel.

3.25 JT agreed with the Authority's provisional view that the level of the MTR price cap applicable in the UK could be used as an appropriate proxy for the LRIC of an efficient MNO in Jersey. JT stated that an approach could be to take the Ofcom model, on which the UK's MTR price cap is based, and to consider its suitability for Jersey and Guernsey taking account of any relevant differences in local market circumstances

3.26 JT commented that the Authority was proposing the use of a LRIC MTR model instead of benchmarking, this being the approach taken historically. JT stated that the Authority appeared to pick and choose at its convenience whether to use benchmarking data to set pricing depending on which outcome it wished to see. Previously, MTRs had always been set by way of benchmarking. JT stated that the Authority must take into consideration that the Channel Island mobile operators have a higher cost base than the UK mobile operators as they do not benefit from the same economies of scale and scope. Added to this, as operators in islands, they have the additional costs of operating off island submarine cables.

3.27 Sure acknowledged that it is international practice, in large jurisdictions at least, to apply MTRs that reflect the LRIC costs of providing MCT. Sure also stated that it is necessary for the Authority

to consider the local market conditions before making a decision to move to a LRIC-based MTR and that the Authority presented no data or analysis of the likely impact on the Channel Islands markets of a significantly reduced MTR.

3.28 Airtel stated that the Authority had not supplied any evidence as to why the model used to calculate the current MTR is inefficient and it calls for a re-evaluation. Further, the LRIC model is more appropriate where the incremental cost is significantly different from the current cost (the Authority assumes that Airtel means Fully Allocated Cost (**FAC**)). From Airtel's point of view, the current costs are already high and increasing with the introduction of any new technology and lack of economy of scale. Airtel argues that margins are under pressure as a result of stagnant market conditions, reducing Average Revenue Per User (**ARPU**), high infrastructure cost and competitive pricing.

3.29 Airtel therefore recommended the FAC model as the most appropriate method for estimating the mobile termination cost since it is verifiable and less prone to dimensioning errors unlike the approach used in LRIC model. Airtel proposed that FAC has the advantage of simplicity and is based on audited data, leaving no scope for disagreement or dispute. It considered that it also ensures that each cost element is clearly identifiable and included and relies on the actual data furnished by the operators.

3.30 Airtel argued that LRIC is not the right approach the Channel Islands for the following reasons:

- In the LRIC model, the termination charge is determined using a bottom-up approach where the future cost for a hypothetical operator is calculated on the basis of an assumed coverage and capacity instead of the cost of the actually deployed network. Most variants of the LRIC model only consider the incremental cost, therefore, they do not entirely compensate the full cost.

- The LRIC model does not allow for the recovery of historical costs incurred by the operators. It could result in an unfair situation where the marginal cost is pegged at a level, which does not realise the true cost and erodes the margin and, subsequently, the roll-out capabilities.

- The LRIC model is also hugely prone to errors. It is based upon a large number of assumptions for designing a model network. Any wrong assumption could result in a wrong/unrealistic termination charge. Given that such a model effectively starts from a blank piece of paper, there is a risk that some costs will be omitted or wrongly calculated. Further, the model requires extensive data, not all of which is easily available. Therefore, the assumptions run the risk of the overall model not being very reliable and susceptible to errors.

CICRA Analysis

3.31 JT and Sure agreed with the Authority's provisional findings on the justification for a LRIC approach to the setting of the MTR. Airtel did not concur with the Authority estimating termination charges using any variant of the LRIC model.

3.32 The Authority welcomes JT's position on considering the UK model as a useful proxy for the setting of MTRs in the Channel Islands. The Authority notes JT's comments relating to the picking and choosing of cost methodologies. In the Authority's view it is necessary to distinguish between the costs standard that is aimed at (proposed to be LRIC) and the methodology that is used to arrive at an estimate of LRIC costs. There are several different methodologies that could be applied for the latter exercise, with varying advantages and disadvantages. There is no reason why several different methodologies should not be used in parallel. In section 4 below, the Authority uses a combination of benchmarking and an adjusted version of Ofcom's LRIC costs model. The Authority considers that this is a reasonable and proportionate way of assessing LRIC in the context of the Channel Islands. The Authority is not persuaded that it would be proportionate to engage in developing a bespoke bottom up LRIC costs model for the Channel Islands, given the costs, complexity and timescales that would be involved.

3.33 Sure raises an issue relating to the appropriate use of LRIC in a smaller jurisdiction. The Authority addresses that point in Section 4 of this Draft Decision.

3.34 The Authority notes the issues raised by Airtel in its response. The Authority has set out on a number of occasions now its reasons for considering that MTRs in the Channel Islands are too high; why a LRIC costs standard is appropriate; and why the failure to reduce MTRs to a measure based on LRIC costs could result in competitive distortions and consumer harm. These issues are addressed further in Section 4 of this Draft Decision.

CICRA Conclusion

3.35 Both Sure and JT acknowledge that LRIC could be considered as an appropriate costs measure for setting MTRs in Jersey. Airtel does not agree with the use of any variant of the LRIC model.

3.36 The Authority considers that the LRIC costs measure is the correct measure of costs to target. The Authority considers what would be the most appropriate and proportionate method(s) to apply in modelling LRIC costs in Section 4 of this Draft Decision.

Question 5: Does the respondent agree with CICRA's provisional view that the Ofcom MTR model is a suitable proxy to be used as a LRIC MTR model to be applied to the Jersey market? If the respondent does not agree with CICRA's provisional view the respondent should provide all of its analysis and assessment.

Responses received

3.37 JT referred to its response to Question 4.

3.38 Sure did not consider that LRIC-based MTRs would be likely to be the optimal way to set MTRs in the Channel Islands. However, if the Authority were to proceed to impose a LRIC-based MTR,

then Sure believed that it was critical for the Authority to take the utmost care to ensure that the resulting MTR was reasonable and proportionate. Sure agreed with the Authority that it would not be proportionate to develop a bespoke LRIC model for the Channel Islands market, but also maintained that would not be correct to borrow a LRIC model from another market (such as the UK) and simply to make a few adjustments.

3.39 Sure considered the costs of engaging a consultant to collect data and amend the Ofcom LRIC model would not be commensurate with any benefits such an amended model would deliver, compared to the Authority simply using the BEREC MTRs as the basis for a benchmarked MTR for the Channel Islands. Sure submitted that the maximum benefit to Sure customers, should the Channel Islands MTR be reduced to zero, would be [✂]ppm, and any costs incurred by CICRA in setting a new MTR should be commensurate with the benefits that change will deliver.

3.40 If a LRIC-based MTR were to be imposed in the Channel Islands, Sure advocated adopting a benchmarked MTR, including either the full 37 MTRs as set out in the BEREC 2018 MTR report, or including the 7 smallest countries in that BEREC. Sure stated its view that it would be wholly inappropriate for the Authority to use either the LRIC model or the actual rate from the UK to set the Channel Islands MTR, as the UK approach to setting MTRs had resulted in one of the lowest rates across Europe. If the UK rate were around the 50th percentile, Sure would be less concerned.

3.41 Airtel did not agree with the Authority's provisional view that the Ofcom MTR model was a suitable proxy for the purposes of estimating the LRIC of MTR provision in Jersey. It considered the UK telecoms market to be hugely different to the Channel Islands, observing that the addressable subscriber base, and the number of registered telecom service providers, vastly outnumber those in Jersey.

3.42 Airtel "*categorically and strongly disagree[d]*" with the Authority's reasoning and positioning and submitted that none of the four reasons as set out in the Call for Information justified either the adoption of MTR level from the UK, or the Ofcom MTR model, and further contended that the Authority had failed to give any valid reason for Clause 6.11 of its Call for Information.

CICRA Analysis

3.43 JT acknowledged that the Ofcom LRIC model could be considered as a methodology for setting MTR in Jersey. The Authority has carried out further analysis of the Ofcom LRIC model and the potential MTR rate that would result if certain adjustments were made to the model to approximate more closely with conditions in the Channel Islands. The results of this analysis are set out in Section 4 of this Draft Decision.

3.44 Sure did not consider that a LRIC based MTR approach would be the optimal way to set MTRs for the Channel Islands and suggested instead benchmarking by reference to MCT rates prevailing in other EU jurisdictions. The Authority has carried out a benchmarking assessment using available BEREC data, the results of which are set out in Section 4 of this Draft Decision.

3.45 Airtel argued strongly that the Ofcom MTR could not be used as a suitable proxy for the Channel Islands. CICRA has considered the appropriateness of the UK LRIC model and has engaged an advisor to consider the impact on the output of the model if it were amended to take into account specific factors relating to the Channel Islands. This analysis is set out in Section 4 of this Draft Decision.

CICRA Conclusion

3.46 Having considered the responses received to question 5, the Authority considers that the UK LRIC model provides an important and relevant input to inform its assessment of the LRIC of MCT provision in the Channel Islands, subject to adjusting it to reflect local Channel Island conditions and when considered alongside other relevant inputs, in particular a broader benchmarking exercise against MCTs fixed (predominantly by reference to a LRIC cost standard) in other European jurisdictions.

3.47 The Authority remains of the view that it would not be proportionate to engage in the task of developing a bespoke bottom-up LRIC model specifically for the Channel Islands. No operator has contended otherwise in its response to the call for information.

Question 6: Is there any other relevant matter that the Respondent wishes to raise with CICRA, which is not covered by any of the above questions?

Responses received

3.48 While generally supportive of lower MTRs for Jersey and Guernsey, JT remains unconvinced that any changes to Channel Island MTRs will have the desired effect of ensuring that calls to Channel Islands mobile numbers are included in the call bundles offered by UK mobile operators.

3.49 JT stated that it had not seen any evidence of a direct correlation between MTR levels and the inclusion of minutes in UK bundles. By way of example, JT refers to the Channel Island fixed voice termination rates are on a par with the UK fixed termination rates[9] calls to Channel Island landlines from mobile operators and yet are excluded from mobile bundles. Additionally, mobile calls to the Isle of Man mobile numbers are also excluded from inclusive bundles despite the fact that the Isle of Man MTR is far lower than the Channel Islands MTR at 1.25 pence per minute. Further, the Channel Island mobile operators interconnect with BT and not directly with the UK mobile operators and therefore it is the rate charged by BT that is passed on in the price of mobile calls.

3.50 JT submitted that the UK retail mobile rates and the bundles offered by the UK mobile operators are not regulated by Ofcom. Whilst Ofcom does not have any jurisdiction over retail mobile rates, it controls the allocation and administration of number ranges. Many number ranges have set retail prices that are mandatory. If Ofcom were to use their powers to ensure that a reduction in the Channel Island MTR corresponded to Channel Island numbers (mobile and Channel Island national geographic – 01534 and 01481) being included in the UK operators call

[9] Day 0.5106 ppm; Evening 0.2338 ppm; Weekend 0.1841 ppm

bundles, JT could support a reduction in Channel Island MTRs. JT suggested that this is the route the Authority should explore with Ofcom to address the issue of including Channel Islands numbers in UK mobile operators' bundles.

3.51 Sure considered that the Authority had omitted a very important issue in the Call for Information, namely how the change to the MTR in the Channel Islands would be implemented. Regardless of what the new Channel Islands MTR will be, Sure took the view that the manner in which it was introduced was very important, and should allow the MNOs time to adjust their businesses to absorb the impact of the change. In that regard, Sure noted that many countries around the world have used glide-paths to reduce MTRs over time. As far as Sure could ascertain from the BEREC report, only three countries out of the 37 included in the report had not applied some kind of glide-path when introducing reductions to the levels of MTRs prevailing within their territories.

3.52 Sure also maintained that a radical reduction in the MTR in the Channel Islands could have a negative impact on the currently competitive and vibrant three-operator retail mobile market in the Channel Islands. Sure submitted that the Authority needed to be extremely careful in how it implements any reductions on the MTR, so as to avoid adverse impacts on the choice, innovation and retail pricing for mobile services in the Channel Islands.

3.53 Airtel submitted that the call for information lacked supporting evidence and was based purely on conjectures and a flawed approach. Airtel firmly believed that there was no need to review MTRs at the present time. Further, any reduction in the termination charge would adversely impact Airtel, necessitating Airtel to seek compensation by reducing the size of bundles offered, and increasing the tariffs charged, to customers.

3.54 Airtel further stated that the telecoms sector was poised on the threshold of launching next-generation mobile technology i.e., 5G. It claimed that any adverse impact on its revenues would potentially cause delay in future investments in this very crucial sector of economy and prevent realisation of objectives in the telecoms policies pursued by the States of Guernsey and Jersey.

CICRA Analysis

3.55 The Authority understands JT's concern as to the lack of a guarantee that, if MTRs are reduced in the Channel Islands, calls to the Channel Islands mobile number ranges will come to be included in the 'in bundle' calling plans offered by UK MNOs to their customers. This is a concern that officers of the Authority have discussed at length with Ofcom. It is the officers' understanding that, until Channel Island MTRs are aligned with, or at least very close to the UK MTR, it is not expected that UK MNOs will include Channel Island calls in bundle.

3.56 The Authority notes that a reduction in call changes for UK phone users to call the Channel Islands is not the primary driver for the Authority in considering a reduction of MTRs in the Channel Islands. The Authority has in the past argued that the inclusion of calls to the Channel Islands in UK call bundles could provide an economic benefit by increasing the use made of Channel Island mobile services, and benefiting Channel Island consumers and businesses, who could in that case expect to receive more calls from UK mobile numbers. However, the

Authority's primary focus is upon reducing the MTR rate charged between operators on the Channel Islands, and the associated economic benefits. These benefits are set out in more detail in Section 4 of this Draft Decision.

3.57 Sure has proposed the use of a glide-path to allow operators time to adjust to any change in their revenues resulting from reduced MTRs. The Authority provisionally agrees with this view, as further explained in Section 4 of this Draft Decision.

3.58 As regards Airtel's complaint in relation to the alleged lack of evidence in support of the present review, the Authority refers to the previous consultation documents as to the need to review MTRs and provides further explanations in section 4 of this Draft Decision.

CICRA Conclusion

3.59 The Authority has taken note of the points made by the operators in their response to question 6 and has reflected them where appropriate in its proposals below.

OTHER ISSUES RAISED BY RESPONDENTS TO THE CALL FOR INFORMATION

3.60 In responding to the six questions included in the Call for Information, additional issues were raised by stakeholders. These issues are considered and addressed below.

(a) Can harm be expected to arise from the SMP held by MNOs absent regulation of MTRs?

3.61 Sure queried whether the Authority has analysed and assessed the evidence of whether harm will arise within the Channel Islands without regulatory intervention, or whether the benefits the Authority expects from regulatory intervention will materialise. Sure stated there is no evidence that a reduction in MTRs would flow directly through to retail prices and result in significant reductions in those retail prices. Rather the evidence available to Sure suggested to it that an insignificant impact on retail prices would result. Further, Sure considered the extent of any potential harm that could arise due to distortions of competition in retail markets, whereby high MTRs may be used to fund lower retail prices, may be over-estimated by the Authority, albeit it needed to see the evidence the Authority has relied on to establish whether the Authority's estimates were reasonable. Sure was also of the view that the Authority needs to consider whether there are other wider distributional impacts of the current level of MTRs at the wholesale level.

CICRA Response

3.62 The issue of harm in the Call for Information is addressed further in this paper at Section 4 of this Draft Decision, in which we consider the risks of that harm from unregulated prices for termination.

