



An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

Information Notice

Market Reviews: Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non-Residential Customers

Wholesale Fixed Access and Call Origination Broadcasting Transmission Services in Ireland

Publication and notification to the European Commission (EC), the Body of European Regulators for Electronic Communications (BEREC), and Member State National Regulatory Authorities (NRAs) of draft measures under Article 32 of Directive 2018/1972

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Commission for Communications Regulation

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Additional Information

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1. This Information Notice concerns the Commission for Communications Regulation's ('**ComReg**') publication and parallel notification to relevant European authorities of its '**Draft Decision**' concerning its analysis of the Retail Fixed Telephony Service ('**RFTS**') and wholesale Fixed Access and Call Origination ('**FACO**') markets in Ireland. A non-confidential copy of the Draft Decision is attached at Appendix 1 of this Information Notice.
2. In accordance with the requirements, at that time, of Article 6 of the Framework Directive (now Article 23 of the of the European Electronic Communications Code ('**EECC**')),¹ ComReg carried out a public consultation ('**Consultation**') on its analysis of the RFTS and FACO markets in Ireland over the period 17 June to 19 August 2020.²
3. Prior to the adoption of a final decision, Article 32(3) of the EECC now requires ComReg to publish and, at the same time, make draft measures accessible to the European Commission ('**EC**'), the Body of European Regulators for Electronic Communications ('**BEREC**') and National Regulatory Authorities ('**NRAs**') in other Member States (the '**Article 32 Notification**').
4. The Article 32 Notification has today been made by ComReg on the basis of the draft measures set out in the Draft Decision.
5. Please note that this Information Notice, including the Draft Decision in Appendix 1, does not constitute a national public consultation and should therefore not be construed as an invitation to make submissions to ComReg.
6. Having completed the Article 32 Notification, ComReg will take utmost account of any views expressed by the EC, BEREC and NRAs in other Member States before adopting its final decision.

¹ Directive 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (the '**EECC**').

² On 17 June 2020 ComReg published its RFTS and FACO Market Review - Consultation and Draft Decision, ComReg Document 20/31 ('**Consultation**') available at: <https://www.comreg.ie/publication/rfts-faco-consultation-document-and-draft-decision-instrument>.

Appendix 1: RFTS and FACO Draft Measures

A 1.1 A copy of ComReg's Draft Decision is attached below.



Commission for
Communications Regulation

Market Reviews

Retail Access to the Public Telephone Network
at a Fixed Location for Residential and Non-
Residential Customers

Wholesale Fixed Access and Call Origination

NOTE: THIS IS A DRAFT DECISION

Response to Consultation and Final Decision

Reference: ComReg 21/65

Date: 18 June 2021

Redacted Information

Please note that this is a non-confidential version of the Response to Consultation and Decision. Certain information within the Response to Consultation and Decision has been redacted from the public version for reasons of confidentiality and commercial sensitivity, with such redactions indicated by the symbol ✂ and highlighted in BLACK. In some cases, ComReg has presented information in an aggregated form in order to strike a balance between preserving the confidentiality of operator-specific information whilst enabling interested parties to understand, in a meaningful way, the conclusions set out in the Response to Consultation and Decision.

Non-confidential

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1 Executive Summary

1.1 Introduction

- 1.1 This Response to Consultation and Decision (**'Decision'**) sets out ComReg's final position regarding its review of competition within the markets for the provision of:
- (a) Retail Fixed Telephony Services (**'RFTS'**); and
 - (b) Wholesale Fixed Access and Call Origination (**'FACO'**).
- 1.2 These markets correspond to Markets 1 and 2 respectively of the European Commission's (**'EC'**) 2007 Recommendation on markets susceptible to *ex ante* regulation.¹ This Decision sets out what, if any, role regulation will play in promoting effective competition within these markets for the coming years.
- 1.3 The 2007 Recommendation established that neither the RFVA markets nor the FACO markets continue to be susceptible to *ex ante* regulation. Accordingly, ComReg must carry out a Three Criteria Test (**'3CT'**) to determine whether *ex ante* regulation of the RFTS markets (which consists of both a Retail Fixed Voice Access (**'RFVA'**) and a Retail Fixed Voice Calling (**'RFVC'**) component) and the upstream FACO markets continues to be warranted. However, in advance of doing so, it is firstly necessary to define the parameters of the RFTS markets and the FACO markets on which the 3CT is carried out.
- 1.4 In this Decision, ComReg assesses the extent of competition on three retail markets for the provision of RFTS, and on four wholesale markets for the provision of FACO. The three retail markets examined, and as further described below, are the markets for:
- (a) Standalone Low-Level RFTS (**'Standalone LL-RFTS'**) in the State;
 - (b) Bundled Low-Level RFTS (**'Bundled LL-RFTS'**) in the State; and
 - (c) High-Level RFTS (**'HL-RFTS'**) in the State.
- 1.5 The four wholesale markets examined, and as further described below, are the:
- (a) Urban Low-Level Fixed Access and Call Origination market (the **'Urban LL-FACO Market'**);
 - (b) Urban High-Level Fixed Access and Call Origination market (the **'Urban HL-FACO Market'**);

¹ COMMISSION RECOMMENDATION of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (notified under document number C(2007) 5406) (Text with EEA relevance) (2007/879/EC) (the **'2007 Recommendation'**).

- (c) Regional Low-Level Fixed Access and Call Origination market (the '**Regional LL-FACO Market**');
 - (d) Regional High-Level Fixed Access and Call Origination market (the '**Regional HL-FACO Market**');
- 1.6 RFTS consists of both an RFVC component and an RFVA, or retail line rental, component. RFTS can be sold either on a standalone basis, or bundled with other retail services (principally broadband, mobile telephony or TV services).
- 1.7 In general, FACO is a wholesale input purchased by Access Seekers² which do not operate their own networks (or only have networks with limited geographic reach), and which ultimately permits the provision of RFTS to end users. Those Service Providers ('**SP(s)**') with their own networks can also self-supply FACO. FACO and RFTS both consist of an access component (line rental), and a calling component.
- 1.8 Fixed Voice Call Origination ('**FVCO**') is the calling component for call conveyance and Wholesale Line Rental ('**WLR**') is the Fixed Access ('**FA**') component. FVCO and WLR allow an SP to sell RFTS, with line rental and calls typically being sold together to the end user at the retail level. FVCO and FA are, in almost all cases, sold together as a single FACO product.
- 1.9 Where ComReg identifies that any SP operating in the FACO or RFTS markets has Significant Market Power ('**SMP**'), this can give rise to competition problems, meaning that RFTS (and related) markets would not function effectively, to the ultimate detriment of end users. Where ComReg identifies SMP, it can impose at least one of a range of *ex ante* regulatory obligations on SPs designated with SMP. At the wholesale level, these obligations may include, *inter alia*, requirements to provide specified products and services at regulated wholesale prices, and are ultimately designed to enable Access Seekers (that is, SPs without networks of their own (or insufficient network coverage of their own)) to compete in providing RFTS to end users.

² We refer in general to Access Seekers as purchasers of wholesale services.

- 1.10 In this Decision, ComReg defines the RFTS and FACO markets from both a product perspective and a geographic perspective. ComReg then assesses the extent of competition within such markets and, where appropriate, designates SPs with SMP if, in ComReg's view, and on the basis of the evidence available to it, competition does not effectively constrain the conduct of that SP on the market. Where SMP has been identified, ComReg specifies regulatory obligations that it intends to impose on the SMP SP to address competition problems that would likely arise, absent regulatory intervention. Where regulatory intervention is warranted, it is designed to promote the development of effective competition in the provision of retail and/or wholesale services, with the ultimate beneficiary intended to be retail end users, arising from increased choice and quality of retail services at more competitive prices. Where SMP is not identified, existing regulation is withdrawn.
- 1.11 In June 2020 ComReg issued a Consultation (the '**2020 Consultation**')³ which set out its preliminary analysis of competition in the RFTS markets and the FACO markets (collectively, the '**Relevant Market(s)**'). For each Relevant Market, ComReg set out its proposals on market definition, on its assessment of Significant Market Power ('**SMP**'), and on the remedies it proposed to impose on any SP identified as having SMP, in order to address potential competition problems to the ultimate benefit of end users.
- 1.12 Five industry stakeholders ('**Respondent(s)**'), provided responses ('**Submission(s)**') to the 2020 Consultation,⁴ namely:
- (a) Alternative Operators in the Communications Market ('**ALTO**');
 - (b) BT Communication Ireland Limited ('**BT**');
 - (c) Eircom Limited ('**Eircom**'), including a report which it commissioned from its consultants, Copenhagen Economics ('**CE**');
 - (d) Sky Ireland Limited ('**Sky**'); and
 - (e) Vodafone Ireland Limited ('**Vodafone**').
- 1.13 Having considered Respondents' Submissions to the 2020 Consultation and having regard to the additional information and analysis obtained as referenced throughout this Decision, ComReg, consistent with its preliminary views set out in the Consultation, has decided to define the markets identified at paragraphs 1.4 and 1.5 above.

³ Market Reviews - Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non-Residential Customers, and Wholesale Fixed Access and Call Origination - Consultation and Draft Decision. Reference: ComReg 20/46, 17 June 2020 (the '**2020 Consultation**').

⁴ As set out at Annex: 13 below, non-confidential versions of the Respondents' Submissions are published alongside this Decision on www.comreg.ie as ComReg Document 21/65b.

- 1.14 ComReg's overall conclusion is that, based on the application of the 3CT detailed below,⁵ continued *ex ante* regulation of the three RFTS markets is no longer warranted, as there is insufficient evidence that Eircom continues to have SMP on those markets (including on the basis of any regulation of the FACO and other markets). The evidence available to ComReg shows that the three RFTS markets have moved towards a situation of effective competition over time. In this respect, there is evidence of existing competition on the RFTS markets, particularly having regard to the persistent decline in Eircom's market share across these markets, and also the decline in the size of the Standalone LL-RFTS market, as end users migrate to purchasing RFTS in a bundle with other services. Barriers to entry and expansion in these markets are, on a forward-looking basis, not likely to be high.
- 1.15 In respect of the four FACO markets (together, the '**Relevant FACO Markets**'), ComReg concludes, having carried out a 3CT as set out in greater detail below, that the Urban LL-FACO Market and the Urban HL-FACO Market (together, the '**Urban FACO Markets**') are likely to be characterised by a tendency towards effective competition and low barriers to entry, arising from the widespread rollout of Next Generation ('**NG**') broadband which is capable of enabling the provision of wholesale and/or retail Managed Voice over Internet Protocol ('**Managed VoIP**').⁶ ComReg considers that NG Broadband includes technologies which consist of a partial or full optical component, including Fibre to the Cabinet ('**FTTC**'),⁷ Fibre to the Premises ('**FTTP**'), and DOCSIS 3.0/3.1 which is used to deliver broadband over cable.⁸

⁵ The 3CT set out in the 2020 Explanatory Note and at Article 67(1) of the European Electronic Communications Code (Directive (EU) 2018/1972), which does not yet have legal effect in the State, as of May 2021, sets out the criteria that must be cumulatively satisfied in order to determine that a relevant market should be - or continue to be - subject to *ex ante* regulation. The three criteria are

- a. the presence of high and non-transitory barriers to entry;
- b. a market structure which does not tend towards effective competition within the relevant time horizon; and
- c. the insufficiency of competition law alone to adequately address the market failure(s) concerned.

⁶ ComReg's QKDR defines 'Voice over Broadband' as "*IP-based services that facilitate voice calls to and/or from the PSTN over a broadband connection. With this service, the customer may either have broadband access from an ISP and acquire voice over broadband services from a separate entity, or have both broadband and voice over broadband services bundled together by the same supplier. Voice services bundled with digital TV services and delivered over digital cable TV networks should also be recorded here.*" The QKDR furthermore requests SPs to provide data on Managed VoB, SIP Trunking and IP connections equivalent to ISDN (i.e. Hosted PBX). Accordingly, the expression 'Voice over Broadband' used in the QKDR equates to the expression 'Managed VoIP' used in this Decision.

⁷ Very high speed Digital Subscriber Line ('**VDSL**') is the underlying technology in FTTC. Accordingly, FTTC includes exchange-based VDSL ('**eVDSL**').

⁸ Section 2.2 of open eir's NGA Technical Handbook (v23, dated 10 Jan 2021) states that open eir NGA Bitstream Plus products are delivered over FTTH, and over FTTC over a copper line using VDSL2 technology from an Exchange DSLAM (EVDSL) or Cabinet DSLAM.

- 1.16 Accordingly, ComReg has decided to remove SMP regulatory obligations on Eircom on those markets, subject to the expiry of a sunset period which is designed to afford Access Seekers a reasonable and sufficient period of time to migrate away from the purchase of FACO from Eircom, to the purchase of other wholesale inputs capable of delivering Managed VoIP based RFTS (including self-supply), should they so wish.
- 1.17 In contrast, the Regional LL-FACO Market and the Regional HL-FACO Market (together, the '**Regional FACO Markets**') are characterised by the absence – or the insufficient presence – of NG Broadband. Therefore, there is insufficient NG Broadband to enable SPs to self-provide FACO and/or RFTS, such that it would likely act as an effective competitive constraint on Eircom. Accordingly, having carried out a 3CT and a competition assessment, ComReg has concluded that it is appropriate to designate Eircom with SMP on the Regional FACO Markets only. To address identified competition concerns, ComReg imposes a suite of regulatory remedies on Eircom in the Regional FACO Markets.
- 1.18 The key distinguishing characteristic in determining whether a market is effectively competitive (the Urban FACO Markets), or continues to be characterised by SMP (the Regional FACO Markets) is the presence, at an appreciable level of coverage, of NG Broadband networks. Access Seekers are only capable of providing Managed VoIP at a premises that is connected to or passed by wholesale NG Broadband, which facilitates the delivery of Managed VoIP. The identifying characteristic of differences in conditions of competition between geographic areas is that such network rollout should pass a non-trivial number of premises. Accordingly, given that the rollout of wholesale NG Broadband networks by Eircom, SIRO, and, on a forward-looking basis, National Broadband Ireland ('**NBI**') (within the footprint of the National Broadband Plan ('**NBP**') Intervention Area ('**IA**')) is ongoing and is expected to continue over the lifetime of this market review, ComReg has decided to carry out a Mid-term Assessment ('**MTA**') 24 months after the Effective Date of this Decision, which will reassess conditions of competition on the constituent units (Eircom Exchange Areas ('**EA(s)**')), in the Regional FACO Markets only. Depending on the outcome of the MTA, ComReg may withdraw or retain remedies in certain EAs.
- 1.19 In arriving at the above conclusions, ComReg has, in accordance with its relevant statutory obligations:
- (a) consulted with the Competition and Consumer Protection Commission ('**CCPC**'). The CCPC is in agreement with ComReg's analysis;⁹ and

⁹ A copy of the CCPC's correspondence ('**CCPC Response**') is set out at Annex: 1 of this Decision. The CCPC indicated that it is satisfied that there are no compelling grounds for altering the market definitions proposed by ComReg, and that there are no compelling grounds to disagree with ComReg's competition assessments of each of the duly-defined Relevant Markets.

(b) notified the European Commission ('EC'), BEREC,¹⁰ and other National Regulatory Authorities ('NRAs') regarding the measures which it proposes to take (the 'Notified Draft Measures').¹¹ On XX XX 2021 the EC issued its response to ComReg (the 'EC Response'), in which it [To Be Completed], as further set out in Annex: 2 below.

1.20 In arriving at the positions set out in this Decision, ComReg has taken utmost account of the EC's Response. ComReg's consideration of the EC's Response is set out in Annex: 3 and elsewhere throughout this Decision, as appropriate.

1.2 Background to the Reviews

1.21 The EC's **2020 Recommendation**¹² does not identify the FACO market(s) or the RFTS market(s) as being deemed susceptible to *ex ante* regulation at EU level. Accordingly, in order to determine whether, at national level, it is appropriate to regulate these markets, ComReg must show that the market to be regulated passes the 3CT. The purpose of the 3CT is to ensure that markets not identified in the EC's recommended list can only be regulated on an *ex ante* basis where it can be demonstrated that:

- (a) entry barriers are high and non-transitory,
- (b) the market is not likely to tend towards effective competition, and
- (c) *ex post* competition law remedies on their own are unsuitable for resolving the identified competition concerns.

1.22 If any one of these criteria fails, then *ex ante* regulation is not justified, and any SMP remedies on the market should be removed.

1.23 The FACO markets were last reviewed by ComReg in 2015,¹³ while the RFVA markets were last reviewed in 2014.¹⁴ At that time, Eircom was designated as having SMP on each of two national FACO markets, and on each of three national RFTS markets, and a suite of regulatory obligations was imposed on Eircom in all five markets. Some such obligations have since been amended and/or withdrawn through subsequent regulatory decisions.

¹⁰ Body of European Regulators for Electronic Communications ('BEREC') as established by Regulation (EC) No 1211/2009 of the European Parliament and of the Council of 25 November 2009 establishing the Body of European Regulators for Electronic Communications and the Office.

¹¹ A non-confidential version of the Notified Draft Measures is available online at XXXX.

¹² COMMISSION RECOMMENDATION of 18.12.2020 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (the '2020 Recommendation').

¹³ ComReg Decision No. D05/15, Market Review - Wholesale Fixed Voice Call Origination and Transit Markets. Response to Consultation and Decision, ComReg Document 15/82, 24 July 2015. See <https://www.comreg.ie/csv/downloads/ComReg1582.pdf> (the '2015 FACO Decision').

¹⁴ ComReg Decision No. D12/14, Market Review: Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non-Residential Customers, ComReg Document 14/89, 28 August 2014. See <https://www.comreg.ie/csv/downloads/ComReg1489.pdf> (the '2014 RFVA Decision'). As set out in greater detail

- 1.24 ComReg carries out its analyses of the RFTS markets and the FACO markets in this Decision in accordance with the Modified Greenfield Approach ('MGA') set out in the 2020 Explanatory Note.¹⁵ ComReg's market assessment starts from the assumption that SMP regulation is not present in the specific market(s) under consideration. However, regulation present in other related markets, or through the general regulatory framework is considered. This approach avoids erroneously drawing conclusions regarding the competitive structure of a particular market that may be influenced by, or indeed premised on, existing regulation on that market. Considering how markets may function absent regulation helps to ensure that SMP-based regulation is only applied (or withdrawn) in circumstances where it is justified and proportionate to do so.
- 1.25 This Decision specifies the form of the price control obligations which ComReg imposes on the Regional LL-FACO Market (with the exception of PSTN WLR) and the Regional HL-FACO Market, as set out in Section 10 below. ComReg is currently engaged in a separate analysis of its Access Network Model ('ANM'), and expects to issue a final Decision on its ANM proposals (the '**Separate ANM Pricing Decision**'), including the appropriate price control for PSTN WLR in late 2021, having issued a Consultation (the '**Separate ANM Pricing Consultation**') in October 2020.¹⁶
- 1.26 ComReg has decided that the existing price control obligation of cost orientation for PSTN WLR should be maintained from the Effective Date¹⁷ pending ComReg's adoption of its Separate ANM Pricing Decision.

1.3 Retail Market Trends and Developments

- 1.27 Since ComReg's previous reviews of the RFVA markets in the 2014 RFVA Decision and the FACO markets in the 2015 FACO Decision, there have been several notable retail developments which have impacted the provision of RFTS. In line with the MGA,¹⁸ these retail trends are discussed in Section 3 below, to the extent that they inform the subsequent analysis of the RFTS and FACO markets.

at Section 4 below, ComReg defines relevant RFTS markets, rather than retaining the 2014 definition of relevant RFVA markets, on the grounds that end users have overwhelmingly indicated a preference for purchasing RFTS from the same SP, rather than RFVA and RFVC separately from different SPs.

¹⁵ COMMISSION STAFF WORKING DOCUMENT EXPLANATORY NOTE Accompanying the document COMMISSION RECOMMENDATION on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (the '**2020 Explanatory Note**').

¹⁶ Regulated Wholesale Fixed Access Charges - Review of the Access Network Model and Specification of the Price Control for Public Switched Telephone Network Wholesale Line Rental. Consultation and Draft Decision Reference: ComReg 20/101, 22 October 2020 (the '**Separate ANM Pricing Consultation**').

¹⁷ The Effective Date is, as defined in the Decision Instrument set out at Annex: 14 below, is the date on which the Decision Instrument is notified to Eircom.