(b) Consumer benefits of a reduction in the MTR

3.63 In Sure's assessment, it is difficult to see how a significant reduction in the Channel Islands MTR would benefit end users in the Channel Islands as there is a potential cost to be paid for maintaining a dynamic three-operator mobile market in a small jurisdiction. Sure's points included, but were not limited to, the following:

(a) *Savings for consumers* - a payment of MTRs is a redistribution of monies between MNOs, the result being that each MNO would only be able to pass on to its retail customers its net saving (or cost) of an MTR reduction. If the Authority assumes a reduction in the MTR will be passed on, in its entirety to retail customers, Sure believes this is a serious misunderstanding. Referencing its net payment of MTRs during 2018 at c.£ [✂] across the two Bailiwicks, Sure terminated [✂]minutes, thus the maximum amount it would be able to pass on to its customers is [✂]ppm if in the extreme case MTR's were reduced to zero.

(b) *Calls from local fixed to mobile* - those charges are regulated by the Authority and have not been influenced in the past when the MTR was reduced. Thus Sure does not believe an MTR reduction would likely reduce the retail price for Channel Islands consumers to make fixed to mobile calls. The incumbent operators of each island are bound by a regulated Price Control mechanism, which is operated on a basket basis and it is less likely that any reduction in MTRs would benefit consumers making calls from local fixed to mobile numbers.

(c) *Calls to Channel Islands mobile numbers from outside the Channel Islands* - there is no evidence or reason to believe a reduction in the Channel Islands MTR would result in a reduction in commercial rates payable by international operators.

(d) *Wholesale rates* – Sure states that Ofcom is putting pressure on the Authority for the Channel Islands MTR to be reduced to the same level as in the UK, yet it has seen no evidence this would likely lead to any benefits to Channel Islands consumers, or even consumers in the UK making calls to the Channel Islands. By way of example, a reduction in the Isle of Man to 1.25ppm in 2015 did not result in BT changing its wholesale rate to UK mobile operators for calls to the Isle of Man.

(e) *MTR payment and receipts* – an operator that has a net surplus from originating and terminating calls would need to find that lost revenues elsewhere. Sure believes this is likely to manifest in less competitive retail pricing, resulting in the end customer paying for the MTR reduction. Further, the impact of losing a significant portion of that revenue, due to a reduction in MTRs, could affect its ability to continue trading.

3.64 Sure contended that the Authority should undertake a transparent cost-benefit study looking at the Channel Islands market conditions and changes that a LRIC-based MTR would cause. If the analysis proves significant net benefits to a significant MTR reduction, then Sure is not opposed to that in principle. In the immediate future, if the Authority wants to revise the MTR before completing a cost benefit study, Sure recommends using a broader benchmark, including LRIC-based and non-LRIC-based MTRs from countries across the world, including smaller jurisdictions.

CICRA Response

3.65 Sure's points regarding the benefits and risks are addressed in Section 4 of this Draft Decision. Particular additional points include:

(a) As regards the effect of the retail price control on the prices of the fixed operators in the Channel Islands, these prices are regulated on a basket basis and therefore there is, in the Authority's opinion, potential for the fixed operators to implement changes if they wish to do so. Moreover, insofar as the reduction in MTRs has a material effect on fixed operators' input costs, the Authority may consider adjusting the retail price control to reduce the resulting cost saving, with consequential benefits for consumers.

(b) With regards to the impact of a reduction in MTRs on the charges faced by international operators passing calls to the MNOs for termination in the Channels Islands, it is correct that those operators need to purchase conveyance services as well as MTR. They may choose to do so from an operator other than the terminating MNO in order to ensure a competitive rate for such conveyance services. A reduction in MTRs should reduce the overall level of costs facing international operators when their customers call mobile numbers in the Channel Islands.

(c) With regards to the wholesale rates payable by UK operators and their implications for retail offers in the UK, the Authority's primary focus is upon the benefits to the Channel Islands economy and to Channel Islands consumers that can be expected to result from a reduction in MTRs. As part of that assessment, however, the Authority has taken into account how UK consumers may be affected by the reduction. The Authority's view is that a reduction in MTRs increases the prospects of reduced retail charges to UK consumers; and, if such retail charges are reduced, this can be expected to benefit the Channel Islands by increasing demand for termination services in the Channel Islands and by increasing the calls from UK mobiles received by Channel Islands consumers and businesses, to their benefit.

3.66 As regards the approach to reviewing MTRs, the Authority has carried out a benchmarking analysis, as well as applying other methodologies, and this is included in Section 4 of this Draft Decision.

(c) Financial Risk

3.67 Sure said that it did not understand the "*financial risk*" that the Authority suggests could result in some providers excluding calls to certain mobile numbers from their call allowances and bundles. Assuming this to be a reference to Ofcom's view that a reduction in the Channel Islands MTR would resolve the issue of some UK operators excluding calls to Channel Islands numbers from their bundles, Sure believed this was highly unlikely to happen, pointing to the position on termination of calls to Channel Islands fixed number ranges as evidence. Sure considered the Authority and Ofcom should first prove that effective action can be taken to reduce UK retail charges for calls to fixed line numbers before making any assertion as to any regulatory influence that either regulatory body believes it can exert in the lowering of UK retail charges to Channel Islands' mobile numbers.

CICRA Response

3.68 The Authority continues to engage with Ofcom on matters relating to the high retail rates charged to consumers in the UK to call the Channel Islands. It is the understanding of the Authority that UK MNOs have a 'binary' approach to retail pricing with the retail price being either 'in bundle' or 'out of bundle' for consumers. In the case of calls from UK MNOs to Channel Island mobile end users, UK MNOs do not include calls 'in bundle' because of the high wholesale prices currently payable to terminate calls in the Channel Islands. The Authority considers that, if wholesale prices fall, this increases the prospect of UK MNOs including calls to the Channel Islands 'in bundle'. The Authority also understands that customers do complain about 'bill shock' on calling the Channel Islands and therefore there is some incentive for UK MNOs to respond in this way. However, the situation in the UK is not the primary focus for the Authority when considering the benefits of a reduction of the Channel Islands MTR, save insofar as it may be expected to have positive consequences for the Channel Islands economy and consumers.

4. The Authority's approach to MTRs

Introduction

4.1 Having assessed the responses to the Call for Information in Section 4, in this section we consider whether the existing MTR of 4.11ppm is too high and, if so, what an appropriate rate would be for the Channel Islands.

4.2 In considering this issue, we address in turn the following topics:

(a) The economic rationale for regulating MTRs in the Channel Islands;
(b) Different methodologies for assessing what an appropriate MTR rate is;
(c) The glide path and effective date for a potential MTR reduction should one be directed; and
(d) The financial impact on operators should there be a reduction.

Item 1 - Economic Rationale for Regulating MTRs in the Channel Islands

4.3 In considering the economic rationale for regulating MTRs in the Channel Islands, we consider that the same arguments for regulating and reducing MTRs in larger economies apply also to Jersey, notwithstanding that Jersey is a small island jurisdiction.

The Channel Islands in context

4.4 Each of the Channel Islands has three MNOs: JT, Sure and Airtel.[10] Figure 1 shows the subscriber market shares of the three operators on the two islands. The largest firm on each island is the "incumbent" operator (JT on Jersey and Sure on Guernsey) and Airtel has around 20% on each island. This is important because it shows that the market shares are asymmetric, a matter we will return to later. Table 2 compares the MTR in the Channel Islands with the rates in some selected EU countries and with the average for the EU 28. It can be seen from this table that the rate in the Channel Islands is many multiples of the rates prevailing in the benchmarked countries. The MTR in the Channel Islands is around 12 times that found in Malta and 5.6 times the EU average. The Authority recognises that the Channel Islands has a population approximately 1/3rd that of Malta and significantly smaller than the average EU country. Subsequent analysis in this section takes into account the impact of being a smaller jurisdiction when setting the MTR.

[10] Marathon holds a licence in Jersey but is not active in the provision of terminating traffic in Jersey.

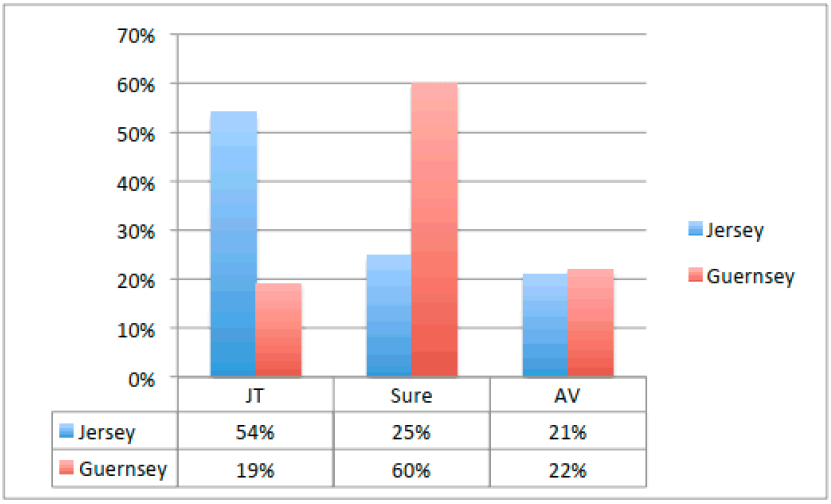


Figure 1: Mobile Market Shares: Channel Islands
Source: CICRA 2017[11], Figures 23 and 24

	€c	£p
Channel Islands	4.7802	4.111
Cyprus	0.9900	0.8514
France	0.7400	0.6364
Malta	0.4045	0.3479
Netherlands	0.5810	0.4997
UK	0.5650	0.4859
EU28	0.8541	0.7345

Table 2: Mobile Termination Rates in Selected Countries
Source: BEREC

Economic effects of reducing MTRs

4.5 The level of MTRs is of general concern to regulators because call termination is an economic bottleneck. It is a service that can only be supplied by the called party's network, which therefore enjoys a monopoly in the market for MCT on its own network. Although competition between retail operators in retail markets may be fierce, in the absence of competition for call termination operators will still have incentives to charge monopoly prices to other networks for call termination which significantly exceed the efficient costs of production (Harbord & Hoernig 2015[12]). In this section we consider economic risks that could arise from MTRs set significantly above cost.

4.6 There are three established economic risks that arise from such prices. These are:

(1) A high differential between on-net and off-net prices;

[11] CICRA (2017) *Telecommunications Statistics and Market Report 2017*

[12] Harbord, D., & Hoernig, S. (2015). Welfare analysis of regulating mobile termination rates in the UK. *The Journal of Industrial Economics*, *63*(4), 673-703

(2) Reduced consumer welfare as a result of higher prices, as termination rates are passed through to consumer prices; and
(3) A transfer of consumer surplus from fixed network callers to mobile subscribers (Harbord & Hoernig 2015).

4.7 Due to the risks set out above, NRAs and the European Commission have sought to reduce MTRs to a price that reflects the fair and efficient cost of terminating off net calls. By so doing, regulators seek to remove market distortions that can restrict competition between firms and, ultimately, cause harm to consumers.

4.8 In addition to these three general risks there is an additional, Channel Island-specific, risk:

(4) High calling charges from the UK to the Channel Islands.

4.9 Regulation currently prevents any differential between on-net and off-net calls. Given that no party is advocating the removal of existing MTR regulation, and the present consultation focuses instead on the level of MTRs, we do not consider point (1) further.

4.10 The mobile market in the Channel Islands has some features that suggest there may be competitive and consumer harm, these harms reflect the specific conditions of the Channel Islands. In the following section we examine the effects of point (2), (3) and (4).

THE SITUATION IN THE CHANNEL ISLANDS

Risk 2 – Reduced consumer welfare as a result of higher prices, as termination rates are passed through to consumer prices

4.11 In this section we consider if high mobile call termination rates in the Channel Islands leads to higher retail prices and therefore to reduced consumer welfare.

4.12 In principle, one would expect the retail prices charged by operators in the Channel Islands to cover their common input costs, including the costs of terminating calls on MNOs' networks in the Channel Islands. In a competitive retail market, one would expect competition to place firms under pressure to pass cost savings resulting from reduced MTRs onto their customers in the form of lower retail prices.

4.13 A high MTR will generate profits, for an MNO that has net terminating call inflows, which could affect competition in retail mobile markets. These effects would be limited if all MNOs have similar market shares as this could result in the traffic volumes across all operators being almost equal.

4.14 It is possible that excess profits from MTRs set above cost could be passed through to mobile providers' customers, for example through lower retail call prices or increased investment. This competing away of excess profits is known as the 'waterbed effect'. However, this would be a competitive distortion as the terminating provider would earn economic rents at the expense

of customers of competing providers and could use these to improve its retail offering to consumers. This could potentially benefit mobile providers who have net terminating call inflows, rather than competition being based on the merits of each provider (e.g. cost efficiency or quality of service). Even if the waterbed effect led to a full 'recycling' of higher MTRs, excessive MTRs could still harm consumers' interests by distorting competition in downstream retail markets.

4.15 When a firm is able to set price above cost, not only is welfare transferred from the consumer to the producer, but there is also a "deadweight loss". This is the welfare that would accrue to consumers had the price been set at or near the competitive level due to increased consumption. The deadweight loss is caused by forgone consumption due to prices being set above cost and the profit maximising monopoly producing below the level it would produce in a competitive market. When prices are set at or near cost (the competitive level), the welfare that is transferred from producers to consumer is augmented by a reduction in deadweight loss that is also transferred to consumer welfare. The size of this transfer is dependent upon the degree of price elasticity – the more price elastic the greater the reduction in deadweight loss.

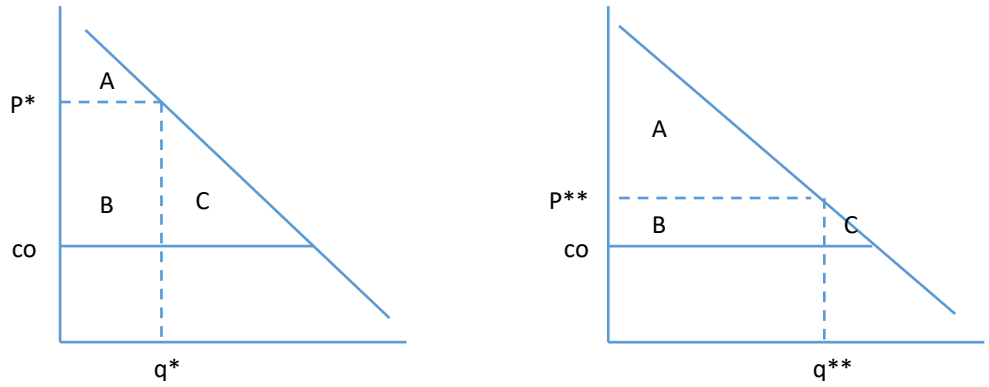


Figure 2: Deadweight loss
Source: SPC Network

4.16 The left hand figure illustrates the case where the price (p*) is set above cost (co), resulting in a quantity produced equal to q*. The areas A, B and C, represent consumer surplus, supplier surplus and deadweight loss respectively. On the right hand side the price is reduced to p**, which is closer to cost, resulting in an increase in consumer surplus and a decrease in supplier surplus. Crucially, the deadweight loss is also reduced and transferred to consumers, so there is more than a simple transfer of surplus from suppliers to consumers. Put simply, consumers gain more than suppliers lose, and total welfare is increased.