¹⁸ See Explanatory Note to the 2020 Recommendation. The MGA begins by looking at the retail market before working up the value chain to the wholesale market. The analysis of the competitive nature of these markets

- 1.28 The main SPs operating in the RFTS markets in Ireland are Eircom, Virgin Media, Vodafone, Sky and Pure Telecom and several other smaller SPs.
- 1.29 This Decision identifies the following key retail trends and developments:
- (a) Although the number of SPs present in the market has increased, there has been a gradual decline in RFTS subscriptions, and in RFVC traffic. Since the publication of the 2014 RFVA Decision (in Q3 2014), residential RFTS subscriptions and business RFTS subscriptions have declined by 5% and 6% respectively. However, as indicated in the most recently-available Eurobarometer data,¹⁹ a (declining) majority of households (55%) continue to retain a fixed landline;
 - (b) Purchasing RFTS as part of a bundle is increasing in popularity amongst consumers, with purchases of RFTS as part of a bundle (dual, triple or quadruple play) increasing from 70% in Q3 2014, to 83% in Q4 2020;
 - (c) There has been a substantial increase in the footprint of NG Broadband, which enables SPs to offer multiple propositions, and move towards convergence, with the barriers between markets being slowly eroded;
 - (d) Managed VoIP subscriptions continue to rise, with the number of Managed VoIP minutes having doubled since the last review, increasing from 11.7% of all RFTS traffic, to 23.6% as at Q4 2020. The number of SPs offering Managed VoIP services has increased in line with this trend; and
 - (e) Wholesale and retail SPs (e.g. Eircom, SIRO, Imagine and Virgin Media) are moving towards full IP-based infrastructure.

1.4 Summary of RFTS Market Assessment

- 1.30 The 2014 Recommendation established that the RFVA markets are no longer susceptible to *ex ante* regulation. Accordingly, ComReg must carry out a 3CT to determine whether *ex ante* regulation of the RFTS markets (which consist of both an RFVA and an RFVC component) continues to be warranted. However, in advance of doing so, it is firstly necessary to define the parameters of the RFTS markets on which the 3CT will be carried out.

assumes that no SMP derived regulations are in place in the market under consideration in order to avoid circularity in the analysis.

¹⁹ Eurobarometer edition 462: E-Communications and Digital Single Market (July 2018) at <https://publications.europa.eu/en/publication-detail/-/publication/57889a55-8fb6-11e8-8bc1-01aa75ed71a1/language-en>, p.31.

Market Definition

- 1.31 A relevant market consists of both a relevant product market and a relevant geographic market. In respect of the relevant product market, ComReg analyses the downstream Relevant RFTS Markets to determine whether any retail products could be considered by an end user as an effective substitute for RFTS, taking account of any demand-side and supply-side considerations.
- 1.32 In line with the EC Notice on Market Definition,²⁰ and the SMP Guidelines,²¹ ComReg's starting point when defining a relevant market is to consider a narrow set of RFVA services – the focal product – and to examine whether the relevant market should be expanded beyond the narrow focal product to include other services, taking account of demand-side and supply-side substitutability considerations. ComReg's position is that the appropriate focal product is standalone RFTS, consisting of both RFVA (retail line rental) and RFVC (retail call origination) in a single product offered over Eircom's Fixed Narrowband Access ('**FNA**') network.²²
- 1.33 ComReg notes that Eircom FNA may be delivered over the Public Switched Telephone Network ('**PSTN**', which delivers a single voice channel over a line), ISDN Basic Rate Access ('**ISDN BRA**', which delivers two voice channels over a line), ISDN Fractional Rate Access ('**ISDN FRA**', which delivers 16 voice channels over a line), or ISDN Primary Rate Access ('**ISDN PRA**', which delivers 30 voice channels over a line). ComReg's analysis of RFTS product characteristics offers some insight into the substitutability between such products and the likelihood of them falling within the same product market. Given that there is likely a segment of the market that demands high-volume RFTS products, ComReg finds that a focal product relating to standalone FNA RFTS over PSTN or ISDN BRA may not be appropriate for this high-volume segment of the market.
- 1.34 ComReg considers that there is a break in the chain of substitution in the downstream RFTS markets arising from the distinction between PSTN and ISDN BRA on the one hand, which support one or two voice channels respectively, and, on the other hand, ISDN FRA and ISDN PRA, which are capable of supporting up to 30 voice channels.
- 1.35 For that reason, ComReg's position is that there are two distinct focal products for FNA RFTS, pertaining to low-volume and high-volume RFTS end users:
- (a) Low-Level RFTS ('**LL-RFTS**') delivered over PSTN and ISDN BRA; and
 - (b) High-Level RFTS ('**HL-RFTS**') delivered over ISDN FRA and ISDN PRA.

²⁰ Commission notice on the definition of relevant market for the purposes of Community competition law, (the '**Notice on Market Definition**'), Official Journal C 372, 09/12/1997 pp.5-13.

²¹ SMP Guidelines 2018 and Notice on Market Definition.

²² FNA describes Current Generation ('**CG**') technology delivered entirely over copper access paths, and includes both PSTN and ISDN access paths.

- 1.36 ComReg also considers that RFTS delivered over NG Broadband (as described at paragraph 1.15 above) as Managed VoIP is likely to be an effective demand-side substitute to the focal products.
- 1.37 In light of the high incidence of RFTS being provided as part of a bundle with NG Broadband (particularly for Managed VoIP), and a sizeable but declining number of standalone RFTS users, consistent with the 2014 RFVA Decision, ComReg considers it appropriate to further delineate a Standalone LL-RFTS Market and a Bundled LL-RFTS Market.
- 1.38 From a geographic perspective, the Relevant RFTS Product Markets are national in scope. This is based on limited variations in the number and size of potential competitors geographically, the absence of sufficient evidence of differentiated pricing or marketing strategies on a sub-national basis and limited differences in demand characteristics across regions.
- 1.39 ComReg notes that there may be some geographic differences in entry conditions around the country, depending on availability of NG Broadband which would allow Access Seekers (including BT/Sky, Vodafone, Digiweb and Pure Telecom) to provide Managed VoIP-based RFTS to end users, thus removing any reliance on purchasing upstream FACO inputs from Eircom.
- 1.40 However, on balance, ComReg's view is that there is insufficient evidence to conclude that there are grounds to define sub-geographic markets in respect of any of the Relevant RFTS Product Markets.
- 1.41 ComReg's position is that there are therefore three distinct Relevant RFTS Markets (the '**Relevant RFTS Markets**')
- (a) **Market 1a:** a national Standalone Low-Level RFTS ('**Standalone LL-RFTS**') market including RFTS delivered over PSTN and ISDN BRA and any Managed VoB delivered over NG Broadband on a standalone basis;
 - (b) **Market 1b:** a national Bundled Low-Level RFTS ('**Bundled LL-RFTS**') market including RFTS delivered over PSTN and ISDN BRA and Managed VoB delivered over (and with) NG Broadband on a bundled basis together with any of broadband, television or mobile services; and
 - (c) **Market 1c:** a national High-Level RFTS ('**HL-RFTS**') market including RFTS over ISDN FRA and PRA and any Hosted PBX or SIP Trunking forms of Managed VoIP delivered over NG Broadband,²³ on a standalone basis or on a bundled basis together with any of broadband, television or mobile services.

²³ Hosted private branch exchange ('**Hosted PBX**') is a Managed VoIP product designed to meet the needs of business end users. The SP hosts the RFVC functionality and PBX features off-site, at the SP's location, thereby reducing the level of infrastructure investment incurred by the end user. The end user connects via IP to the SP to engage in RFVC. Session Initiation Protocol Trunking ('**SIP Trunking**') is another Managed VoIP product designed to meet the needs of business end users. Unlike Hosted PBX, SIP Trunking provides for RFVC delivered over IP at an on-premises PBX. This requires the end user to incur a greater level of infrastructure investment than Hosted PBX. SIP Trunks are multi-channel services comparable to the delivery of RFTS over ISDN FRA or PRA.

3CT and Competition Assessment of Relevant RFTS Markets

- 1.42 As set out above, the Relevant RFTS Markets are not identified at EU level as being susceptible to *ex ante* regulation, and a 3CT must therefore be carried out. If any one of the three criteria fail, this is sufficient to conclude that the market appears to be competitive, and should not be subject to SMP regulation.
- 1.43 ComReg has assessed all three criteria and has concluded that Criterion 1 (the presence of high and non-transitory barriers to entry) and Criterion 2 (the market is not likely to tend towards effective competition) both fail, having regard in particular to the regulatory assessment of the Relevant FACO Markets, which suggests that the ability to supply Managed VoIP in the Urban FACO Markets, and the proposed continued regulation of the Regional FACO Markets provide the grounds on which both criteria fail.
- 1.44 *Ex ante* regulation should only be imposed where competition law remedies are likely to be insufficient to address identified competition problems (Criterion 3). This third criterion therefore assesses the sufficiency of competition law by itself to deal with any market failures identified in the market analysis, in the absence of *ex ante* regulation.
- 1.45 ComReg does not consider that competition law is likely to be sufficient to effectively address any market failures in the RFTS Markets, should they arise given, amongst other things, the inability to impose remedies and timing of any action that may be taken. Thus, Criterion 3 passes. However, given that the first two criteria of the 3CT fail, this does not alter ComReg's overall conclusions on the Relevant RFTS Markets.

Withdrawal of Remedies in the Relevant RFTS Markets

- 1.46 Predicated on the competition analysis carried out in Section 6 concerning the Relevant FACO Markets, ComReg has decided that the 3CT fails on all three Relevant RFTS Markets. It therefore follows by definition that regulation is not appropriate in these markets. ComReg therefore withdraws existing SMP regulation on the Relevant RFTS Markets. ComReg does not consider that any sunset period in respect of deregulation of the Relevant RFTS Markets is appropriate. The SMP obligations are therefore withdrawn upon the Effective Date of this Decision.

1.5 Summary of FACO Market Assessment

- 1.47 The 2014 Recommendation established that the FVCO market is no longer susceptible to *ex ante* regulation. Given that ComReg defines a broader set of Relevant FACO Markets, it must carry out a 3CT to determine whether *ex ante* regulation of the Relevant FACO Markets (which consists of both a fixed access and a FVCO component) continues to be warranted. However, in advance of doing so, it is firstly necessary to define the parameters of the FACO markets on which the 3CT is carried out.

Market Definition

- 1.48 ComReg has, as a first step, carried out an assessment of relevant retail markets to examine whether any downstream consumer behaviour is likely to indirectly constrain an SP in setting prices above the level which would otherwise be expected to obtain in a competitive market. ComReg then analyses the upstream wholesale Relevant FACO Markets to determine whether any wholesale products or services could be considered by an SP as an effective substitute for FACO, taking account of any demand-side and supply-side considerations.
- 1.49 ComReg has defined two separate relevant product markets. These are the Relevant LL-FACO Market and the Relevant HL-FACO Market (the '**Relevant FACO Markets**').
- 1.50 LL-FACO products are likely to be purchased by Access Seekers to serve the needs of their residential and small business end users. LL-FACO can be delivered over FNA, or over NG Broadband. Eircom's FNA FACO product - Single Billing – Wholesale Line Rental ('**SB-WLR**') – falls into the LL-FACO market when it is delivered over PSTN, which provides a single access path on a line, or ISDN BRA, which provides two access paths on a line.
- 1.51 The LL-FACO market also includes Managed VoIP (specifically, Managed VoB) delivered over NG Broadband, either on a wholesale basis, or on a retail basis. The underlying NG Broadband access path may be provided on a self-supply basis (e.g. Virgin Media), or an Access Seeker may procure wholesale NG Broadband inputs from another SP (for example, NG Bitstream²⁴ offered by Eircom, or VUA²⁵ offered by Eircom or SIRO).