4.17 This is on the assumption that the competitiveness of the market results in a retail price reduction in line with the reduction in MTR. If this reduction is not passed on to consumers, that would raise questions about the competitiveness of the retail market.

4.18 The Authority therefore concludes that the above section sets out a 'classic argument' for reduction in MTRs to a cost oriented price as established in the papers referred in this analysis.

Operators set monopoly prices for MTRs, if not regulated or subject to competition, extracting welfare from consumers. By changing MTRs to a rate closer to cost, that surplus is transferred from producers to consumers and deadweight loss is reduced.

4.19 In other countries where MTRs have been set at LRIC, there has been a reduction in prices and an increase in consumer welfare as result (Harbord & Hoernig 2015, Growitsch, Marcus & Wernick 2010[13]).

Risk 3 - A transfer of consumer surplus from fixed network callers to mobile subscribers

4.20 Another source of competitive harm could arise from excessive MTRs as a result of the transfer of call termination revenues from the fixed to the mobile sectors. If mobile providers were to have excessive MTRs while fixed providers were able only to charge lower Fixed Termination Rates, this could result in a transfer of welfare from fixed providers to mobile providers. To the extent that fixed providers and mobile providers compete with one another (for example for calls), this would also have the potential to distort competition, in that a mobile to fixed call would be cheaper in relation to cost than a fixed to mobile call[14].

4.21 The Channel Islands have three mobile operators, of which two also operate fixed networks in their respective incumbent island. Therefore, specifically in the Channel Islands the effect of the MTR being set above costs could be considered as an incumbent favouring charge, i.e. benefiting the two operators who have both fixed and mobile networks. This is because each operator is able to benefit from above cost MTRs, even though their fixed customer pay a price for fixed to mobile calls that is above cost.

4.22 The Authority concludes that an MTR set above cost could result in a distorted playing field with regards to fixed to mobile calls. This result of the high MTR would have a particular negative impact on the one operator in the Channel Islands who is a mobile only operator. This operator may benefit from a termination rate set above costs. However, that high price is passed on to fixed line originating calls resulting in a high fixed to mobile call cost. This could be expected to reduce the volume of fixed to mobile calls. A reduction in MTR, if passed through to fixed line customers in lower prices, could then be expected to result in more fixed to mobile calls, offsetting any reduction in revenues from lower MTRs.

Risk 4 – Higher charges for calls to Channel Islands from the UK

4.23 In this section the Authority considers the impact of the high MTR in the Channel Islands on calls from outside the Channel Islands terminating on mobile operators' networks in the Channel Islands.

[13] Growitsch, C., Marcus, J. S., & Wernick, C. (2010). The effects of lower mobile termination rates (MTRs) on retail price and demand. *Communications and strategies*, (80), 119-140.

[14] In economics terms this results in an allocative inefficiency, which occurs when prices are set above cost resulting in too few resources being allocated to that activity. The opposite occurs when prices are set below cost.

4.24 The Authority understands that the high level of MTRs in the Channel Islands results in a high calling charge from the UK. A review of prices for calls from the UK to Jersey and Guernsey indicates prices ranges from 46ppm (BT landlines) to £1.00 per minute (EE mobile). The question is whether this is likely to cause economic harm to Jersey and Guernsey, even though these charges are not paid for by citizens of the Bailiwicks.

4.25 At one level, this relates to one of the arguments about MTRs as touched on in Section 4 of this Draft Decision: a reduction of MTRs could lead to a reduction in call prices from the UK to the Channel Islands, resulting in an increase in revenues for UK operators and an increase in consumer surplus in the UK. Channel Islands operators would, receive lower revenues for termination of inbound calls from the UK.

4.26 It is also, however, necessary to take account of call externalities associated with calls received from outside the Channel Islands, which are of benefit to consumers and businesses within the Channel Islands.

4.27 Externalities are benefits that are not experienced by the consumer that pays for the service. In the case of calls, the recipient of a call usually gains some utility from that call but does not pay for it themselves. As Harbord and Hoernig (2015) point out:

> *"Subscribers receive a fixed utility from being connected to a network; utility from making calls (…) and utility from receiving calls independently of their origin (so there is a call externality" (p. 680)*

4.28 Thus subscribers to networks on the Channel Islands may obtain a benefit (or "utility") from receiving more and longer calls from the UK if MTRs in the Channel Islands were reduced, with consequential reductions in UK retail charges associated with calling the Channel Islands. This externality is paid for by UK subscribers, but realised by Channel Islands subscribers.

4.29 Operators on the Channel Islands are also likely to benefit if the volume of calls increase. Whilst the termination revenue from each minute is reduced, there are likely to be more minutes of traffic offsetting at least part of any lost traffic.

4.30 Related to this point is substitution by over-the-top (OTT) services such as Skype. Given the current high level of call charges from the UK to the Channel Islands, it is quite possible that many minutes are diverted from fixed and mobile calls to these OTT services, resulting in no termination revenue for Channel Islands based operators. If UK calls to the Channel Islands become part of the bundle purchased by UK subscribers to a fixed or mobile service (and thus counted as an inland UK call), then UK subscribers could become indifferent between using their fixed or mobile package and an OTT services. This too may result in more termination minutes for Channel Islands based networks.

4.31 The Authority therefore concludes that, a reduction in MTRs could lead to an increase in consumer welfare insofar as this led to a reduction in the retail charges to UK consumers, and a consequential increase in call volumes to mobile numbers in the Channel Islands.

Conclusion – Economic effects of reducing MTRs

4.32 The high level of MTRs in the Channel Islands (in comparison with EU Member States), together with the market structure of the two Bailiwicks (each of which have two fixed / mobile operators and one mobile-only operator), is likely to cause a distortion of competition that could be harmful to both competitors and consumers. Lowering mobile termination rates so that they more closely reflect cost can be expected to address this distortion. The Authority would therefore expect a reduction of MTRs to improve the prospects of retail price reductions for callers of mobile numbers in the Channel Islands, and (in the longer term) of increased competition in the communications sector, to the benefit of consumers and businesses in the Channel Islands. Any analysis of the loss of revenue to operators resulting from reduced MTRs that does not take into account a longer term change in prices and the retail market is an incomplete picture. It places the focus primarily on the interests of MNOs rather than on the wider public benefits that would result from a downward pressure on the retail prices charged to consumers and the removal of competitive distortions in the Channel Islands telecoms sector.

Item 2 - Methodologies

4.33 In the first topic of section 5 the Authority considered the economic rationale for regulating MTRs, concluding that there were risks in local MTR and downstream retail markets as a consequence of MTRs that were left substantially above the efficient costs of provision. In this second topic of Section 4 the Authority turns to consider what approaches should be applied in order to determine an appropriate level of MTRs for the Channel Islands.

4.34 MTRs can in principle be determined using two alternative measures of cost: Long Run Incremental Cost ("**LRIC**") and Fully Allocated Cost ("**FAC**"). Common principles of the LRIC cost methodology include:

- The output of the LRIC model is the incremental costs (additional costs) caused by MCT in the long run;
- These incremental costs equate to the costs that would be avoided in the long run by the MNO if they no longer provided MCTs, and
- The LRIC output excludes fixed ("common") costs (eg. costs of initial deployment for geographic coverage), whereas FAC is LRIC plus a share of the fixed costs (FAC is sometimes called "**LRIC+**" for this reason). Note, if MTRs are determined using the LRIC measure of costs, these fixed costs are still recovered by operators, but at the retail level through voice and data package pricing, rather than through MTRs.

4.35 The Authority provisionally considers that the most appropriate measure of costs for the purposes of regulating MTRs is LRIC:

(a) In some jurisdictions, historically, MTRs were set on an FAC basis but EU best practice is now firmly fixed on the LRIC measure, as favoured by the 2009 EC Recommendation on

Termination Rates[15] and confirmed by the EU's 2018 European Electronic Communications Code Directive[16]. LRIC has been adopted by the majority of the NRAs and has been upheld against appeal (including the Competition Commission in the UK). Importantly for the Authority, the LRIC methodology has been also applied in a number of smaller jurisdictions (eg., Malta, Iceland, Luxembourg).

(b) The LRIC standard has clear advantages over FAC. By considering the incremental costs incurred, for an on-net call the internal cost (to the operator terminating the call) is the LRIC cost. For an off-net call it is the external costs which is the MTR that the originating operator is charged by the terminating operator. If the MTR is greater than LRIC then off-net calls are more costly than on-net calls. This disadvantages smaller operators, as a larger proportion of their subscribers' calls tend to be off-net, and a smaller proportion on-net. In addition, it reduces incentives for smaller operators to compete for calls though lower call pricing, as this tends to attract heavier user subscribers, leading to outbound off-net call volumes that are significantly higher than inbound off-net call volumes (an "off-net call imbalance"). These effects reduce the intensity of competition, to the detriment of consumers.

(c) LRIC is therefore likely to achieve more effective competition between mobile operators.

4.36 Common principles of the LRIC cost methodology includes:

- The output of the LRIC model is the incremental cost (additional cost) caused by MCT in the long run;
- These incremental costs equate to the costs that would be avoided in the long run by the MNO if they no longer provided MCTs, and
- The LRIC output excludes fixed ("common") costs (eg. Costs of initial deployment for geographic coverage), whereas LRIC+/FAC is LRIC plus a share of the fixed ("common") costs.

4.37 The next question which arises concerns the most appropriate method for measuring LRIC costs in the Channel Islands, in order to determine the level at which MTRs should be fixed.

4.38 There are a number of different methodologies that could be used in this connection, each with their own advantages and disadvantages, as set out in the table below.

4.39 The Authority's advisor on the UK LRIC model has considered three different approaches to estimating the value of MCT LRIC for the Channel Islands. These approaches are a) a bespoke model, b) an adapted model and c) benchmarking. A high-level comparison of these approaches is set out below.

[15] Commission Recommendation 2009/396

[16] Article 75 and Annex III, Directive (EU) 2018/1972

Approach	Bespoke model	Adapted model	Benchmarking
Description	Building or buying a generic MCT model and tailoring it to CI specific parameters.	Adapting existing published model for key CI cost driver differences.	Extrapolating MCT LRIC from a sample of bespoke model results in other jurisdictions.
Advantages	Most accurate	Effort focused on most important differences	Simplest
Disadvantages	Costly and time consuming. Significant effort required from operators (hundreds of parameter inputs).	Needs expertise and judgement to identify key cost drivers. Intellectual property constraints may limit use.	Does not reflect key differences in CI specific parameters, which may have a significant impact on results.

Table 3: Approaches to estimating MCT LRIC for the Channel Islands
Source: Brockley Consulting

4.40 As set out in the above table, the task of constructing, from the bottom up, a full bespoke model reflecting an assessment of efficient costs for MNOs in the Channel Islands would be a substantial exercise, involving significant expenditure of time and costs. The burden would be imposed not only upon the Authority but also upon local MNOs who would need to provide a substantial volume of data inputs for use in the model.

4.41 The Authority provisionally considers that this would be an excessively burdensome exercise for small jurisdictions like Jersey and Guernsey, giving rise to disproportionate regulatory costs. As set out in section 3 above, none of the operators that responded to the call for information has advocated such a course.

4.42 Accordingly, the Authority has focused upon the other two methods identified in the above table, namely (a) benchmarking against a range of other jurisdictions, in particular those which have themselves undertaken LRIC modelling, in order to arrive at an indicative estimate of the LRIC of MCT; and (b) adapting an existing LRIC model developed in another jurisdiction, with adjustments to reflect local conditions in the Channel Islands. These two broad methodologies are considered and applied in turn below.

4.43 The results of all of the methodologies considered below clearly show that 4.11ppm is significantly above any realistic or reasonable estimate of the LRIC of MCT provision in the Channel Islands. The results obtained by the Authority's analyses suggest that an MTR of less than 1ppm would be appropriate for the Channel Islands.

(a) Benchmarking exercise

Data inputs used by the Authority

4.44 The first approach to assessing an appropriate MTR for the Channel Islands is by way of benchmarking. In considering and applying benchmarking, the Authority has relied on the authoritative data compiled by the Body of European Regulators for Electronic Communications (**BEREC**). This body, recognised under EU law, comprises representatives of national regulators across Europe, and published a number of authoritative indicators and guidance papers to assist national regulators in observing internationally recognised best practice. Of present relevance, BEREC produces every six months a Termination Rate report which contains data relating to 37 countries in the European region. This draft decision is based on data taken from the 2018 BEREC report[17] (the **BEREC Report**).

Benchmarking is an established and accepted method for setting MTRs in Europe

4.45 As the BEREC Report shows, benchmarking is a well-recognised method, deployed by regulators in a number of jurisdictions for the purposes of regulating MTRs. The following table has been prepared using data from the BEREC Report. As it shows, all European countries with the exception of Switzerland have regulated the level of MTRs that may be charged by MNOs within their jurisdictions. The majority of European countries have compiled their own bottom-up LRIC models for the purposes of calculating what price cap to apply to MTRs. However, regulators in nine out of 36 (one quarter of the total) base their price decisions instead on Benchmarking data. The Authority therefore considers that benchmarking is a useful and relevant methodology to apply, and one that may be particularly well suited to small jurisdictions like the Channel Islands where the cost and complexity of bottom-up LRIC modelling is regarded as disproportionate.

Figure 3: Cost accounting models used by NRAs
Source: BEREC

[17] Termination Rates at European Level, July 2018, BoR (18) 218, 6 December 2018

Analysis by reference to recent MTRs applicable in other European jurisdictions

4.46 The Authority has therefore analysed data from the BEREC Report regarding MTRs in various relevant jurisdictions, in order to produce a range of price levels within which a revised MTR could be set.

4.47 Specifically, the Authority has considered a number of benchmarking options. These are listed below and expanded upon in the rest of this section:

i. Benchmarking based on the 35 countries which publish a regulated rate;
ii. Benchmarking based on the 35 countries with any significant outliers removed;
iii. Benchmarking based on the 23 countries where the MTR is set by reference to bespoke "bottom-up LRIC" models (or **BU-LRIC**);
iv. Benchmarking based on the 7 smallest countries (by population);
v. Benchmarking based on the 7 smallest countries (by population) with any significant outliers removed, and
vi. Benchmarking based on the 7 smallest countries (by population) where the MTR is set using LRIC.

4.48 The Authority sets out its benchmarking analysis for items (i) to (vi) above in full in Annex B to this Draft Decision.

4.49 The complete benchmarking exercise has provided the Authority with a broad indicative range of MTRs.

4.50 In considering what would be the most appropriate benchmark rate for the purposes of the Channel Islands the Authority has placed particular weight on the following factors in selecting which benchmark figures to rely upon:

- The Authority considers that the MTRs prevailing in smaller jurisdictions are more likely to be relevant to the Channel Islands;
- The Authority has accordingly selected the smallest **seven** jurisdictions. This is a fifth of the full data set published by the Authority and therefore could be considered to be a reasonable set of data points. (it is of note that seven jurisdictions were also selected by Sure in its example of benchmarking using BEREC data); and
- Given that the Authority considers it appropriate to aim for a LRIC standard, the Authority considers it appropriate to benchmark the seven smallest jurisdictions where the MTR rate is set using LRIC.