²⁴ 'NG Bitstream' describes services provided over Wholesale Central Access ('**WCA**') which typically include access to capacity over an SP's NG (typically fibre or copper/fibre/hybrid) network, the use of broadband equipment and some element of backhaul and handover. The Access Seeker puts in place its own marketing and advertising, sales and billing arrangements while the SP providing Bitstream repairs and maintains the wholesale service from the end users' premises up to the handover point at the regional or national point of presence ('**PoP**').

²⁵ Virtual Unbundled Access, or VUA, is Eircom's description of its Virtual Unbundled Local Access, or VULA, product. VUA is therefore a virtual access product delivered over Eircom's NG Broadband network, which allows Access Seekers to purchase Wholesale Local Access, or WLA, to deliver retail services over that NG Broadband including broadband, RFTS and TV.

- 1.52 HL-FACO products are likely to be purchased by Access Seekers to serve the needs of larger corporate and institutional end users. As with LL-FACO, Eircom SB-WLR falls into the HL-FACO market when it is delivered over ISDN FRA, which provides 16 access paths on a line, or ISDN PRA, which provides 30 access paths on a line. The HL-FACO market includes Managed VoIP delivered in the form of Hosted PBX or SIP Trunking on a self-supply basis, or by means of an Access Seeker procuring wholesale NG Broadband inputs.
- 1.53 Both the LL-FACO Market and HL-FACO Market include self-supply, and RFTS delivered as Managed VoIP over wholesale NG Broadband inputs (NG WLA and NG WCA).²⁶
- 1.54 The LL-FACO Market also includes RFTS delivered as Managed VoB over a DOCSIS 3.0+ CATV network. The HL-FACO Market also includes the supply of SIP Trunking and Hosted PBX over NG WLA or NG WCA broadband inputs, but excludes the supply of SIP Trunking or Hosted PBX offered over leased lines (Wholesale High Quality Access, or '**WHQA**').
- 1.55 In paragraphs 5.400 to 5.579, ComReg considers the geographic scope of the Relevant FACO Markets. ComReg considers, on the basis of the evidence available to it, that competitive conditions on the Relevant FACO Markets are moving away from a situation of relative homogeneity based on ongoing demand for FACO delivered over Eircom FNA, to a position of differentiation across regions within the State, driven by the rollout of NG Broadband networks which enable the delivery of both White Label VoIP and Managed VoIP RFTS. On this basis, ComReg defines two sub-national geographic markets, one characterised by comparatively greater levels of competition, and a separate sub-national geographic market characterised by a comparative lower level of competition. There are sufficient differences between the competitive characteristics of these markets.
- 1.56 ComReg relies on an objective criterion to determine which sub-national geographic market an Eircom Exchange Area ('**EA**') falls into, based on its competitive conditions. This criterion is that, at an EA, 80% of premises must be passed by wholesale NG Broadband, thus facilitating the delivery (or potential delivery) by an Access Seeker of Managed VoIP.
- 1.57 ComReg considers that there are four separate, distinct sub-national geographic markets in the provision of LL-FACO and HL-FACO.
- 1.58 ComReg therefore defines a total of four Relevant FACO Markets:
- (a) the **Urban LL-FACO Market**, comprised of the 407 Exchange Areas where the 80% coverage criterion is met;

²⁶ Wholesale Local Access, or WLA, and Wholesale Central Access, or WCA, are wholesale broadband products that allow Access Seekers to offer retail broadband, RFTS, and TV services to downstream end users.

- (b) the **Regional LL-FACO Market**, comprised of the 795 Exchange Areas where the 80% coverage criterion has not been met;
 - (c) the **Urban HL-FACO Market**, comprised of the 407 Exchange Areas where the 80% coverage criterion is met; and
 - (d) the **Regional HL-FACO Market**, comprised of the 795 Exchange Areas where the 80% coverage criterion has not been met.
- 1.59 The Urban LL-FACO Market and the Urban HL-FACO Market are collectively referred to as the **Urban FACO Markets**,²⁷ while the Regional LL-FACO Market and the Regional HL-FACO Market are collectively referred to as the **Regional FACO Markets**.²⁸
- 1.60 As set out at Table 55 below, while the Urban FACO Markets (which are to be deregulated) account for 34% of Exchange Areas, they account for a substantial majority of both premises (69%) and RFTS lines (74%) in the State. ComReg also intends to revisit the possibility, where warranted by the available evidence, of deregulating additional Exchange Areas as part of the Mid-term Assessment.
- 1.61 The sizes of the Urban FACO Markets and the Regional FACO Markets have altered since the publication of the 2020 Consultation, as described in greater detail at paragraphs 5.553 to 5.557 below. These changes arise from a refinement of the assessment methodology which ComReg has used to count the number of premises at an Exchange Area passed by wholesale NG Broadband, and to identify premises which are passed by more than one such network. In particular, at the time of the 2020 Consultation, ComReg applied an assumption in respect of certain Eircom wholesale NG Broadband lines which were not mapped to an Eircode that such lines passed premises on a unique, non-overlapped basis. While this assumption was reasonable when assessing Q4 2019 data, the rollout, in particular, of Ireland's Fibre Network by Eircom called this assumption into question, as it leads to premises being overlapped by both Eircom VDSL and Eircom FTTH. Accordingly, the fact that a proportion of these unmapped lines now serve premises on overlapped basis has deflated coverage levels in some instances.
- 1.62 Additionally, the 2020 Consultation was based on Q4 2019 data, while this Decision is based on Q4 2020 data. On a national basis, there has been an approximate 1.6% increase in premises numbers over that one year period. Where, at EA level, NG Broadband rollout has not kept pace with increases in premises numbers, the higher denominator will have the effect of deflating the coverage level at that EA.

²⁷ The Urban FACO Markets cover approximately 1,573,582, or 69%, of premises in the State.

²⁸ The Regional FACO Markets cover approximately 699,724, or 31%, of premises in the State.

Competition Analysis of Relevant FACO Markets

- 1.63 As set out above, the Relevant FACO Markets are not designated at EU level as being presumptively susceptible to *ex ante* regulation, and a 3CT must therefore be carried out. All three criteria must be met in order for a market to be susceptible to SMP regulation and, if this is the case, it is then necessary to proceed to a full competition assessment to determine whether SMP is present on the market.
- 1.64 ComReg's analysis indicates that, in respect of the Regional FACO Markets, the 3CT is met. ComReg is therefore required to carry out a competition assessment of the Regional FACO Markets, to determine whether any SP, or SPs, on those markets hold positions of SMP.
- 1.65 In contrast, ComReg's analysis indicates that, on the Urban FACO Markets, the 3CT is failed, suggesting that the Urban FACO Markets are not susceptible to *ex ante* regulation, because they exhibit sufficient characteristics consistent with well-functioning and competitive markets. Where markets are deemed to fail the 3CT, ComReg cannot impose SMP remedies on the market, and any SMP remedies already present on the Urban FACO Markets must be removed (subject to the implementation of any sunset period).
- 1.66 ComReg therefore proceeds to a competition analysis of the Regional FACO Markets only, and assesses whether there is evidence of SMP on those markets by references to:
- (a) Existing competition;
 - (b) Potential competition; and
 - (c) Countervailing Buyer Power ('**CBP**').
- 1.67 In respect of **existing competition**, absent regulation in the Regional FACO Markets, it is unlikely that Eircom would be sufficiently constrained by existing competition, such that it would be prevented from behaving, to an appreciable extent, independently of competitors, customers and consumers.
- 1.68 Eircom's persistently high market shares, the lack of effective indirect pricing constraints, and the absence of notable evidence of competition materially impacting Eircom's pricing behaviour is indicative of Eircom having SMP in the Regional FACO Markets.
- 1.69 In respect of **potential competition**, ComReg has considered the extent to which potential competition would, over the lifetime of this market review, be likely to effectively constrain Eircom's behaviour in the Regional FACO Markets, such that it would mitigate Eircom's suggested SMP position.

- 1.70 Barriers to entry to the Relevant FACO Markets may, to some extent, be avoidable for SPs which operate NG Broadband networks capable of delivering FACO, either on a wholesale-only basis (e.g. SIRO or, on a forward-looking basis, NBI), or on an RFTS self-supply basis (e.g. Virgin Media). However, in practice, these SPs would not be in a position to offer an effective alternative merchant market FACO product that would likely meet the expectations of Access Seekers, without incurring significant sunk costs. ComReg also considers that alternative RFTS SPs such as Vodafone would be unlikely to commence the provision of FACO over the period of this review.
- 1.71 Overall, ComReg concludes that, absent regulation, it is unlikely that Eircom would be sufficiently constrained by potential competition, such that it would prevent Eircom from behaving, to an appreciable extent, independently of competitors, customers and consumers.
- 1.72 In respect of **CBP**, ComReg has carried out an assessment of the impact posed by strong buyers on the competitive behaviour of Eircom in the Regional FACO Markets. Having regard to this analysis, ComReg considers that it is unlikely that Eircom would be sufficiently constrained by CBP in the Regional FACO Markets, such that it would prevent it from behaving, to an appreciable extent, independently of competitors, customers and consumers.
- 1.73 For these reasons, ComReg designates Eircom with SMP on the Regional LL-FACO Market and the Regional HL-FACO Market.

Competition Problems and Impacts

- 1.74 In Section 9 below, ComReg identifies competition problems which could potentially arise, absent regulation, from Eircom's ability and incentive to exercise SMP in the Regional FACO Markets (and related markets). Absent regulation in these markets, ComReg considers that Eircom would have the ability and incentive to engage in a number of conducts to the detriment of competitors, consumers, and, ultimately, end users. These conducts include exclusionary conduct designed to prevent potential competitors from entering the market, or to induce existing competitors to exit the market, exploitative conduct designed to maximise the revenue earned from end users beyond what would be expected in a competitive market, and leveraging, whereby Eircom could seek to increase its market power in an adjacent market, by leveraging its SMP position on the Regional FACO Markets.

SMP obligations to be imposed on the Regional FACO Markets

- 1.75 To mitigate identified potential competition problems that could arise from the exercise of market power by Eircom, ComReg imposes a range of proportionate *ex ante* regulatory remedies to ensure the development of effective competition amongst SPs, to the ultimate benefit of consumers. These are largely a continuation of existing obligations, save for bringing some obligations up to modern regulatory standards. ComReg therefore requires that Eircom be subject to the following largely FNA-based SMP obligations on both the Regional LL-FACO Market and the Regional HL-FACO Market:
- (a) Access obligations;
 - (b) Transparency obligations;
 - (c) Non-discrimination obligations;
 - (d) Statement of Compliance obligations; and
 - (e) Price Control and Cost Accounting obligations.
- 1.76 The price control obligations which ComReg imposes on Eircom in the Regional FACO Markets with respect to its provision of FACO products, services and associated facilities are, generally, a continuation of the obligations set out in the 2015 FACO Decision, and related decisions. One exception is the price control to apply to PSTN WLR, the form of which will be decided in the Separate ANM Pricing Decision to be adopted by ComReg in late 2021. In the meantime, the existing price control is continued.
- 1.77 Having considered Respondents' views, ComReg has decided to amend or remove some of the obligations it proposed in the 2020 Consultation. This includes reducing the burden of the accounting separation obligation, and also amending the Statement of Compliance obligation to align it with the cognate obligation in the 2018 WLA/WCA Decision and the 2020 WHQA Decision. In respect of the sunset periods on the Urban FACO Markets, ComReg has reduced the length of the sunset periods for the withdrawal of access remedies in respect of FACO delivered by Eircom over ISDN BRA.
- 1.78 Continuing the position set out in the 2015 FACO Decision, ComReg is not imposing obligations on Eircom with respect to access to NGA FACO (apart from some specific interconnection obligations). ComReg considers that limiting obligations to FNA FACO serves the dual purpose of safeguarding competition in the short to medium term (through the various FNA FACO remedies), while at the same encouraging Access Seekers to develop their own Managed VoIP-based capabilities over the longer term, thereby encouraging more effective and sustainable competition.

Withdrawal of Remedies in the Urban FACO Market

- 1.79 As set out in Section 7 below, ComReg concludes that no SP is likely to have SMP (having regard to existing competition and potential competition) on the Urban FACO Markets, and in Section 11, subject to the implementation of a sunset period, ComReg has proposed that existing obligations would be withdrawn from this market.
- 1.80 From the Effective Date of this Decision, an 18-month sunset period will apply in respect of FACO delivered over PSTN, ISDN FRA, and ISDN PRA, by means of which Eircom is required to maintain existing supply of access to FACO products, services and facilities (for example, SB-WLR orders already supplied to Access Seekers) at no more than existing prices. With respect to new supply of FACO products, services and facilities (for example, SB-WLR orders received) a separate 9-month sunset period applies (which will run in parallel with the 18-month sunset period described above). Similarly, and in respect of FACO delivered over ISDN BRA, a 12-month sunset period will apply in respect of existing supply, while a 2-month sunset period will apply in respect of new supply. ComReg is of the view that these sunset periods will allow Access Seekers sufficient time in which to make any necessary preparations for the new market environment, arising from deregulation, thereby preserving continuity in the supply of both wholesale and retail services (were Eircom to withdraw SB-WLR, or significantly alter its SB-WLR terms and conditions, following deregulation).²⁹
- 1.81 During the relevant sunset periods, Eircom is required to maintain access at existing prices, but not to meet other obligations (for example, in relation to transparency, non-discrimination etc.).
- 1.82 In line with the removal of obligations from the Relevant RFTS Markets, ComReg will continue to monitor the effectiveness of competition in the Urban FACO Markets (and Regional FACO Markets) in order to ensure the protection of end users' interests. In this respect, ComReg reserves its right to re-examine competitive conditions within this market and, if appropriate, to intervene accordingly.

²⁹ ComReg would not expect Eircom to significantly alter its terms and conditions given the presence of competition.

1.6 Next Steps

- 1.83 ComReg intends to monitor the extent of any constraints from RFTS or FACO services provided over NG Broadband networks over the period of this market review. In particular, ComReg intends, following 24 months from the Effective Date of this Decision, to publish a consultation carrying out a further review of the prevailing conditions of competition at Exchange Areas in the Regional FACO Markets (the Mid-term Assessment) and, if appropriate, to carry out a competition assessment at those Exchange Areas. Accordingly, the Mid-term Assessment may, where warranted on the basis of the available evidence, lead to the removal of regulatory obligations from any Exchange Areas falling within the Regional FACO Markets which exhibit conditions of competition more consistent with conditions of competition at the Urban FACO Markets.

Nonconfidential

2 Introduction

2.1 What are RFVA, RFVA and RFTS?

- 2.1 Retail Fixed Voice Access ('**RFVA**') is a retail service which provides a connection or access at a fixed location to the fixed telephone network by means of the Public Switched Telephone Network ('**PSTN**') or another network, for the purpose of making and/or receiving telephone calls. RFVA³⁰ provides the network access necessary for the provision by a Service Provider ('**SP**') of a Retail Fixed Voice Calls ('**RFVC**') service. While it has been in the past possible for end users to purchase RFVA and RFVC separately from different SPs, end users now typically exhibit a strong preference for purchasing a bundle of RFVA and RFVC from a single SP. Throughout this Decision, the bundled RFVA and RFVC service is referred to as Retail Fixed Telephony Service ('**RFTS**'). RFTS allows for an end user to initiate calls on a landline to set up a connection to the dialled number, and therefore involves the use of various services at the wholesale level, including Fixed Access and Call Origination ('**FACO**'), transit, and call termination services such as Fixed Voice Call Termination ('**FVCT**'), which transmit the call from the dialling party up to a point of handover, at which point the called party's SP takes over the call and transports it to the called party. In cases where the originating and terminating SP are not directly interconnected, an intermediary SP may provide a bridging, or interconnection, transit service.
- 2.2 SPs may provide RFVC, RFVA or bundled RFTS over their own network, where they have rolled out a network. In the alternative, an SP which does not operate its own network may purchase wholesale inputs from a network operator and offer RFTS for sale to end users over that network.
- 2.3 End users may purchase RFTS delivered over fixed narrowband access ('**FNA**') or broadband access. FNA based RFTS delivered over a traditional copper telephone line³¹ may be provided to end users either directly or indirectly. In the case of **Direct** provision, RFTS is provided by the SP on its own FNA network directly to the end user. In the case of **Indirect** provision, the SP does not operate its own network and, instead, provides RFTS to end users by purchasing wholesale inputs delivered over Eircom's FNA network (typically, Single Billing-Wholesale Line Rental ('**SB-WLR**'), White Label Voice ('**WLV**') or, on a very limited basis, Carrier Pre-Select ('**CPS**')).

³⁰ Commonly referred to as '(retail) Line Rental'.

³¹ Traditional copper lines are classified according to the number of voice channels available. PSTN provides a single voice channel on a line, while Integrated Services Digital Network ('**ISDN**') delivers multiple voice channels over a single line: 2 channels in the case of ISDN Basic Rate Access ('**BRA**'), 16 in the case of ISDN Fractional Rate Access ('**FRA**'), and 30 in the case of ISDN Primary Rate Access ('**PRA**'). Service delivered over PSTN is often described as 'Plain Old Telephony Service', or 'POTS'.

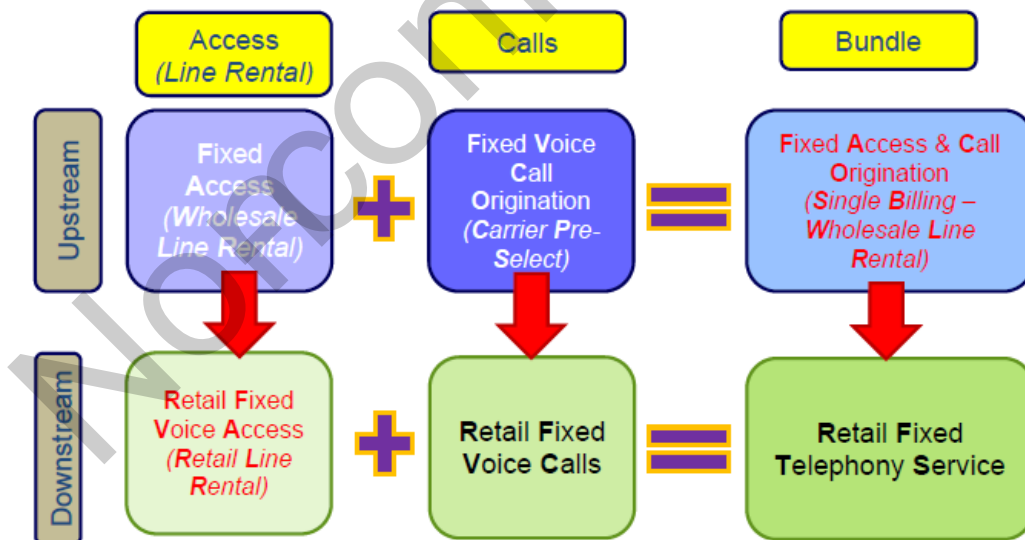
2.4 Broadband-based **RFTS** is provided to end users by SPs who offer dedicated Managed VoIP over broadband, rather than over FNA. In the case of **Direct** provision, RFTS is provided by the SP directly on its own broadband network to the end user (for example, Virgin Media). In the case of **Indirect** provision, the SP does not operate its own broadband network and, instead, provides RFTS to its end users by means of Managed VoIP, by purchasing wholesale NG Broadband inputs from SPs including Eircom, SIRO, and BT. NBI will also facilitate the provision of RFTS over NG Broadband as it rolls out its network. Managed VoIP differs from Unmanaged VoIP services such as Skype or WhatsApp, in that the SP providing Managed VoIP can manage the quality of the voice traffic on the IP access path, to assure minimum Quality of Service (**‘QoS’**) standards.

2.2 What are FVCO and FACO?

2.5 Fixed Voice Call Origination (**‘FVCO’**) is a wholesale service which switches, routes, and conveys a voice call up to a designated point of handover on a network. The FVCO service is supplied over an access path (referred to as **‘Fixed Access’** or **‘FA’**). FA is commonly described as Wholesale Line Rental (**‘WLR’**). The bundled provision of FVCO together with FA is referred to in this Decision as Fixed Access and Call Origination (**‘FACO’**). Eircom is currently the largest supplier of FACO.