4.51 This section therefore reports the results of a benchmarking exercise conducted by reference to MTRs in the 7 smallest countries (by population) in which the MTR is set using LRIC. It also provides a broader summary comparison of all of the six benchmarks considered by the Authority. The full data for the six benchmarks (including the preferred or 'central case' benchmark) can be found in Annex B.

Benchmarking based on the 7 smallest countries where MTRs are set by the LRIC methodology

4.52 As the Authority stated in its earlier analysis, the European Commission recommendation is that MTRs are set by the BU-LRIC methodology. Therefore, in this analysis the Authority has benchmarked against the 7 smallest countries (by population) where the MTR is set by the BU-LRIC method.

Country Code	Country	Population	Euro Exchange	Model	Rate 1/18 to 6/18
MT	Malta	433,245	1	Pure BU-LRIC	0.4045
NO	Norway	5,400,916	1	Pure BU-LRIC	0.4502
HR	Croatia	4,140,148	7.4	Pure BU-LRIC	0.6353
IE	Ireland	4,847,139	1	Pure BU-LRIC	0.7900
LV	Latvia	1,911,108	1	Pure BU-LRIC	0.8900
SI	Slovenia	2,081,900	1	Pure BU-LRIC	1.1400
SK	Slovakia	5,450,987	1	Pure BU-LRIC	1.2260

Table 4: MTRs for the 7 smallest European countries (by population) where the MTR is set by BU-LRIC
Source: BEREC, CICRA

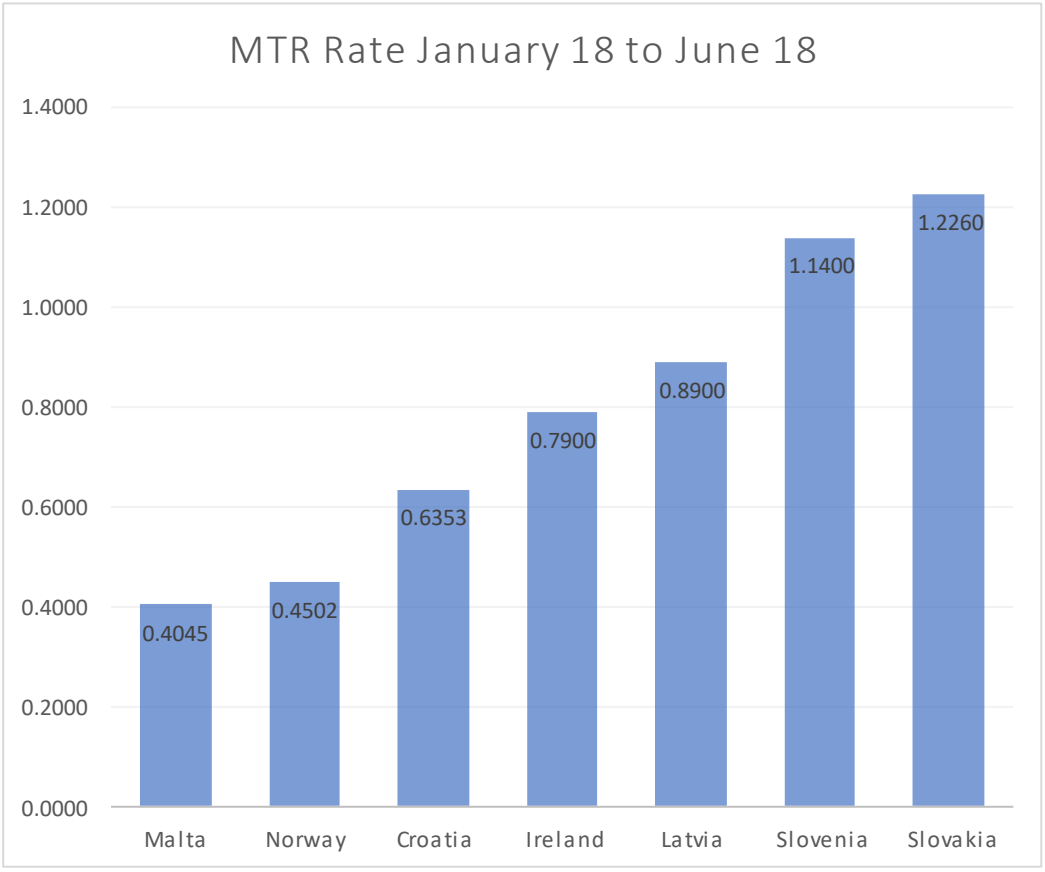


Figure 4: MTRs for the 7 smallest European countries (by population) where the MTR is set by BU-LRIC
Source: CICRA

4.53 The resulting average MTR across the 7 jurisdictions (smallest population with MTR based on BU-LRIC) is 0.7909 Eurocents, being the equivalent of **c[x]ppm**.[18]

Summary of benchmarking methods – based on BEREC data

4.54 The Authority has also considered six further benchmarks derived from the BEREC data. The Authority considers that this broader benchmarking provides a sensitivity analysis, confirming the case for a substantial reduction from the currently prevailing Channel Islands MTR of 4.11ppm. The table and graph below sets out the analysis of the six benchmarking methods.

23 Countries - BU-LRIC Methodology	0.7634
Pure BU-LRIC - Smallest 7 countries by populatoin	0.7909
Smallest 6 countries by population (excluding Liechtenstein)	0.7911
34 Countries with regulated / available MTRs (excluding Liechtenstein)	0.8177
35 Countries with regulated / available MTRs	0.8649
Smallest 7 countries by population	1.0309

Table 5: Summary of the six benchmarking methodologies
Source: CICRA

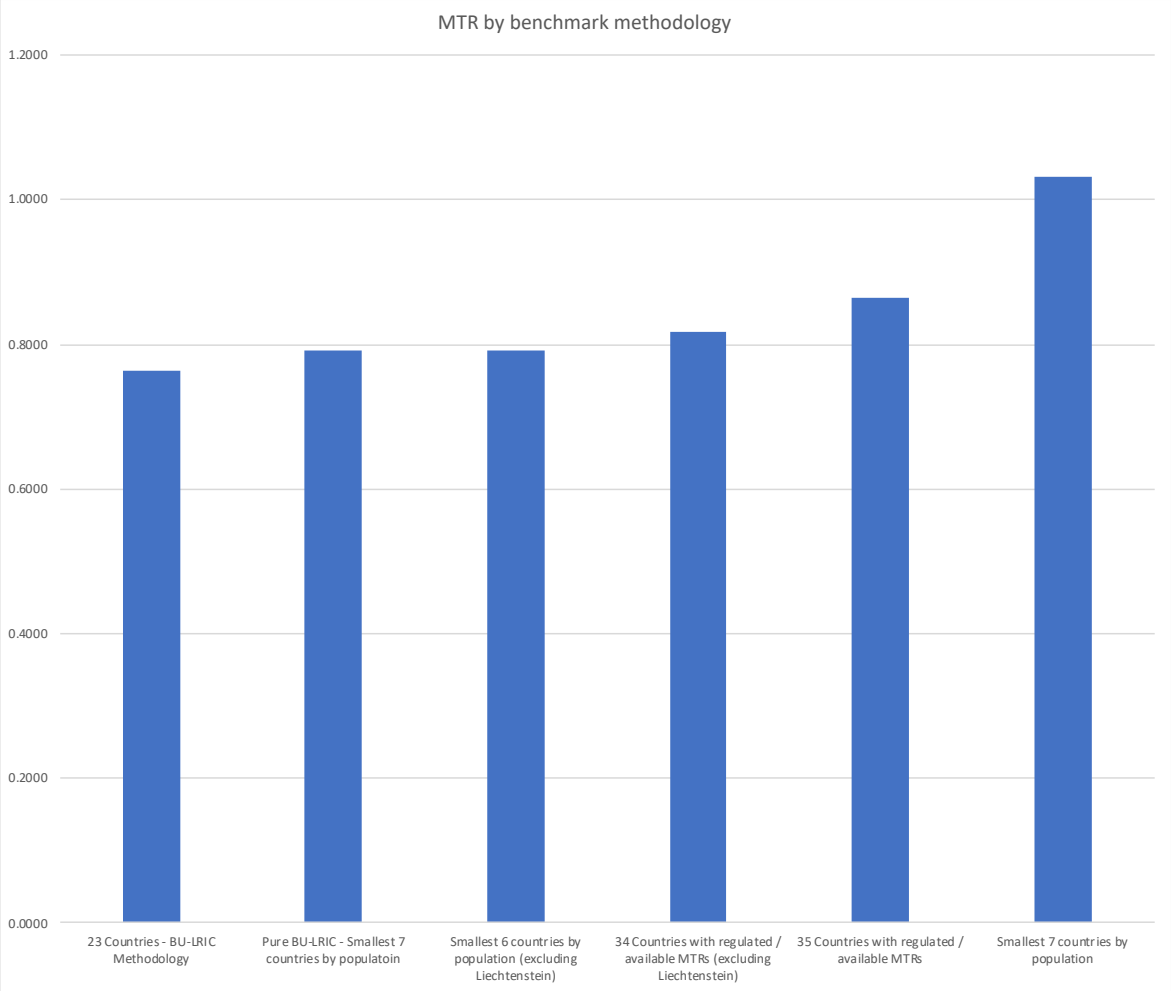


Figure 5: Summary of the six benchmarking methodologies

[18] Applying the average exchange rate over the six-month period of [date] to [date], 1 EUR = @ GBP - NOTE the Authority will provide the current figure at the time of publication of the final decision

Source: CICRA

4.55 In conclusion the range of benchmarked MTRs is between 0.7634 and 1.0309 Eurocents or [x]-[y] ppm[19].

4.56 The Authority's preferred benchmark, for the reasons explained at the introduction to this section, is the benchmark of the seven smallest countries by population where LRIC is the methodology used to set the MTR. That benchmark concludes that the MTR would be 0.7909 Eurocents, which equates to approximately 0.68ppm.

(ii) Analysis of trends in MTRs across Europe

4.57 As an adjunct to the benchmarking analysis, the Authority has also considered trends across Europe for the reduction of MTRs. These provide a further guide in assessing whether the current 4.11ppm rates, which have applied in Jersey without reduction since 2014, are likely to provide any reliable estimate of current costs of MTR provision.

4.58 The data show that there has been a very pronounced trend of MTRs reducing over a number of years across Europe.

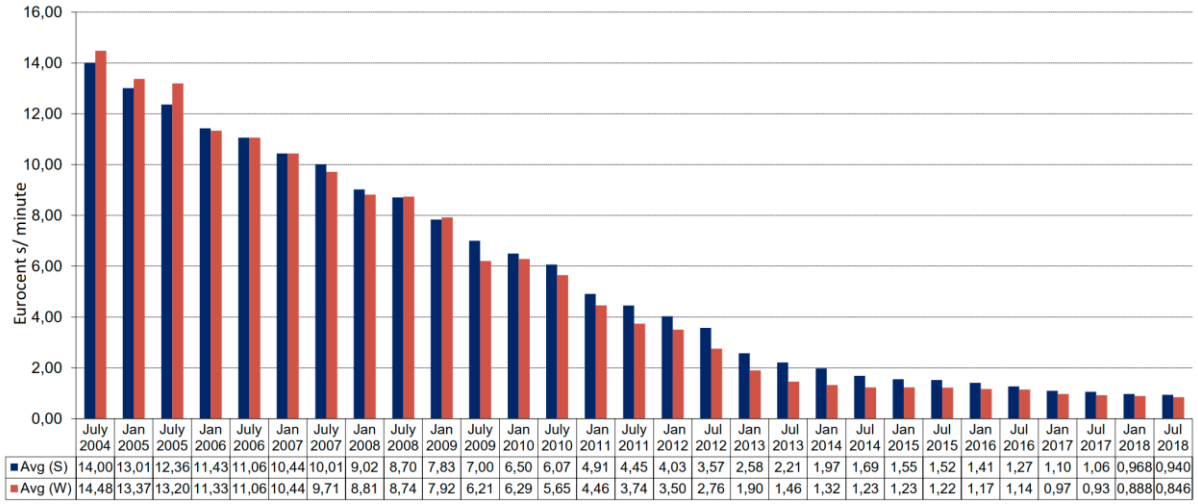
4.59 The BEREC Report, as used in the previous section for benchmarking, includes the average MTR across the BEREC countries. This is quoted by reference to four averaging methodologies. The table below sets out these average methods with the latest average included.

Methodology	Eurocents
Average – Standard	0.9402
Average – Weighted	0.8467
Average EU28 – Standard	0.8342
Average EU28 – Weighted	0.8541

Table 6: Average MTR across the BEREC Countries
Source: BEREC

4.60 In order to demonstrate how MTRs have reduced across Europe since 2004 the following analysis is provided in the BEREC Report.

[19] Applying the average exchange rate over the six-month period of [date] to [date], 1 EUR = @ GBP - NOTE the Authority will provide the current figure at the time of publication of the final decision



	July 2004	Jan 2005	July 2005	Jan 2006	July 2006	Jan 2007	July 2007	Jan 2008	July 2008	Jan 2009	July 2009	Jan 2010	July 2010	Jan 2011	July 2011	Jan 2012	Jul 2012	Jan 2013	Jul 2013	Jan 2014	Jul 2014	Jan 2015	Jul 2015	Jan 2016	Jul 2016	Jan 2017	Jul 2017	Jan 2018	Jul 2018
Avg (S)	14,00	13,01	12,36	11,43	11,06	10,44	10,01	9,02	8,70	7,83	7,00	6,50	6,07	4,91	4,45	4,03	3,57	2,58	2,21	1,97	1,69	1,55	1,52	1,41	1,27	1,10	1,06	0,968	0,940
Avg (W)	14,48	13,37	13,20	11,33	11,06	10,44	9,71	8,81	8,74	7,92	6,21	6,29	5,65	4,46	3,74	3,50	2,76	1,90	1,46	1,32	1,23	1,23	1,22	1,17	1,14	0,97	0,93	0,888	0,846

Figure 6: Evolution of simple and weighted averages[20]
Source: NRAs, BEREC

4.61 Of relevance to the analysis carried out by the Authority is the fact that the Channel Islands MTR has been above the European average since approximately 2012, when taking into account the currency exchange rate. The Authority considers that this provides evidence that the Channel Island MTR rate remaining at 4.11 ppm has been counter to the trend observed across Europe. It is also interesting to note that, at the time the Guernsey rate was set to 4.11 ppm this rate was less than the UK rate which at the time was 4.180 ppm and 4.480 ppm for the four main UK mobile operators.[21]

4.62 The BEREC Report therefore provides evidence that across Europe MTRs have seen a reduction to their current level.

4.63 Changes in mobile technology, including the migration from 2G to 3G to 4G networks has resulted in a reduction in the MTR. The reduction in the cost of network equipment as well as new network topologies resulting from the introduction of alternative spectrum bands with resultant different coverage and performance parameters have driven the reduction in the incremental costs.

(a) Ofcom cites that "*MTRs in the UK have decreased significantly over recent years. In 1998, the average MTR was more than 13ppm, driving high retail prices for mobile voice calls. With our regulatory intervention and reductions in the cost of provision, MTRs have been progressively decreasing, dropping to around 0.5ppm today – which reflects the estimated incremental cost of terminating a call with today's technology*."[22]

[20] NOTE to figure 6 – Averages are based on nominal rates per minute of service. The number of countries and operators considered has increased over the years, thus affecting the average slightly. Moreover, the Weighted Average does not take into account countries not providing the total number of subscribers and those that could have changed over the years. Considering these caveats, the graph shows the general trend. – Footnote from the BEREC 2018 Report

[21] The 2010/11 MTR of 4.180ppm was to be applied by O2, Vodafone and Everything Everywhere, and the slightly higher rate at 4.480ppm was to be applied by HSG. From 2011/12 onwards the MTR applicable to all main operators was the same rate.