2.6 The relationship between these wholesale inputs and how they are used in supplying RFVA and RFVC – together, RFTS - is illustrated in Figure 1 below:

Figure 1: Upstream FACO and downstream RFTS



- 2.7 In this respect, FACO (FVCO + FA) is an upstream input into the downstream provision of RFTS to end users. Together, the purchase of FACO, transit and FVCT³² enables Access Seekers who do not operate their own network to offer RFTS to end users.³³ FACO is therefore a key input which facilitates the ability of an SP to provide RFTS to end users, either directly on its network, or by renting access to third party network inputs.
- 2.8 For example, an SP may wish to provide RFTS to an end user's premises but may not operate its own network. That SP can purchase FACO at the wholesale level which allows it to provide RFTS. The SP may also need to purchase transit, if it is not directly interconnected with the called party's SP.
- 2.9 Eircom provides several products which allow for the provision of indirect access to SPs. These are SB-WLR, WLV, and CPS, each of which are described below.
- 2.10 Eircom's FACO (that is, FA by means of WLR, and FVCO) product is called SB-WLR. While some SPs purchase SB-WLR from Eircom to provide RFTS directly to their end users, other SPs (specifically, BT) purchase SB-WLR as an input to their own wholesale products, which they resell to other SPs.
- 2.11 Eircom also offers a WLV product. Eircom provides the SP with a managed end-to-end voice calls product, including FVCO, WLR and other wholesale inputs, which allows the SP to avoid incurring the costs of the switching equipment required to hand a call over at a point of handover at which FACO concludes. SB-WLR is therefore an input into WLV. The 2015 FACO Decision³⁴ described WLV as Wholesale Switchless Voice ('**Wholesale SV**').
- 2.12 Finally, a very small number of SPs purchase CPS, where an end user wishes to purchase its RFVA service from Eircom and a calls-only service (RFVC) separately from another SP. Thus, CPS does not include the WLR component of SB-WLR. CPS is a legacy-only wholesale service which Eircom has not provided to new customers since September 2016 and is used to provide RFVC when the end user purchases RFVA separately.
- 2.13 An SP purchasing SB-WLR pays Eircom a fixed monthly WLR charge, along with FVCO charges and, if required, a transit charge on a per call and/or per minute basis. An SP purchasing CPS will pay Eircom the FVCO charge only. An SP purchasing WLV will pay Eircom the SB-WLR charges described above, as well as additional charges relating to the provision of a managed virtual network.³⁵

³² The provision of a RFTS may also involve the provision of Mobile Voice Call Termination ('**MVCT**').

³³ Residential and business retail customers.

³⁴ ComReg Decision No. D05/15, Market Review - Wholesale Fixed Voice Call Origination and Transit Markets. Response to Consultation and Decision, ComReg Document 15/82, 24 July 2015. See <https://www.comreg.ie/csv/downloads/ComReg1582.pdf> (the '**2015 FACO Decision**').

³⁵ https://www.openeir.ie/uploadedFiles/Content/Products/MNS/White_Label_Voice_Services_Factsheet.pdf

- 2.14 In accordance with its statutory obligation to review certain electronic communications markets, this Decision presents ComReg's position on its analysis of the retail markets for the provision of RFTS (the '**Relevant RFTS Markets**') and, separately, its analysis of the wholesale markets for the provision of FACO (the '**Relevant FACO Markets**').
- 2.15 The objective of this review is, ultimately, to decide if, absent regulation, any SP has Significant Market Power ('**SMP**') on any of the defined Relevant Markets³⁶ and, if so, to impose appropriate remedies to address any competition problems that could likely arise, in those duly-defined Relevant Markets. Such competition problems could, for example, include (but are not limited to):
- (a) A refusal to supply SB-WLR, resulting in an undermining of effective competition, including up to the inability for end users to make calls across networks; or
 - (b) The levying of excessive charges for the provision of SB-WLR, resulting in higher costs for those SPs originating calls, with such higher costs potentially passed through to end users in the form of increased charges for RFTS and/or other services.
- 2.16 Remedies imposed by ComReg to date – and also by National Regulatory Authorities ('**NRAs**') in other European Union ('**EU**') Member States - to address competition problems have generally focussed on access obligations and price controls with respect to the provision of FACO, in addition to other remedies designed to ensure non-discrimination and transparency.
- 2.17 In this Decision, ComReg presents its findings on its analysis of the Relevant Markets. The analysis set out in this Decision adopts the approach recommended by the European Commission ('**EC**') and, in doing so, takes the utmost account of:
- (a) The **2020 Recommendation** on relevant product and service markets susceptible to *ex ante* regulation within the electronic communications sector. The 2020 Recommendation was accompanied by the **2020 Explanatory Note** (which entered into force in December 2020, after the 2020 Consultation was published, but prior to the publication of this Decision);³⁷

³⁶ The Relevant FACO Markets and the Relevant RFTS Markets are together referred to in this Decision as the '**Relevant Markets**'.

³⁷ The 2014 Recommendation and 2014 Explanatory Note have since been replaced by an updated list of recommended markets which took effect in December 2020, COMMISSION RECOMMENDATION of 18.12.2020 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (the '**2020 Recommendation**') and accompanying explanatory note, COMMISSION STAFF WORKING DOCUMENT EXPLANATORY NOTE Accompanying the document COMMISSION RECOMMENDATION on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive (EU) 2018/1972

- (b) The **2014 Recommendation** on relevant product and service markets susceptible to *ex ante* regulation within the electronic communications sector. The 2014 Recommendation was accompanied by the **2014 Explanatory Note** (which were in force when the market review commenced, and when the 2020 Consultation was published);³⁸
- (c) The **SMP Guidelines**³⁹ on market analysis and the assessment of SMP and the accompanying **SMP Explanatory Note**;⁴⁰ and
- (d) The 2005 Accounting Separation and Cost Accounting Recommendation.⁴¹

2.18 ComReg also takes account of:

- (a) The **Notice on Market Definition** for the purposes of Community competition law;⁴²
- (b) The European Electronic Communications Code (**'EECC'**)⁴³; and
- (c) Any relevant common positions adopted by the Body of European Regulators for Electronic Communications (**'BEREC'**), which is the coordinating and policy-making body for European NRAs.⁴⁴

2.19 ComReg also has regard to any relevant comments made by the EC, pursuant to Article 32 of the EECC, with respect to other EU NRAs' market analyses.

of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (the '**2020 Explanatory Note**'). Together, this Decision refers to the 2014 Recommendation and the 2020 Recommendation as the '**EC Recommendations**', and the 2014 Explanatory Note and the 2020 Explanatory Note as the '**EC Explanatory Notes**'.

³⁸ European Commission Recommendation of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation (the '**2014 Recommendation**') and Explanatory Note accompanying the Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation (the '**2014 Explanatory Note**').

³⁹ European Commission guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services (OJ 2018/C 159/01) (the '**SMP Guidelines**').

⁴⁰ European Commission Staff Working Document accompanying the document COMMUNICATION FROM THE COMMISSION: Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services (the '**SMP Explanatory Note**').

⁴¹ European Commission Recommendation of 19 September 2005 on accounting separation and cost accounting systems under the regulatory framework for electronic communications (2005/698/EC) (the '**2005 Accounting Separation and Cost Accounting Recommendation**').

⁴² Commission notice on the definition of relevant market for the purposes of Community competition law, (the '**Notice on Market Definition**'), Official Journal C 372, 09/12/1997 pp.5-13.

⁴³ DIRECTIVE (EU) 2018/1972 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2018 establishing the European Electronic Communications Code (the '**EECC**').

⁴⁴ BEREC, as established by Regulation (EC) No 1211/2009 of the European Parliament and of the Council of 25 November 2009 establishing BEREC and the Office which has since been replaced and repealed by REGULATION (EU) 2018/1971 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2018 (the '**2018 BEREC Regulation**') <https://eur-lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:32018R1971&from=EN>.

- 2.20 This Decision defines the Relevant RFTS Markets and the Relevant FACO Markets with respect to both product and geographic dimensions. It also assesses competition within those markets and examines potential competition problems before either withdrawing or proposing (as appropriate) regulatory remedies, in addition to associated impacts, to address any competition problems identified.
- 2.21 Before setting out the analysis underpinning these market reviews, the remainder of this introductory section describes the relevant legal and regulatory framework, in addition to the regulatory approach in the respective Relevant Markets to date.

2.3 Legal basis and regulatory framework

- 2.22 ComReg has undertaken this market review in accordance with the obligation under (and commenced during the currency of) the Framework Regulations⁴⁵ that NRAs should analyse relevant markets, taking utmost account of an EC recommendation on relevant markets susceptible to *ex ante* regulation and the 2018 SMP Guidelines, prior to determining whether competition is effective or not, and if not, to impose obligations in accordance with the Access Regulations.⁴⁶
- 2.23 The Framework Regulations and the Access Regulations (together with the Authorisation Regulations⁴⁷ and the Universal Service Regulations⁴⁸) transpose into Irish law the regulatory framework for electronic communications set out in the Framework Directive, the Access Directive, the Authorisation Directive, and the Universal Service Directive,⁴⁹ all now repealed with effect from 20 December 2020 and replaced with the EECC, which entered into force on 20 December 2018. While the work undertaken by ComReg for the purpose of this market review was conducted in part prior to the coming into effect of the EECC, throughout this market review ComReg has been aware of the need to be consistent with the EECC.

⁴⁵ European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011) (the '**Framework Regulations**').

⁴⁶ European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011, S.I. No. 334 of 2011 (the '**Access Regulations**').

⁴⁷ European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011, S.I. No. 335 of 2011 (the '**Authorisation Regulations**').

⁴⁸ European Communities (Electronic Communications Networks and Services) (Universal Service and Users' Rights) Regulations 2011, S.I. No. 337 of 2011 (the '**Universal Service Regulations**').

⁴⁹ Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive) as amended by Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009 (the '**Framework Directive**'); Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities (the '**Access Directive**') as amended by Directive 2009/140/EC; Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services, as amended by Directive 2009/140/EC (the '**Authorisation Directive**'); Directive 2002/22/EC of the European Parliament and of

- 2.24 Regulation 26 of the Framework Regulations⁵⁰ requires that ComReg, taking the utmost account of the EC Recommendation on relevant markets susceptible to *ex ante* regulation and of the SMP Guidelines, defines relevant markets appropriate to national circumstances, in accordance with the principles of competition law.
- 2.25 The Relevant FACO Market, its constituent FVCO and FA components, and the Relevant RFVA Market are not deemed to be susceptible to *ex ante* regulation under either the 2014 Recommendation or the 2020 Recommendation which replaced it.
- 2.26 ComReg notes that the EC, in the earlier 2007 Recommendation⁵¹ (which was replaced by the 2014 Recommendation), identified the markets for RFVA and FVCO as being susceptible to *ex ante* regulation.
- 2.27 The RFVA market was described in the following terms:⁵²
- “Access to the public telephone network at a fixed location for residential and non-residential customers (hereafter, ‘Market 1’)”*
- 2.28 The FVCO market was described in the following terms:
- “Call origination on the public telephone network provided at a fixed location. (For the purposes of this Recommendation, call origination is taken to include call conveyance, delineated in such a way as to be consistent, in a national context, with the delineated boundaries for the market for call origination and the market for call transit on the public telephone network provided at a fixed location.) (hereafter, ‘Market 2’)”*
- 2.29 Given that the 2007 Recommendation no longer has effect, and that the FACO (or FA or FVCO) market and the RFVA market are no longer included in the markets, there is no presumption in favour of continuing to regulate these markets. Therefore, in order to consider whether the markets are susceptible to *ex ante* regulation in light of national circumstances, ComReg must carry out the 3CT set out in the EC Explanatory Notes and reiterated at Article 67(1) of the EECC.
- 2.30 The 3CT sets out the criteria that must be cumulatively satisfied in order to determine whether a relevant market should be, or should continue to be, subject to *ex ante* regulation. The three criteria are:
- (a) The presence of high and non-transitory barriers to entry;

the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (the '**Universal Service Directive**').