[22] Para 2.12, Mobile Call Termination Market Review 2018-2021, Consultation, Ofcom, 27 June 2017

(b) Channel Islands MTRs have not been subject to regular market reviews as recommended by the European Commission. This has meant that any impact of new technologies and the impact of any reduction in equipment costs have not been considered. The result of this is that the Channel Islands MTR has not reduced in line with the rest of Europe.

(c) UK LRIC Model / Channel Island assumptions

4.64 The other main approach applied by the Authority for the purposes of assessing whether the MTR is too high is to adopt the relevant regulatory precedent from the UK context, being Ofcom's LRIC model, and to adapt it for Channel Island specific assumptions.

4.65 The Authority considers it appropriate to use Ofcom's cost model for a number of reasons: i) as set out above, the Authority considers that LRIC is the most appropriate cost measure, in accordance with relevant European guidance; ii) the UK model is publicly available; iii) there are significant links between the UK and the Channel Islands markets; and iv) Ofcom has significant experience of modelling LRIC, and its broad approach has been honed in a number of regulatory appeals. The Authority therefore considers that the model represents a robust and reliable starting point.

Background

4.66 In its previous analysis of MTRs the Authority proposed to consider if it could use the LRIC model of another jurisdiction. The Authority considered that the UK model was possibly the most appropriate model on which to decide whether a LRIC model from another jurisdiction could be a proxy for the setting of an MTR for the Channel Islands. In 2016 the Authority engaged an advisor on LRIC modelling for MTRs. That advisor specifically had extensive experience of working with the Ofcom MTR model.

4.67 The UK LRIC model is publicly available which has enabled the Authority's advisor to consider the drivers in that model; and how, if they were adjusted, it could create a proxy for the Channel Islands and could the UK LRIC model provide an *indicative estimate* for the purposes of fixing a LRIC-based MTR for the Channel Islands.

Description of the Ofcom MCT Model

4.68 Ofcom has been modelling MCT for nearly 20 years. Ofcom was one of the first NRAs to develop a LRIC MCT model in 2011 which has been extensively tested through stakeholder consultations. The model has been updated most recently in 2015 and 2018.

4.69 The model is extensive and complex with over 2.5 million cells. The model estimates the scale and cost of an efficient mobile network over a period of 50 years. Geography, coverage, population, subscribers and traffic are inputs to the model. Within the model the network dimensioning engineering assumptions predict asset counts and the unit cost assumptions generate a total cost for the mobile network. The model is run twice (with MCT and without MCT) and generates the total LRIC (£m). This is then converted into unit costs using Economic Depreciation (ED).

Adapting the Ofcom model: Radio Access Network (RAN) cost

4.70 The UK MCT LRIC is dominated by the costs related to the radio access network (the **RAN**). This cost is driven by population density and only impacts LRIC above a certain level of traffic density. The following assesses how this may be required to be adapted in view of the specific conditions applicable in the Channel Islands.

4.71 The table below shows how the RAN cost forms the significant part of the overall cost.

	UK	
	ppm	%
Sites	0.20	43%
Site equipment	0.06	12%
Backhaul	0.09	19%
RAN total	0.34	74%
Core	0.12	26%
Overall total	0.46	100%

All figures are 2020/21 results (in 2018/19 prices) unless otherwise stated.

Table 7: RAN costs as proportion of overall cost
Source: Brockley Consulting

4.72 However, the RAN costs only contribute to LRIC above a certain level of traffic density, the following diagram explains how the RAN costs contribute to the costs once the network reaches a capacity threshold.

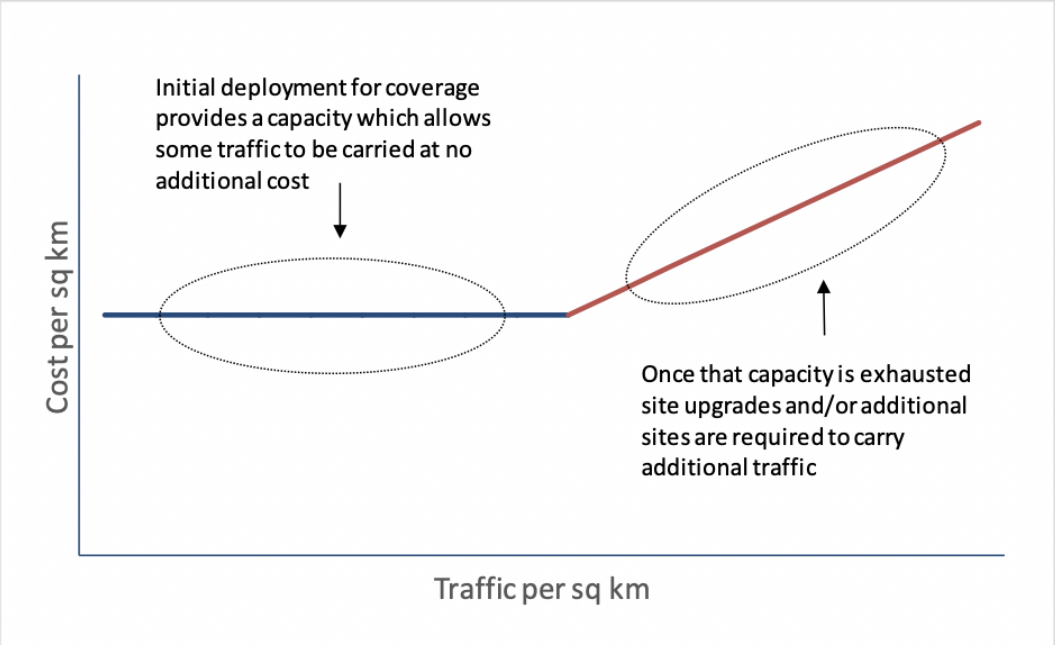


Figure 7: Effect of traffic density on RAN costs
Source: Brockley Consulting

4.73 Therefore it can be demonstrated that RAN costs are driven largely by population density:

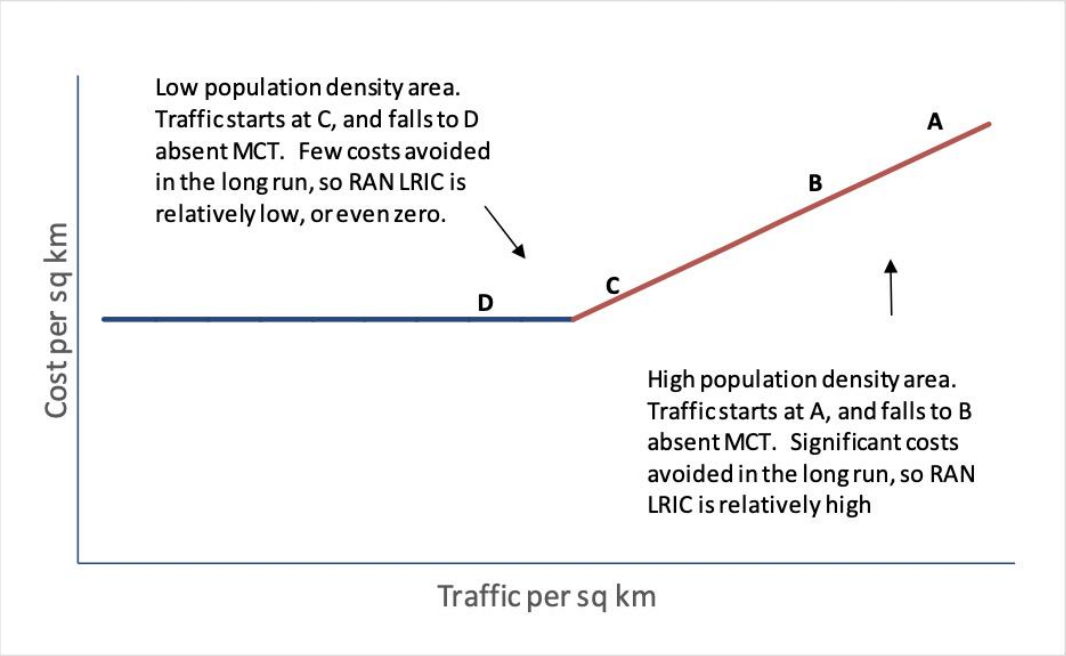


Figure 8: How RAN costs are driven by population density
Source: Brockley Consulting

Adapting the Ofcom model: RAN costs in the Channel Islands

4.74 The UK MTR LRIC model defines a number of geographic types that are characterised by population per square km. As shown in the table below the population density drives the proportion of the total costs in each geographic type that are incremental to MCT (LRIC as a proportion of total costs). This supports the figure above where the LRIC cost increases for denser area of population.

	Population per sq km	LRIC as % of total costs
Urban	12,120	19%
Suburban 1	5,082	20%
Suburban 2	1,872	1%
Rural 1	302	-
Rural 2	83	0%
Rural 3	40	0%
Rural 4	7	0%

Table 8: LRIC costs change by density of population
Source: Brockley Consulting

4.75 In the UK the ~0.5p MTR is a weighted average of the different areas of population density:

- With the rate being > 0.5p in more densely populated areas, and
- Being < 0.5p in other, less dense, areas.

4.76 In order to adjust the UK LRIC model to apply to the Channel Islands firstly the population density of the Channel Islands needs to be taken into consideration. The population densities for the two Bailiwicks have been calculated as being:

- In Jersey the overall population density is 840 per sq km with St Helier being 3,600 per sq km; and
- In Guernsey the overall population density is 992 per sq km with St Peter Port being 3,000 per sq km.

4.77 Based on his experience of Ofcom's MCT model, the Authority's advisor considers that the key cost drivers influencing the LRIC of MCT are:

- Geographical area and population density;
- Coverage;
- Subscriber penetration;
- Traffic per subscriber;
- Market share;
- 2G v 3G v 4G technology split;
- Spectrum holdings;
- Mast and RAN sharing; and
- Proportion of traffic handled on microcells.

4.78 These key cost drivers can be compared between the Channel Islands and the UK. This analysis has been undertaken by the Authority's advisor and is set out in the following table:

Cost driver	UK	Jersey	Guernsey
Geographical area, population, density	6 area geotypes 2 transport geotypes	2 geotypes (population) St Helier & St Clement (44%) Other (56%)	2 geotypes (population) St Peter Port & St Sampson (44%) Other (56%)
Subscriber penetration (2017/18)	120%	114%	110%
Outgoing minutes per subscriber per month (2017/18)	145	107	92
Market share	25%	33%	33%
Spectrum (paired MHz)	20 2G 15 3G 30 4G 65 total	10 2G 10 3G 20 4G 40 total	10 2G 10 3G 20 4G 40 total
Cell radius (3G 2.1GHz)	Urban: 0.8km Suburban 1: 1.4km	75%	85%
Traffic on microcells	2.5%	12.5%	5.0%
Mast and RAN sharing	Yes	No	No
Voice over LTE	Yes	No	No

Figure 9: Adapted Ofcom model - inputs
Source: Brockley Consulting

4.79 By using these cost drivers and applying them to the UK LRIC model the model provides the following outputs for Jersey and Guernsey

Output	Jersey	Guernsey
Voice technology split (minutes, 2017/18)	17% 2G 83% 3G -% 4G (no VoLTE)	17% 2G 83% 3G -% 4G (no VoLTE)
Cell sites for average operator (2017/18)	80 (actual = 57, 58, 130)	41 (actual = 31, 38, 40)

Figure 10: Adapted Ofcom model - inputs
Source: Brockley Consulting

4.80 The model then creates cost per minute outputs for the sites, site equipment, backhaul and core. These results are set out in the table below and are compared against the UK values that were created in the 2018 – 2021 Ofcom model.

4.81 The summary result of the model shows that the UK LRIC is 0.46 ppm. When the model is adjusted to reflect Guernsey-specific conditions, it produces a slightly lower LRIC of 0.4 ppm; and when it is adjusted to reflect Jersey-specific conditions, it indicates a slightly higher LRIC of 0.5 ppm.

	UK	Jersey	Guernsey
	ppm	ppm	ppm
Sites	0.20	0.34	0.26
Site equipment	0.06	0.02	0.07
Backhaul	0.09	0.11	0.04
Core	0.12	0.03	0.03
	0.46	0.50	0.40

Table 9: Adapted Ofcom model - results
Source: Brockley Consulting

Conclusion

4.82 The Authority treats the results of the adjusted Ofcom model as further indicative data to take into account, alongside the results of the benchmarking work, when determining an appropriate level of MTR for the Channel Islands.

4.83 In adjusting the Ofcom model, the Authority was assisted by an expert economic adviser with extensive experience of Ofcom's model. His view is that: *"on the basis of this analysis, a detailed LRIC modelling exercise specifically for the Channel Islands is likely to lead to MTRs below 1ppm"*.

4.84 As set out above, the central case result of the benchmarking analysis, to which the Authority attaches greatest weight, produces an MTR of 0.688ppm.

4.85 Considering the available evidence in the round, the Authority provisionally concludes that **0.7ppm** represents an appropriate level of MTR for Channel Islands. While slightly higher than the datapoints described above, it represents a reasonable (if generous) estimate of the LRIC of providing MTR in the Channel Islands.

Glide path

4.86 The Authority's provisional view, having considered the representations received from Sure as well as the practice of other European regulators, is that the revised MTR for the Channel Islands should be introduced gradually, using a glidepath approach.

4.87 The design of a glidepath necessarily involves an element of regulatory judgement. The Authority considers that a three year period would strike the correct balance between the prompt implementation of a measure which, as set out above, it considers is in the public interest; and the need to allow operators a period of time to adjust their activities and rebalance their revenues in view of reduced MTRs.

4.88 The Authority proposes to implement price reductions in accordance with the following schedule:

Effective Date	**Maximum Mobile Termination Rate (ppm)**
Current MTR	4.11
1 January 2020	3.11
1 January 2021	1.11
1 April 2022	0.7ppm

Table 10: Proposed MTR rate

Financial Impact

4.89 In addressing a potential reduction of MTRs, the Authority has a statutory duty to assess the potential impact that such a reduction could have on the operators financially. In considering the financial impact on operators, the Authority, in 2016, carried out an assessment of the current revenue gains/loss owing to MTRs at the traffic revenues at that time. Whilst the information supplied by operators was in confidence and has not been subsequently shared by the Authority, it has been used to inform the ongoing assessment and analysis of changes to MTRs.

4.90 The relevant data is commercially sensitive and is not set out in this document, but it gives the Authority comfort that MTRs are a relatively small element of operators' overall revenues; and that the net impact of reduced MTRs should therefore be relatively easy for operators to accommodate without risking their financial stability or substantially adjusting their retail tariffs

4.91 This conclusion is consistent with the representations so far received by MNOs during the consultation process.

(a) Of the responses received to the Call for Information Sure provided what it considered to be the financial impact of a proposed reduction in MTRs. Sure stated that its net payment of MTRs during 2018 was approximately £[✂]k. Across the two Bailiwicks it terminated a total of [✂]minutes. Sure calculated that, in the situation where the current MTR is reduced from 4.11 ppm to zero then the impact would be [✂]ppm.