⁵⁰ This provision is mirrored at Article 64 of the EECC.

⁵¹ COMMISSION RECOMMENDATION of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (2007/879/EC) (the '**2007 Recommendation**').

⁵² Annex to the 2007 Recommendation.

- (b) A market structure which does not tend towards effective competition within the relevant time horizon; and
 - (c) The insufficiency of competition law alone to adequately address the market failure(s) concerned.
- 2.31 If at least one of the 3CT criteria fails, this suggests that competition is working well on the market in question, and that *ex ante* regulation is no longer required. In such instances, the market in question should be deregulated.
- 2.32 If, on the other hand, the 3CT passes, that is to say, if all three criteria are satisfied, then competition is unlikely to be working well on the market in question, and *ex ante* regulation is, in principle, warranted. It is then necessary to carry out a competition assessment, to determine whether the market is characterised by the presence of SMP.
- 2.33 In particular, Regulation 25 of the Framework Regulations⁵³ requires that, where ComReg determines, as a result of a market analysis and in accordance with Regulation 27,⁵⁴ that a given market (defined in accordance with Regulation 26)⁵⁵ is not effectively competitive, ComReg is obliged under Regulation 27(4)⁵⁶ thereof to designate an Undertaking⁵⁷ (or Undertakings) with SMP in that market. In addition, ComReg must, as it considers appropriate, impose specific obligations on such Undertaking(s), or maintain or amend such obligations where they already exist.
- 2.34 As set out at paragraph 1.24 above, ComReg applies the Modified Greenfield Approach ('MGA'), as set out in the 2020 Explanatory Note, when carrying out its assessment. Where an SP is ultimately designated as having SMP in a market, ComReg is obliged, under Regulation 8(1) of the **Access Regulations**, to impose on that SP (or maintain where they already exist) the obligations set out in Regulations 9 to 13 of the Access Regulations as it considers appropriate. Obligations imposed must be:
- (a) Based on the nature of the problem identified;
 - (b) Proportionate and justified in the light of the objectives laid down in section 12 of the Communications Regulation Act 2002 (as amended),⁵⁸ and Regulation 16 of the Framework Regulations;⁵⁹ and

⁵³ This provision is mirrored at Article 63 of the EECC.

⁵⁴ This provision is mirrored at Article 67 of the EECC.

⁵⁵ This provision is mirrored at Article 64 of the EECC.

⁵⁶ This provision is mirrored at Article 67(4) of the EECC.

⁵⁷ Regulation 2 of the Framework Regulations defines an Undertaking as "a person engaged or intending to engage in the provision of electronic communications networks or services or associated facilities".

⁵⁸ Communications Regulation Act 2002 (No. 20 of 2002), as amended (the '**Communications Regulation Act 2002 (as amended)**').

⁵⁹ The general objectives of the EECC are laid out at Article 3 thereof.

- (c) Only imposed following consultation in accordance with Regulations 12 and 13 of the Framework Regulations.

2.35 Section 12(1)(a) of the Communications Regulation Act 2002 (as amended) sets out ComReg's objectives in exercising its functions in relation to the provision of electronic communications networks, electronic communications services and associated facilities, namely to:

- (a) Promote competition;
- (b) Contribute to the development of the internal market; and
- (c) Promote the interests of users within the European Union.

2.4 Liaison with Other Bodies

- 2.36 In addition to conducting a public consultation in accordance with Regulation 12 of the Framework Regulations,⁶⁰ ComReg is required by Regulation 27(1) of the Framework Regulations⁶¹ to carry out an analysis of the Relevant Markets, where appropriate, with an agreement with the Competition and Consumer Protection Commission (the '**CCPC**') under section 34 or 47G of the Competition Act 2002 (as amended).⁶² A copy of the correspondence from the CCPC ('**CCPC Response**') to ComReg dated 16 June 2021 is set out at Annex: 1. The CCPC noted its agreement with ComReg's proposed market definition and competition assessment on the Relevant RFTS Markets and the Relevant FACO Markets. ComReg is also required to consult with the EC in accordance with Article 32(3) of the EECC ('**Article 32 Notification**'). On 18 June 2021, ComReg commenced the Article 32 Notification and made the corresponding draft measures accessible to the EC, BEREC and NRAs in other Member States ('**Notified Draft Measures**').⁶³ ComReg is also obliged to make its draft measures accessible to the EC, BEREC and NRAs in other Member States, pursuant to Regulation 13(3) of the Framework Regulations.⁶⁴
- 2.37 On XX 2021 the EC provided its response to ComReg's Notified Draft Measures ('**European Commission's Response**') a copy of which is set out in Annex: 2. [TO BE COMPLETED]

⁶⁰ This provision is mirrored at Article 23 of the EECC.

⁶¹ This provision is mirrored at Article 67(1) of the EECC.

⁶² Competition Act 2002 (No. 14 of 2002), as amended, (the '**Competition Act 2002 (as amended)**').

⁶³ Case IE/2021/XXXX.

⁶⁴ This provision is mirrored at Article 32(3) of the EECC.

2.5 Previous Reviews of the Relevant Markets

- 2.38 The Relevant RFVA Markets have, to date, been regulated in accordance with ComReg's 2014 RFVA Decision (the '**2014 RFVA Decision**').⁶⁵ The 2014 RFVA Decision designated Eircom as having SMP on each of the Standalone Low-Level Voice Access ('**Standalone LLVA**'), Bundled Low-Level Voice Access ('**Bundled LLVA**'), and High-Level Voice Access ('**HLVA**') RFVA Markets. Various obligations were imposed on Eircom in respect of transparency, bundling, price control, and cost accounting, pursuant to Regulations 8 to 13 of the Access Regulations.
- 2.39 The remedies applied to the Relevant RFVA Markets in the 2014 RFVA Decision have been amended or altered over time by means of the 2015 FACO Decision and the 2018 Bundles Decision.⁶⁶
- 2.40 The **Relevant FACO Markets** have, to date, been regulated in accordance with the 2015 FACO Decision which designated Eircom as having SMP on both the Low-Level ('**LL-FACO**') and High-Level ('**HL-FACO**') FACO Markets. Briefly, ComReg defined separate Low-Level and High-Level FACO markets on the basis that there was a break in the chain of substitution between these markets, such that Access Seekers purchasing LL-FACO would not consider switching to HL-FACO if the price of LL-FACO increased, and vice versa. LL-FACO is, generally, dimensioned to the needs of residential and very small business end users, while HL-FACO is, generally, dimensioned to the needs of larger business and institutional or corporate end users. The pricing and functional characteristics of LL-FACO and HL-FACO reflect these differences.
- 2.41 The 2015 FACO Decision imposed regulatory obligations on Eircom in the form of access, transparency, non-discrimination, price control, accounting separation and cost accounting.

2.6 Information Sources

- 2.42 During this market review, ComReg obtained qualitative and quantitative information from SPs through a series of formal and informal information requests, as well as through industry meetings. ComReg has also reviewed the experience of NRAs in regulating Relevant Markets in other jurisdictions and has carefully analysed guidance from the EC, BEREC and other relevant parties before arriving at the conclusions set out in this Decision.
- 2.43 In conducting its analysis, ComReg drew on data from several sources:

⁶⁵ ComReg Decision No. D12/14, Market Review: Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non-Residential Customers, 28 August 2014. See <https://www.comreg.ie/csv/downloads/ComReg1489.pdf> (the '**2014 RFVA Decision**').

⁶⁶ Response to Consultation and Decision on price control obligations relating to retail bundles: Further specification of the wholesale price control obligation not to cause a margin squeeze in the WLA, and WCA Markets [ComReg Document 18/96](#) Decision: D12/18, November 2018 (the '**2018 Bundles Decision**').

- (a) Residential and SME Market Research commissioned by ComReg and carried out on its behalf by RedC Market Research from September to December 2019 (the '**2019 Market Research**'). This research included attitudinal surveys of retail end users of RFTS, mobile voice and other related telecommunications services. The 2019 Market Research is published at Annex: 4 and Annex: 5 of this Decision;
- (b) Information provided by SPs in response to detailed Informal Information Requests ('**IIR(s)**') issued by ComReg on a non-statutory basis, in which both quantitative and qualitative information on the Relevant Markets and on other related telecommunications services was sought;
- (c) Information provided to ComReg in subsequent follow-up correspondence and discussions in relation to (a) and (b) above;
- (d) Information provided by SPs to ComReg as part of its regular data gathering and monitoring activities, including data provided for the purpose of ComReg's Quarterly Key Data Report(s) ('**QKDR(s)**'); and
- (e) Other information in the public domain.

2.44 The 2019 Market Research referred to above was undertaken on behalf of ComReg by RedC Market Research to inform its FACO and RFTS market reviews, and to examine the attitudes of both residential and SME end users to various issues related to the provision of fixed voice, mobile voice and other related electronic communications services. The field work supporting the 2019 Market Research took place from September to December 2019, with the results finalised and provided to ComReg in January and February 2020.

2.45 As part of the 2019 Market Research, 2,011 residential households were surveyed through face-to face interviews and 501 SMEs were surveyed via a computer aided telephone interview ('**CATI**'), with the person interviewed being the individual responsible for selecting the relevant household or business premises' telecommunications provider(s).

2.46 The surveys examined, *inter alia*:

- (a) Importance placed by end users on ownership and usage of particular technologies or services;
- (b) Willingness of end users to switch between communications providers and technologies or services;
- (c) Attitudes to, and actual reactions to, changing scenarios in the price of telecommunications services;
- (d) The importance of bundled service offers for residential customers; and
- (e) The use of OTT and Managed VoIP services.

- 2.47 ComReg refers to the outputs from the 2019 Market Research, along with the other data sources referred to above, throughout the remainder of the analysis in this Decision.
- 2.48 It should be noted that, rather than being definitive, the 2019 Market Research informs the analysis throughout this Decision, and its outputs are considered alongside empirical evidence, where available, in particular, data presented in the QKDR and in response to Statutory and Informal Information Requests.