(b) Airtel was the only operator that raised significant concerns that, by reducing MTRs, there could be a material harm to its business. In its response Airtel cited that in order to mitigate revenue losses owing to MTRs it might have to consider increasing retail charges to its consumers and/or staff losses. However, Airtel did not provide any specific evidence in support of this claim, which is not supported by the Authority's own assessment as to the materiality of MTR revenues, referred to in the preceding paragraph.

4.92 The Authority recognises that the adjustment to the level of MTRs will inevitably have some impact on the Channel Islands MNOs, but for the reasons set out in relation to the opening topic of this section, it considers that this impact needs to be set against the public interest in bringing MTRs down to a level that is more reflective of their costs of provision.

Conclusion

4.93 In all cases, the methodologies applied for assessing the MTR level show that the existing rate of 4.11ppm is significantly too high and should be reduced below 1ppm. Considering the available evidence in the round, the Authority considers that an appropriate level of MTR is 0.7ppm; and that this should be introduced over a three year glidepath commencing on 1 January 2020, so as to come into full effect from 1 April 2022.

5. Draft Decision

5.1 The Authority proposes to issue a direction to JT under condition 34.1(c) of JT's licence, and directions to Sure, Airtel and Marathon under Conditions 27.1(c) of their respective licences, as set out below.

5.2 The Authority proposes that the direction should enshrine the following ex ante regulatory obligations:

- a requirement to provide network access on reasonable request;
- a requirement not to unduly discriminate;
- a requirement to publish applicable MTRs; and
- a requirement that MTRs should not exceed the rate set out below.

5.3 The rate charged by the relevant licensee for its mobile termination rate shall be reduced over a three year period commencing on 1 January 2020:

Effective Date	**Maximum Mobile Termination Rate (ppm)**
Current rate	4.11
1 January 2020	3.11
1 January 2021	1.11
1 April 2022	0.7ppm

Table 11: Proposed MTR rate

5.4 There shall be no additional charge (other than the MTR) applied by the relevant mobile network operator for any on-island transit of a call to be terminated on a mobile network.

5.5 The MTR shall be billed on a per second basis effective from the first second.

5.6 The MTR shall apply with respect to all voice calls terminated by the relevant mobile network operator in Jersey on a technology neutral basis and irrespective of the origin of the traffic.

5.7 The directions shall be deemed to have come into effect on 1 January 2020, with the final rate applying from 1 April 2022. The directions shall remain until a further decision is made by the Authority.

6. Summary and Next steps

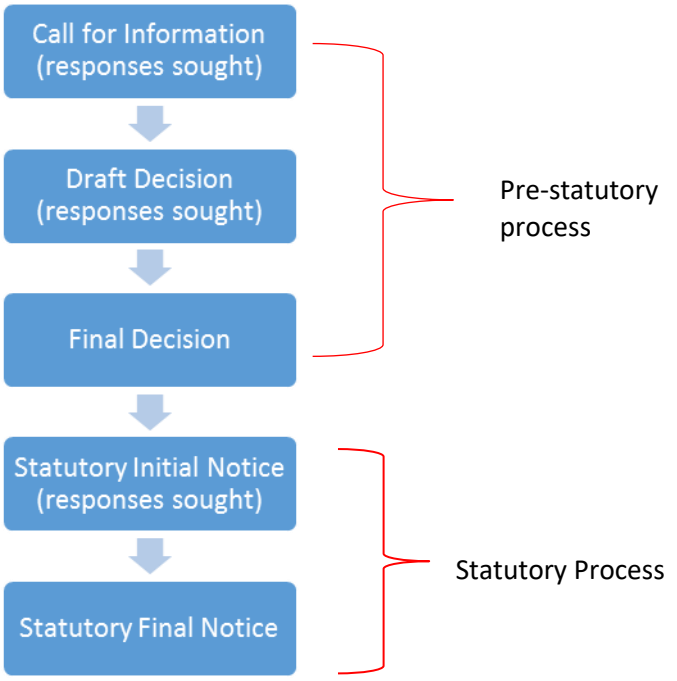
Summary

6.1 Stakeholders are invited to provide written representations on the Draft Decision as set out in Section 5. In addition, respondents are invited to raise any other matters they consider relevant in the present context when responding to this Draft Decision.

6.2 The Authority will consider all of the responses received, which will inform its considerations on the matters set out in this Call for Information.

Consultation Process

6.3 The Authority has recently introduced a revised process for consultations. The Information Notice, CICRA 18/29 "Regulatory Consultation Process" published in July 2018 outlines the new process to be undertaken before carrying out certain regulatory functions in accordance with the relevant statutory process. This process is set out below in diagrammatical form:



6.4 Under the new process there is a new non-statutory process which is to be undertaken prior to the statutory process. The non-statutory process consists of a Call for Information, a Draft Decision and a Final Decision. Responses are sought from stakeholders at the Call for Information and Draft Decision stage, following which a Final Decision is issued. This Draft decision is thus the second stage of the pre-statutory process.

6.5 Whilst the Authority considers any decision made as part of the pre-statutory process to be the starting point for the statutory process and as a statement of its expectations, the Pre-Statutory Final Decision (i.e. stage 3 of the above diagram) is not binding where there is a requirement to undertake a statutory process.

6.6 After the non-statutory process has been completed, the statutory process will commence by issuing a Statutory Initial Notice. Responses are sought at the Statutory Initial Notice stage, following which the Statutory Final Notice is issued, such decision being final and binding.

7. Annex A - Legislative and licensing background

Legal Background

7.1 In considering the regulation of MTRs, including the level at which it should be capped and whether to apply a glide path to reach a proposed final MTR, reference is made to the JCRA's statutory duties as identified below.

7.2 The statutory duties of the JCRA are defined in Article 7 of the Telecoms Law, and include *'a primary* duty *to perform his, her or its functions under this Law in such manner as each considers is best calculated to ensure that (so far as in his, her or its view is reasonably practicable) such telecommunication services are provided, both within Jersey and between Jersey and the rest of the world, as satisfy all current and prospective demands for them, wherever arising.*'

7.3 In addition to the primary duty, relevant duties of the JCRA include the following:

- It must act in such manner as it considers is best calculated to protect and further the short-term and long-term interests of users within Jersey of telecommunication services and perform them, wherever it considers it appropriate, by promoting competition among persons engaged in commercial activities connected with telecommunications in Jersey (Article 7(2)(a) Telecoms Law).
- It must perform its functions in such manner as it considers is best calculated to promote efficiency, economy and effectiveness in commercial activities connected with telecommunications in Jersey (Article 7(2)(b) Telecoms Law) so as to further the economic interests of Jersey (Article 7(2)(c) Telecoms Law).
- These actions, should be best calculated to impose a minimum of restriction on persons engaged in commercial activities connected with telecommunications in Jersey (Article 7(2)(d) Telecoms Law).

7.4 The Telecoms Law provides for a licensing regime. Article 16 of the Telecoms Law provides that the JCRA may include in licences such conditions necessary to carry out its functions. The Telecoms Law specifically provides that licences can include:

- Conditions for the prevention or reduction of anti-competitive behaviour; and
- Conditions allowing the JCRA to make determinations.

7.5 A Class III licence also includes conditions relating to the requirement to provide interconnection services and the production of a reference offer for interconnection services (**RIO**). The JCRA has previously issued directions to JT on the production of a RIO[23].

[23] Direction of the JCRA 2004/3 Re: Jersey Telecom Limited's Reference Interconnect Offer, 29 April 2004, see http://www.cicra.gg/_files/040429%20Initial%20Notice%202004-3.pdf

Regulatory Framework

Finding of SMP

7.6 In October 2017, following a review of the mobile market, the JCRA made a decision with respect to the existence of SMP in the markets for mobile call termination. That decision found that each mobile operator has SMP in the market for terminating calls on its own network.

7.7 MNOs, in their responses to the Call for Information, confirmed that they considered that the October 2017 decision of CICRA still stands.

Licence Conditions - JT

7.8 Condition 33.2 of the licence issued to JT provides that:

> "*The JCRA may determine the maximum level of charges the Licensee may apply for Telecommunications Services within a relevant market in which the Licensee has been found to be dominant. A determination may:*
>
> *a) Provide for the overall limit to apply to such Telecommunications Services or categories of Telecommunications Services or any combination of Telecommunications Services;*
> *b) Restrict increases in any such charges or to require reductions in them whether by reference to any formula or otherwise; or*
> c) *Provide for different limits to apply in relation to different periods of time falling within the periods to which the determination applies.*"

7.9 This condition therefore allows the JCRA to regulate the prices that JT charges for telecommunications services in a way and for a time that it deems appropriate, provided that JT has a dominant position in the relevant market in which those services are supplied.

7.10 Condition 34.1(c) of JT's licence is designed to protect fair competition in the markets in which JT operates, and provides as follows:

> "*The Licensee shall: …*
>
> *(c) comply with any direction issued by the JCRA for the purpose of preventing any market abuse or any practice or arrangement that has the object or effect of preventing, restricting or distorting competition in the establishment, operation and maintenance of Licensed Telecommunications Systems or the provision of Telecommunications Services.*"

7.11 This condition allows the JCRA to give directions to JT, including in relation to the prices that it charges.

Licence Conditions – Other MNOs

7.12 As noted above, Airtel Vodafone, Sure and Marathon have also been found in October 2017 to be dominant (i.e. to possess SMP) in the provision of termination services on their networks. Part IV of their licences provide for the JCRA to impose further obligations in the event the JCRA

determines the operator has SMP in a specific market. Those obligations include a Fair Competition condition (condition 27), part of which is in the same terms as Condition 34.1 (c) of JT's licence, set out immediately above. This condition allows the JCRA to give directions to Airtel Vodafone, Sure and Marathon, including in relation to the prices that it charges.

Approach to setting MTRs

7.13 The EC Recommendation[24] expects that termination rates are set based on the costs incurred by an efficient operators, and that this is based on bottom-up modelling using LRIC as the most appropriate costing methodology.

7.14 Mindful of its statutory duties, the JRCA adopts a proportionate approach to the analysis of MTRs, bearing in mind the comparatively small scale of the regulated markets and the resources it has available.

[24] Commission Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU

8. Annex B – Benchmarking Results

8.1 This section contains the data and results of the full benchmarking analysis undertaken by the Authority.

8.2 For the purposes of this review the Authority has considered the data provided in the July 2018 BEREC report[25] (the **BEREC Report**), this being the latest version available. Applying this data, the Authority has considered a number of benchmarking options. These are listed below and expanded upon in the rest of this section:

i. Benchmarking based on the 35 countries which publish a regulated rate;
ii. Benchmarking based on the 35 countries with any significant outliers removed;
iii. Benchmarking based on the 23 countries where the MTR is set using BU-LRIC;
iv. Benchmarking based on the 7 smallest countries (by population);
v. Benchmarking based on the 7 smallest countries (by population) with any significant outliers removed, and
vi. Benchmarking based on the 7 smallest countries (by population) where the MTR is set using LRIC.

Benchmarking based on the 35 countries which publish a regulated rate

8.3 The following table shows the 35 countries where the MTRs are available. The table includes the population as well as the methodology used to create the MTR.

[25] Termination Rates at European Level, July 2018, BoR (18) 218, 6 December 2018

Country Code	Country	Population	Euro Exchange	Model	Rate 1/18 to 6/18
MT	Malta	433,245	1	Pure BU-LRIC	0.4045
PT	Portugal	10,254,666	1	Pure BU-LRIC	0.4200
NO	Norway	5,400,916	1	Pure BU-LRIC	0.4502
HU	Hungary	9,655,361	317.2	Pure BU-LRIC	0.5488
UK	United Kingdom	66,959,016	0.88	Pure BU-LRIC	0.5650
SE	Sweden	10,053,135	10.33	Pure BU-LRIC	0.5653
NL	Netherlands	17,132,908	1	Pure BU-LRIC	0.5810
DK	Denmark	5,775,224	7.45	Pure BU-LRIC	0.6001
HR	Croatia	4,140,148	7.4	Pure BU-LRIC	0.6353
ES	Spain	46,441,049	1	Pure BU-LRIC	0.6700
BG	Bulgaria	6,988,739	1.96	Pure BU-LRIC	0.7158
FR	France	65,480,710	1	Pure BU-LRIC	0.7400
IS	Iceland	340,566	123.48	Benchmark BU-LRIC	0.7855
IE	Ireland	4,847,139	1	Pure BU-LRIC	0.7900
AT	Austria	8,766,201	1	Pure BU-LRIC	0.8049
EE	Estonia	1,303,798	1	Benchmark BU-LRIC	0.8300
RO	Romania	19,483,360	4.65	Benchmark BU-LRIC	0.8400
ME	Montenegro	629,355	1	Other TD-LRIC	0.8500
LU	Luxembourg	596,992	1	Benchmark BU-LRIC	0.8868
LV	Latvia	1,911,108	1	Pure BU-LRIC	0.8900
FI	Finland	5,561,389	1	Other (FDC/FAC)	0.9300
LT	Lithuania	2,864,459	1	Benchmark BU-LRIC	0.9400
EL	Greece	11,124,603	1	Pure BU-LRIC	0.9460
IT	Italy	59,216,525	1	Pure BU-LRIC	0.9500
DE	Germany	82,438,639	1	Pure BU-LRIC	0.9500
AL	Albania	2,938,428	127.35	Benchmark BU-LRIC	0.9579
CZ	Czech Republic	10,630,589	26.6	Pure BU-LRIC	0.9688
CY	Cyprus	1,198,427	1	Benchmarking	0.9900
BE	Belgium	11,562,784	1	Pure BU-LRIC	0.9900
PL	Poland	38,028,278	4.26	Pure BU-LRIC	1.0065
FYROM	the former Yugoslav Republic of Macedonia	2,086,720	1	TD LRIC	1.0249
SI	Slovenia	2,081,900	1	Pure BU-LRIC	1.1400
RS	Serbia	8,733,407	118.17	Benchmarking	1.2101
SK	Slovakia	5,450,987	1	Pure BU-LRIC	1.2260
LI	Liechtenstein	38,404	1.17	Benchmarking	2.4698
Average MTR	0.8649		**35 Countries with regulated / available MTRs**		

Table 12: MTRs for 35 European countries

Source: BEREC, CICRA

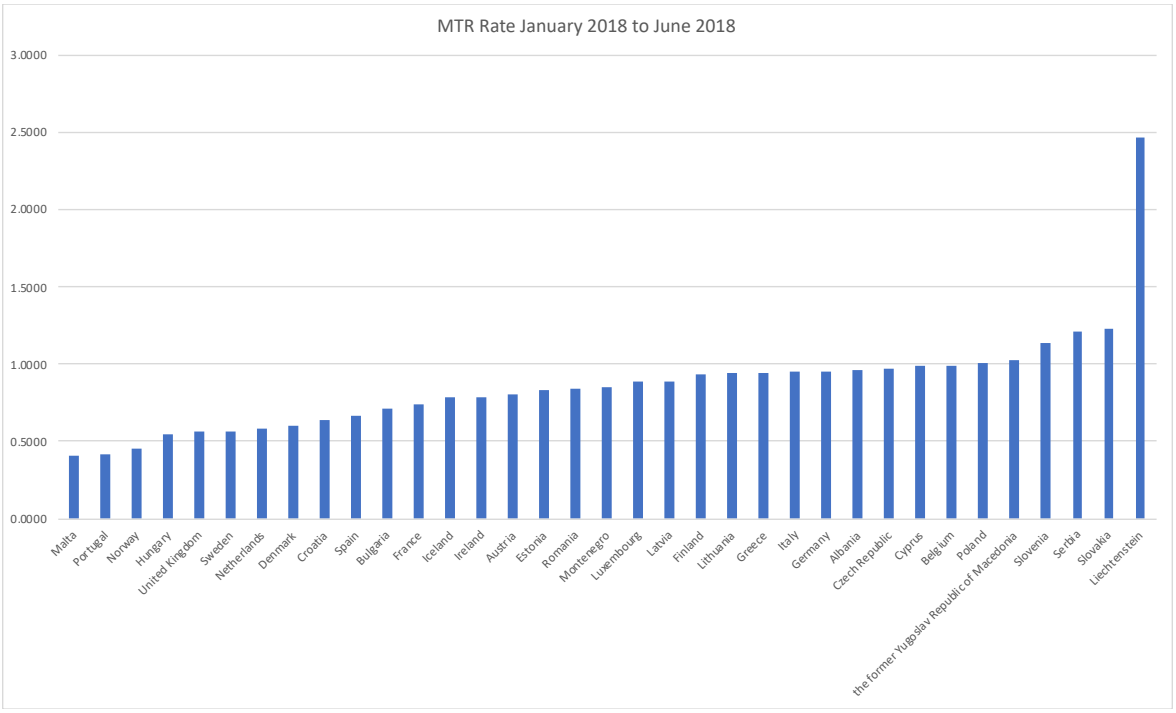


Figure 11: MTRs for 35 European countries
Source: CICRA

8.4 The average MTR across the 35 jurisdictions is 0.8649 Eurocents.

8.5 It is clear from the above graph that Liechtenstein acts as an outlier as its MTR is more than double than the next highest. In order to access the impact of the outlier the Authority carried out an analysis of the 35 countries less Liechtenstein.

Benchmarking based on the 34 countries which publish a regulated rate (Liechtenstein removed)

8.6 The following table shows the 34 countries where the MTRs are available. The table includes the population as well as the methodology used to create the MTR.

Country Code	Country	Population	Euro Exchange	Model	Rate 1/19 to 6/19
MT	Malta	433,245	1	Pure BU-LRIC	0.4045
PT	Portugal	10,254,666	1	Pure BU-LRIC	0.4200
NO	Norway	5,400,916	1	Pure BU-LRIC	0.4502
HU	Hungary	9,655,361	317.2	Pure BU-LRIC	0.5488
UK	United Kingdom	66,959,016	0.88	Pure BU-LRIC	0.5650
SE	Sweden	10,053,135	10.33	Pure BU-LRIC	0.5653
NL	Netherlands	17,132,908	1	Pure BU-LRIC	0.5810
DK	Denmark	5,775,224	7.45	Pure BU-LRIC	0.6001
HR	Croatia	4,140,148	7.4	Pure BU-LRIC	0.6353
ES	Spain	46,441,049	1	Pure BU-LRIC	0.6700
BG	Bulgaria	6,988,739	1.96	Pure BU-LRIC	0.7158
FR	France	65,480,710	1	Pure BU-LRIC	0.7400
IS	Iceland	340,566	123.48	Benchmark BU-LRIC	0.7855
IE	Ireland	4,847,139	1	Pure BU-LRIC	0.7900
AT	Austria	8,766,201	1	Pure BU-LRIC	0.8049
EE	Estonia	1,303,798	1	Benchmark BU-LRIC	0.8300
RO	Romania	19,483,360	4.65	Benchmark BU-LRIC	0.8400
ME	Montenegro	629,355	1	Other TD-LRIC	0.8500
LU	Luxembourg	596,992	1	Benchmark BU-LRIC	0.8868
LV	Latvia	1,911,108	1	Pure BU-LRIC	0.8900
FI	Finland	5,561,389	1	Other (FDC/FAC)	0.9300
LT	Lithuania	2,864,459	1	Benchmark BU-LRIC	0.9400
EL	Greece	11,124,603	1	Pure BU-LRIC	0.9460
IT	Italy	59,216,525	1	Pure BU-LRIC	0.9500
DE	Germany	82,438,639	1	Pure BU-LRIC	0.9500
AL	Albania	2,938,428	127.35	Benchmark BU-LRIC	0.9579
CZ	Czech Republic	10,630,589	26.6	Pure BU-LRIC	0.9688
CY	Cyprus	1,198,427	1	Benchmarking	0.9900
BE	Belgium	11,562,784	1	Pure BU-LRIC	0.9900
PL	Poland	38,028,278	4.26	Pure BU-LRIC	1.0065
FYROM	the former Yugoslav Republic of Macedonia	2,086,720	1	TD LRIC	1.0249
SI	Slovenia	2,081,900	1	Pure BU-LRIC	1.1400
RS	Serbia	8,733,407	118.17	Benchmarking	1.2101
SK	Slovakia	5,450,987	1	Pure BU-LRIC	1.2260
Average MTR	0.8177		**34 Countries with regulated / available MTRs**		
			NOT INCLUDING LIECHENSTEIN IS AN OUTLIER		

Table 13: MTRs for 34 European countries

Source: BEREC, CICRA

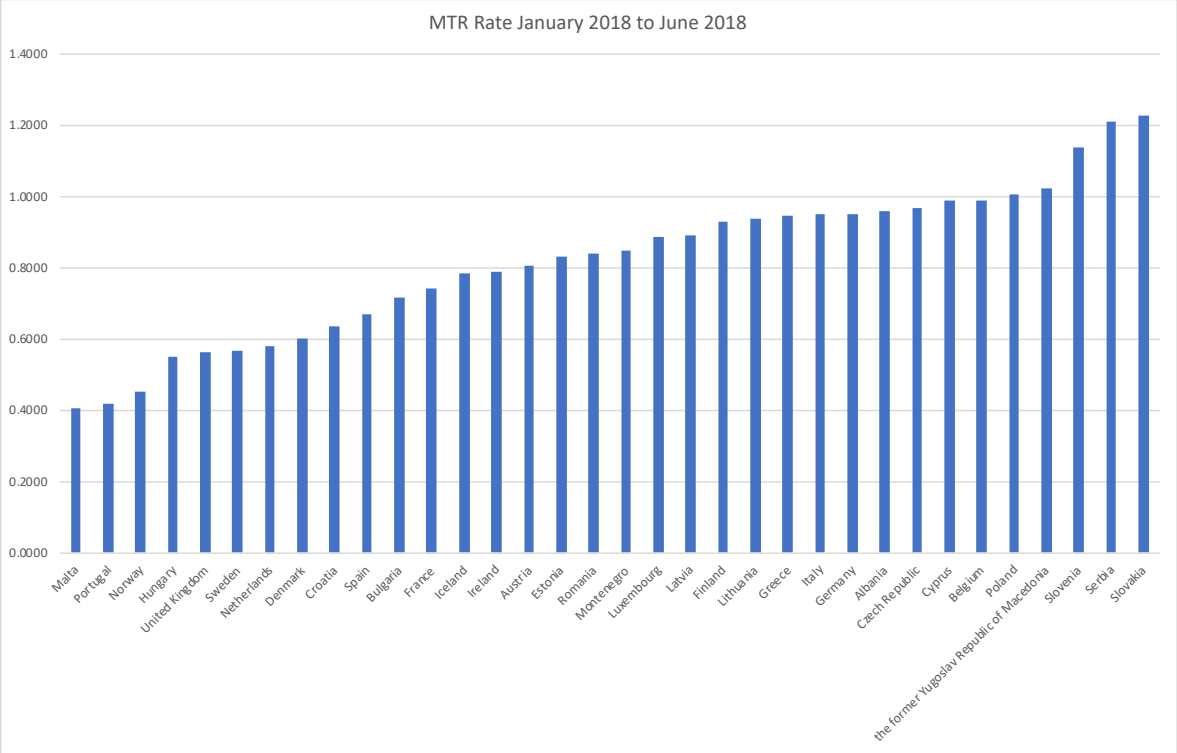


Figure 12: MTRs for 34 European countries
Source: CICRA

8.7 The average MTR across the 34 jurisdictions is 0.8177 Eurocents.

Benchmarking based on the 23 countries where the MTR is set using BU-LRIC

8.8 The European Commission recommendation for the setting of an MTR is by the use of BU-LRIC. 23 of the 35 countries analysed use the BU-LRIC method. The following table shows the 23 countries where the MTRs is set by this method.

Country Code	Country	Population	Euro Exchange	Model	Rate 1/18 to 6/18
MT	Malta	433,245	1	Pure BU-LRIC	0.4045
PT	Portugal	10,254,666	1	Pure BU-LRIC	0.4200
NO	Norway	5,400,916	1	Pure BU-LRIC	0.4502
HU	Hungary	9,655,361	317.2	Pure BU-LRIC	0.5488
UK	United Kingdom	66,959,016	0.88	Pure BU-LRIC	0.5650
SE	Sweden	10,053,135	10.33	Pure BU-LRIC	0.5653
NL	Netherlands	17,132,908	1	Pure BU-LRIC	0.5810
DK	Denmark	5,775,224	7.45	Pure BU-LRIC	0.6001
HR	Croatia	4,140,148	7.4	Pure BU-LRIC	0.6353
ES	Spain	46,441,049	1	Pure BU-LRIC	0.6700
BG	Bulgaria	6,988,739	1.96	Pure BU-LRIC	0.7158
FR	France	65,480,710	1	Pure BU-LRIC	0.7400
IE	Ireland	4,847,139	1	Pure BU-LRIC	0.7900
AT	Austria	8,766,201	1	Pure BU-LRIC	0.8049
LV	Latvia	1,911,108	1	Pure BU-LRIC	0.8900
EL	Greece	11,124,603	1	Pure BU-LRIC	0.9460
IT	Italy	59,216,525	1	Pure BU-LRIC	0.9500
DE	Germany	82,438,639	1	Pure BU-LRIC	0.9500
CZ	Czech Republic	10,630,589	26.6	Pure BU-LRIC	0.9688
BE	Belgium	11,562,784	1	Pure BU-LRIC	0.9900
PL	Poland	38,028,278	4.26	Pure BU-LRIC	1.0065
SI	Slovenia	2,081,900	1	Pure BU-LRIC	1.1400
SK	Slovakia	5,450,987	1	Pure BU-LRIC	1.2260
Average MTR	0.7634		**23 Countries - BU-LRIC Methodology**		

Table 14: MTRs for 23 European countries where the MTR is set by BU-LRIC
Source: BEREC, CICRA

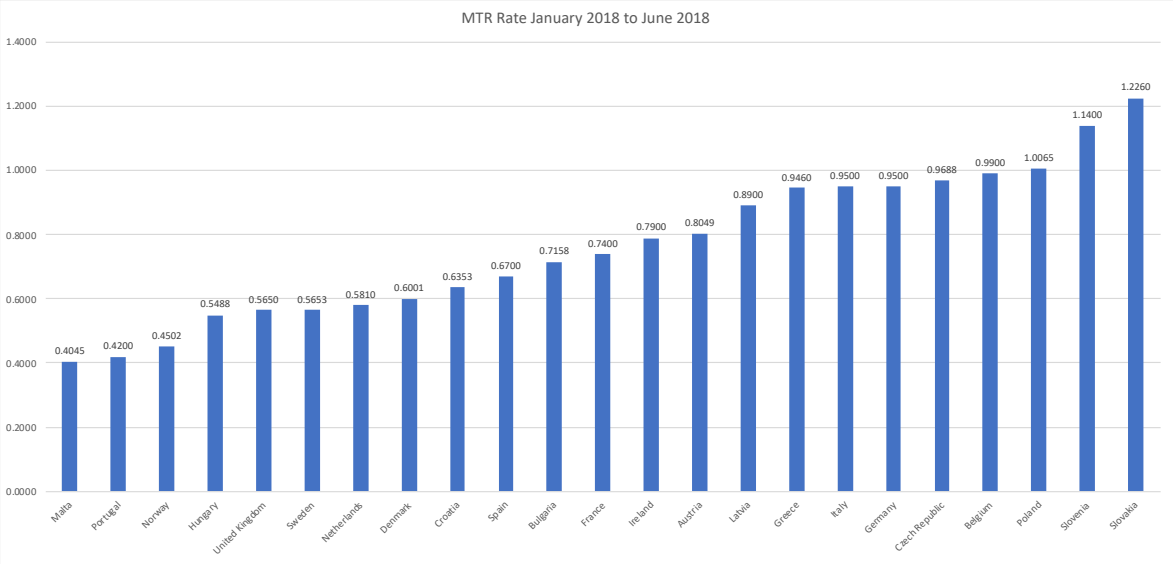


Figure 13: MTRs for 23 European countries where the MTR is set by BU-LRIC
Source: CICRA

8.9 The average MTR across the 23 jurisdictions is 0.7634 Eurocents.

Benchmarking based on the 7 smallest countries (by population)

8.10 A challenge that the Authority faces when considering benchmarking is the size of the Channels Islands and how that is comparable to the countries selected to be benchmarked against. To address that challenge the Authority has selected the seven smallest jurisdictions by population. This methodology aligns with an analysis that was provided by Sure in its response to the Call for Information on this matter, in which Sure applied the BEREC Termination Report figures from January 2018 (i.e. the second most recent report). Applying the figures from BEREC Report, the following table shows the 7 smallest countries by population.

Country Code	Country	Population	Euro Exchange	Model	Rate 1/18 to 6/18
MT	Malta	433,245	1	Pure BU-LRIC	0.4045
IS	Iceland	340,566	123.48	Benchmark BU-LRIC	0.7855
EE	Estonia	1,303,798	1	Benchmark BU-LRIC	0.8300
ME	Montenegro	629,355	1	Other TD-LRIC	0.8500
LU	Luxembourg	596,992	1	Benchmark BU-LRIC	0.8868
CY	Cyprus	1,198,427	1	Benchmarking	0.9900
LI	Liechtenstein	38,404	1.17	Benchmarking	2.4698

Table 15: MTRs for the 7 smallest European countries (by population)
Source: BEREC, CICRA

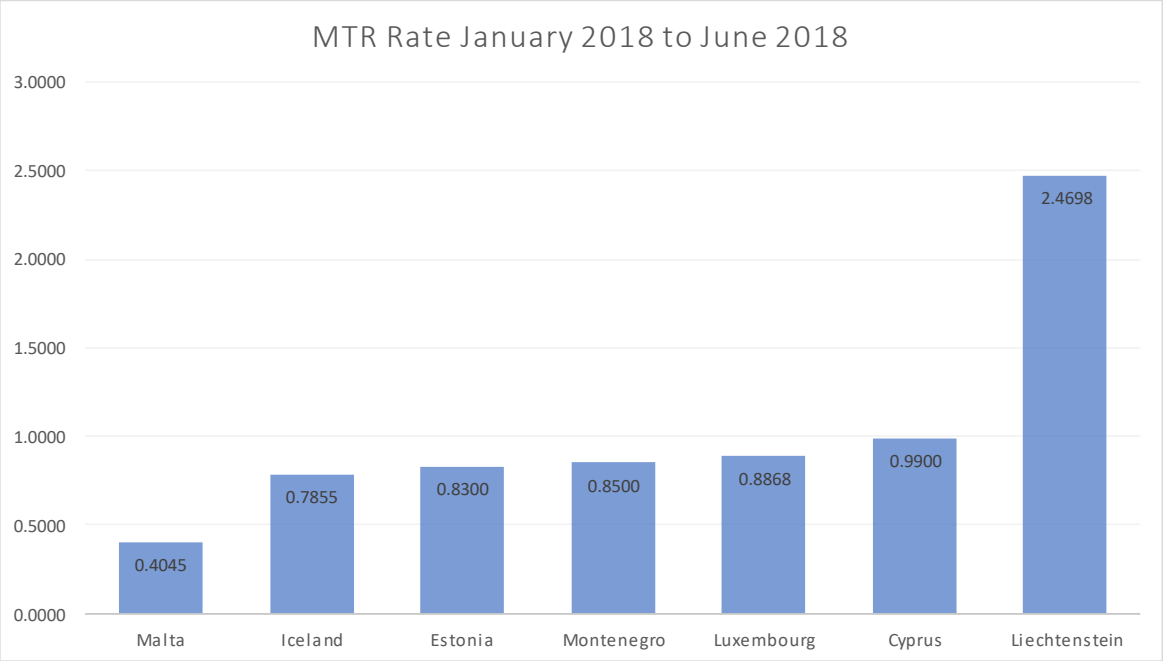


Figure 14: MTRs for the 7 smallest European countries (by population)
Source: CICRA

8.11 The average MTR across the 7 jurisdictions is 1.0309 Eurocents.

Benchmarking based on the 7 smallest countries (by population) (Liechtenstein removed)

8.12 As with the previous analysis Liechtenstein is an outlier being nearly 2.5 times the next highest MTR. Therefore the Authority has removed Liechtenstein from its analysis and considered the 6 smallest countries by population.

Country Code	Country	Population	Euro Exchang	Model	Rate 1/18 to 6/18
MT	Malta	433,245	1	Pure BU-LRIC	0.4045
IS	Iceland	340,566	123.48	Benchmark BU-LRIC	0.7855
EE	Estonia	1,303,798	1	Benchmark BU-LRIC	0.8300
ME	Montenegro	629,355	1	Other TD-LRIC	0.8500
LU	Luxembourg	596,992	1	Benchmark BU-LRIC	0.8868
CY	Cyprus	1,198,427	1	Benchmarking	0.9900

Table 16: MTRs for the 6 smallest European countries (by population)

Source: BEREC, CICRA

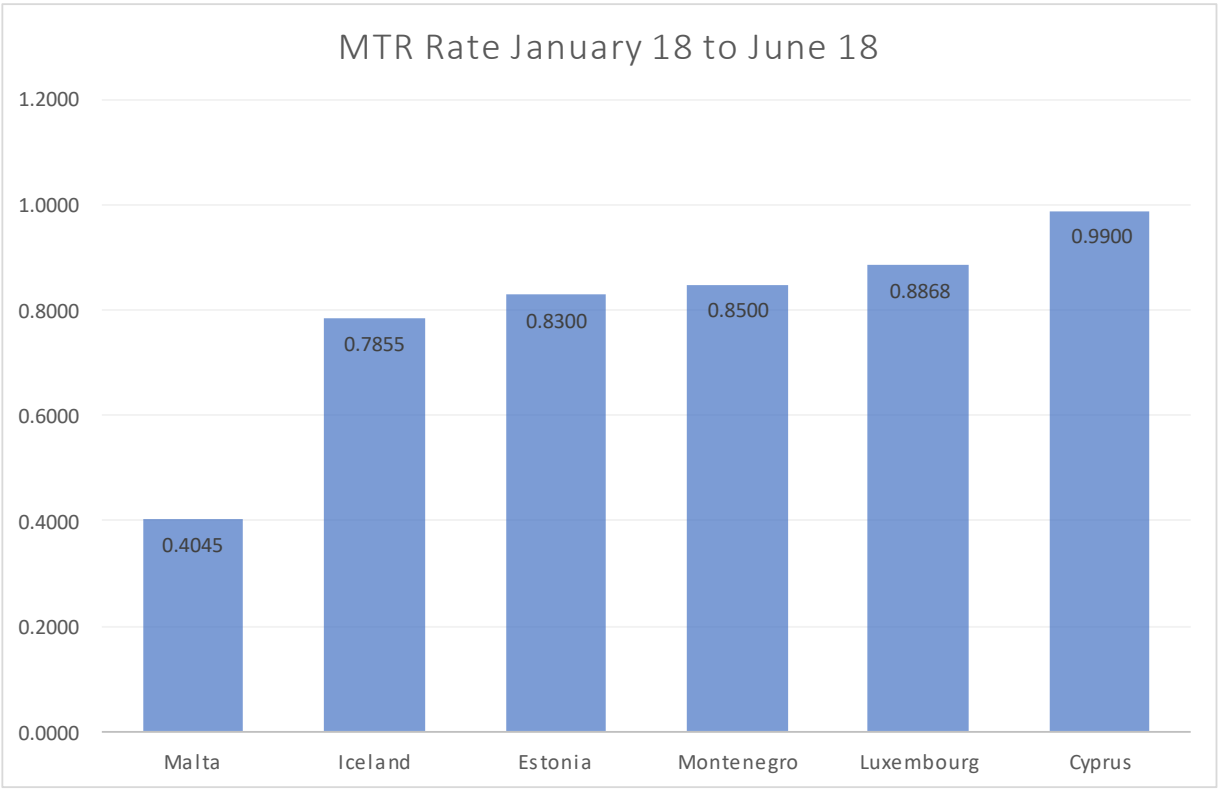


Figure 15: MTRs for the 6 smallest European countries (by population)

Source: CICRA

8.13 The average MTR across the 6 jurisdictions is 0.7911 Eurocents.

Benchmarking based on the 7 smallest countries where MTRs are set by the BU-LRIC methodology

8.14 As the Authority stated in its earlier analysis, the European Commission recommendation is that MTRs are set by the BU-LRIC methodology. Therefore, in this analysis the Authority has benchmarked against the 7 smallest countries (by population) where the MTR is set by the BU-LRIC method.

Country Code	Country	Population	Euro Exchange	Model	Rate 1/18 to 6/18
MT	Malta	433,245	1	Pure BU-LRIC	0.4045
NO	Norway	5,400,916	1	Pure BU-LRIC	0.4502
HR	Croatia	4,140,148	7.4	Pure BU-LRIC	0.6353
IE	Ireland	4,847,139	1	Pure BU-LRIC	0.7900
LV	Latvia	1,911,108	1	Pure BU-LRIC	0.8900
SI	Slovenia	2,081,900	1	Pure BU-LRIC	1.1400
SK	Slovakia	5,450,987	1	Pure BU-LRIC	1.2260

Table 17: MTRs for the 7 smallest European countries (by population) where the MTR is set by BU-LRIC
Source: BEREC, CICRA

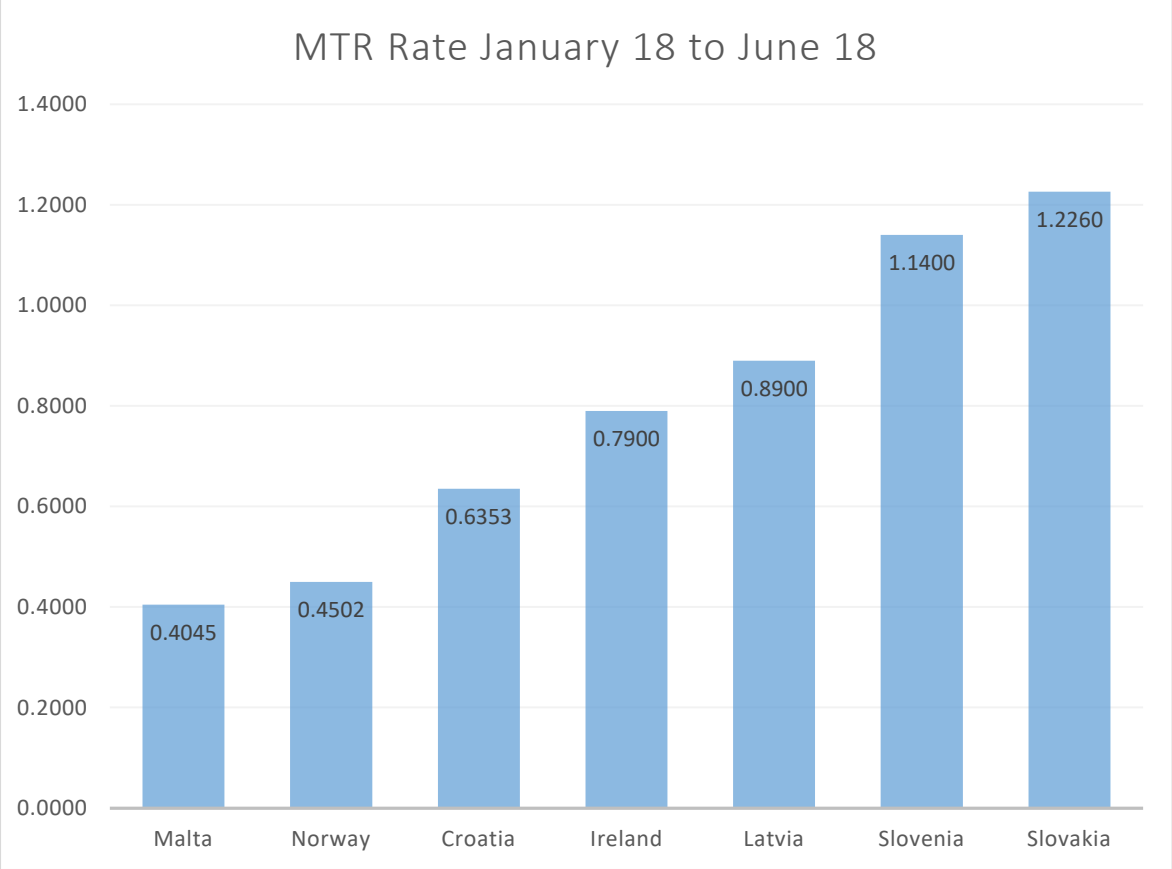


Figure 16: MTRs for the 7 smallest European countries (by population) where the MTR is set by BU-LRIC
Source: CICRA

8.15 The average MTR across the 6 jurisdictions is 0.7909 Eurocents.

Conclusion of benchmarking

8.16 The Authority has in the analysis above set out 6 different methods of benchmarking based on the BEREC data. The benchmarking provides a range of MTR rates against which the Authority could consider an appropriate rate for the Channel Islands. To conclude its analysis the Authority has considered an average of the methods used. The table and graph below sets out the analysis of the 6 benchmarking methods.

Benchmark Methodology	MTR
23 Countries - BU-LRIC Methodology	0.7634
Pure BU-LRIC - Smallest 7 countries by population	0.7909
Smallest 6 countries by population (excluding Liechtenstein)	0.7911
34 Countries with regulated / available MTRs (excluding Liechtenstein)	0.8177
35 Countries with regulated / available MTRs	0.8649
Smallest 7 countries by population	1.0309

Table 18: Summary of the six benchmarking methodologies
Source: CICRA

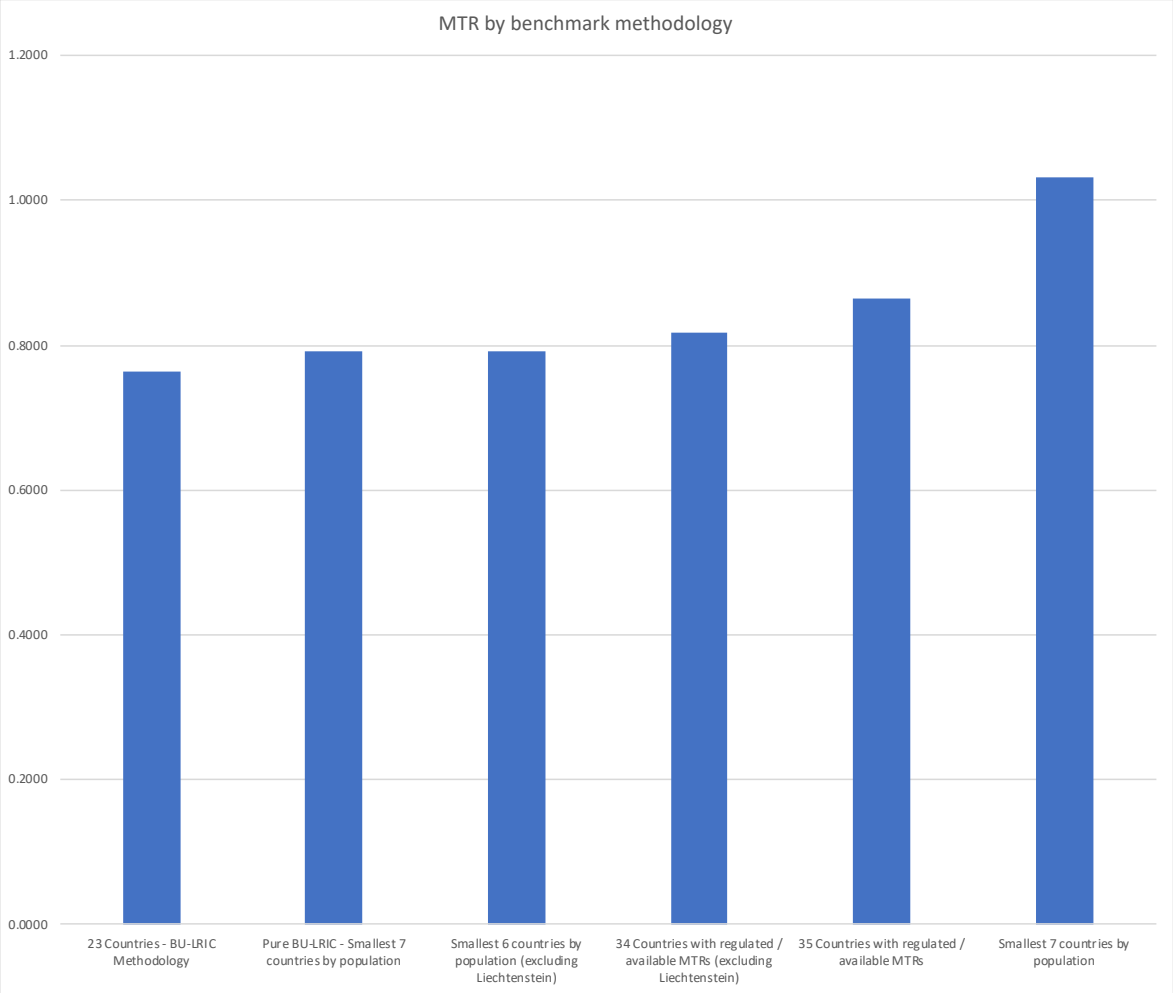


Figure 17: Summary of the six benchmarking methodologies
Source: CICRA

8.17 In conclusion the range of benchmarked MTRs is between 0.7634 and 1.0309 Eurocents. Applying the average exchange rate over the six month period 1 December 2018 to 1 June 2019, being 1EUR : @GBP, this equates to a range of benchmarked MTRs between @ and @ ppm.[26]

[26] Applying the average exchange rate over the six-month period of [date] to [date], 1 EUR = @ GBP - NOTE the Authority will provide the current figure at the time of publication of the final decision