A note on data

- 2.49 ComReg issued its 2020 Consultation on the basis of Q4 2019 data. As part of its data gathering exercise, ComReg relied on returns provided by SPs to ComReg. As of Q4 2019, Eircom provided data to ComReg which allowed for FACO lines to be assigned to individual EAs according to whether the lines were PSTN, ISDN BRA, ISDN FRA, or ISDN PRA, and also according to whether the wholesale product sold to Access Seekers by Eircom was SB-WLR or WLV.
- 2.50 In the intervening period, ComReg understands that Eircom experienced issues with its management information systems and their integration with other systems which resulted in it providing partial and incomplete data to ComReg in respect of a number of products and services, over the course of a number of quarters. The impacted data included FACO data at the EA level, including WLV sales and sales split according to PSTN, ISDN BRA, ISDN FRA, and ISDN PRA. As a result, ComReg has been unable to rely on up-to-date information in certain instances.
- 2.51 Where appropriate and in light of the above, ComReg has had to rely on the best alternative sources of data available, as of Q4 2020. Where no such data are available, ComReg must instead rely on the most recently-available relevant data, which date from Q4 2019. Eircom has indicated to ComReg that data returns from Q1 2021 onwards (which have not yet been made available to ComReg, as of May 2021) will contain full datasets, as had been the practice to Q4 2019.

2.7 Consultation Process

- 2.52 ComReg conducted a public consultation in accordance with Regulation 12 of the Framework Regulations, issuing a Consultation in June 2020. Five Submissions to the Consultation were received from a range of industry stakeholders (together referred to as the '**Respondent(s)**'), namely:
- (a) ALTO,
 - (b) BT,
 - (c) Eircom, which included a submission prepared by Copenhagen Economics,

- (d) Sky, and
- (e) Vodafone.

2.53 Throughout this Decision, ComReg has summarised Respondents' main views and has carefully considered them before setting out its final position.

2.8 European Electronic Communications Code

2.54 The EECC replaces the EU Common Regulatory Framework (which included the Framework Directive and the Access Directive) which was adopted in 2002 and amended in 2009. With some limited exception, Member States were required to transpose the EECC into national law by 21 December 2020.

2.55 As the EECC has not yet been transposed into Irish law as of June 2021, the legal basis for this market review is the existing statutory regime, including the provisions set out in the Framework Regulations, the Access Regulations, the Authorisation Regulations and the Universal Service Regulations, read in light of the EECC. Whilst publication of this Decision occurs before the EECC has been transposed into Irish law, ComReg has been mindful of the EECC in making this Decision. In particular, where possible and appropriate, ComReg has had regard to the amendments brought by the EECC to both the principles and substance of the regulatory regime, including changes to the General Objectives set out at Article 3 of the EECC, and any specific changes to the market analysis procedures described at Chapter III of the EECC, or the remedies imposed on Undertakings designated with SMP set out at Chapter IV of the EECC.

2.56 Overall, in preparing this Decision, ComReg has taken account of its functions and objectives under the Communications Regulation Act 2002 (as amended), in addition to requirements under the Framework Regulations and the Access Regulations.

2.9 Structure of the Decision

2.57 The remainder of this Decision Paper is structured as follows:

- (a) **Section 3** gives an overview of trends and developments in the RFTS Market (including both RFVC and RFVA) that have occurred since 2014;
- (b) **Section 4** defines the Relevant RFTS Markets from both a product and a geographic perspective;
- (c) **Section 5** defines the Relevant FACO Markets from both a product and a geographic perspective;
- (d) **Section 6** assesses competition within the Relevant RFTS Markets by carrying out a 3CT to determine if continued *ex ante* regulation is warranted, and also sets out the withdrawal of SMP remedies and obligations on the Relevant RFTS Markets;

- (e) **Section 7** assesses competition within the Relevant FACO Markets by, firstly, carrying out a 3CT and then, if necessary, moving to consider whether any SP operating within such markets holds a position of SMP;
- (f) **Section 8** considers the Relevant RFTS Markets absent regulation in the Urban FACO Markets;
- (g) **Section 9** sets out the main competition problems that could, absent regulation, occur on the Regional FACO Markets (and related markets), along with the likely consequential impacts on competition and consumers;
- (h) **Section 10** sets out regulatory remedies to address competition problems, in the form of obligations that would be imposed on any SP designated with SMP on the Regional FACO Markets, and also describes the process by which these remedies would be applied and complied with;
- (i) **Section 11** sets out the process whereby regulation may, as appropriate, be removed from the Urban FACO Markets;
- (j) **Section 12** sets out the Regulatory Impact Assessment ('**RIA**') of the proposed approach to regulation in the Relevant FACO Markets;
- (k) **Section 13** sets out the next steps following publication of this Decision;
- (l) **Annex: 1** sets out ComReg's consultation with the CCPC;
- (m) **Annex: 2** sets out the European Commission's response to ComReg's draft notified Decision;
- (n) **Annex: 3** sets out ComReg's consideration of the European Commission's response;
- (o) **Annex: 4** contains the outputs of the 2019 Residential Market Research commissioned by ComReg for the purpose of informing its analysis of the Relevant FACO Markets and the Relevant RFTS Markets;
- (p) **Annex: 5** contains the outputs of the 2019 SME Market Research commissioned by ComReg for the purpose of informing its analysis of the Relevant FACO Markets and the Relevant RFTS Markets;
- (q) **Annex: 6** sets out the February 2020 Proposals provided by Eircom to ComReg, and the revised April 2021 Proposals provided by Eircom to ComReg (together, the '**Proposals**');;
- (r) **Annex: 7** summarises the price sensitivity analysis undertaken by ComReg in relation to the RFTS market and FACO Markets, which is conducted in Section 4 and Section 5 of the Decision (in the context of indirect constraints);
- (s) **Annex: 8** provides an overview of the economic approach used to assess whether different products fall within the same relevant product market;

- (t) **Annex: 9** describes the critical loss analysis used by ComReg in assessing the extent to which indirect constraints may impact on the Relevant FACO Markets. The assessment of indirect constraints is set out in Section 5;
- (u) **Annex: 10** provides an analysis of a range of criteria considered other than those set out in Section 7 when assessing whether an SP has SMP;
- (v) **Annex: 11** sets out in detail ComReg's approach to the FACO geographic market definition exercise;
- (w) **Annex: 12** lists the Exchange Areas falling into the Urban FACO Markets and falling into the Regional FACO Markets;
- (x) **Annex: 13** sets out the non-confidential version of Respondents' Submissions;
- (y) **Annex: 14** sets out the Decision Instrument in respect of the Relevant RFTS Markets and the Relevant FACO Markets which specifies, in legal form, the remedies; and
- (z) **Annex: 15** contains a glossary of the most frequently used terms within this Decision.

Nonconfidential

3 Retail Market Trends and Developments

3.1 Introduction

- 3.1 Prior to defining the product and geographic boundaries of the RFTS and FACO markets in the State, or assessing the strength of competitive constraints on any duly-defined markets, ComReg reviews the structure of the RFTS markets, and any trends that may have impacted the provision of RFTS since ComReg's last review of the RFVA markets in 2014, and the FACO markets in 2015. The following key trends are examined:
- (a) Structure of the RFTS markets (paragraphs 3.5 to 3.35 below);
 - (b) Evolution of access infrastructure and technologies (paragraphs 3.38 to 3.41 below);
 - (c) Changes in retail trends since the publication of the 2014 RFVA Decision and the 2015 FACO Decision (paragraphs 3.42 to 3.126 below); and
 - (d) Behavioural trends in the RFTS market (paragraphs 3.127 to 3.152 below).
- 3.2 ComReg notes that Access Seeker⁶⁷ demand for FACO is ultimately derived from end user demand for RFTS. Therefore, to assist in assessing indirect competitive constraints arising from RFTS on FACO and direct competitive constraints on RFTS,⁶⁸ this Section reviews trends in the supply of RFTS in the State since the 2014 RFVA Decision and 2015 FACO Decision.
- 3.3 Eircom, ALTO, BT and Vodafone all provided comments on ComReg's preliminary findings in respect of retail trends set out in the 2020 Consultation. ALTO, BT, and Vodafone agreed that ComReg had identified the main developments in the provision of RFTS, which are most relevant in assessing the relevant markets. ALTO and BT also made a number of additional comments which are addressed in the text below.
- 3.4 Eircom agreed that ComReg had identified some of the main retail trends and developments, but argued that the assessment was deficient in respect of some trends which, in its view, reduced its ability to act independently of competitors and consumers. Eircom's comments are addressed in detail below.

⁶⁷ Access Seekers are those SPs (or other authorised operators) that purchase, or could potentially purchase (having entered into a contract), FACO services.

⁶⁸ As set out in BEREC's 2010 report on self-supply (BoR(10)09) (at p.4), "A company providing inputs at the wholesale level may be constrained "directly" at that level by other companies that are operating at the same level. Alternatively, that company may be indirectly constrained by the "customers of their competitors" i.e. that company may be indirectly constrained by competition that exists on the retail level."

3.2 Structure of the RFTS Market

- 3.5 RFTS, consisting of both RFVA and RFVC, is provided by Eircom, and several Other Authorised Operators ('**OAOs**'),⁶⁹ including resellers and Cable TV ('**CATV**') Service Providers ('**SP(s)**'). RFTS (a service) is provided over RFVA (a network connection). In the case of fixed narrowband access ('**FNA**') over a copper network, access at a fixed location is provided over either PSTN or Integrated Services Digital Network ('**ISDN**'). RFVA enables end users to use traditional fixed voice services, often described as 'Plain Old Telephony Service' ('**POTS**'). Thus, POTS is a form of RFTS provided over FNA.
- 3.6 SPs can also provide RFTS over a broadband access path (for instance, over FTTx or CATV) by means of Managed VoIP. Managed VoIP differs from POTS-based RFTS in that the access path is over Next Generation ('**NG**') Broadband,⁷⁰ rather than FNA.
- 3.7 RFTS may accordingly be supplied over:
- (a) Current Generation ('**CG**') technology including PSTN or ISDN copper access paths (referred to as '**fixed narrowband access**', or '**FNA**'); or
 - (b) NG technology including CATV or FTTx broadband access paths (RFTS provided via '**Managed VoIP**').
- 3.8 Furthermore, RFTS may be offered to end users either directly, or indirectly:
- (a) **Directly**, where the end user is connected directly to the RFTS SP's network.

Eircom is the largest provider of direct access and is the only supplier of ubiquitous RFTS. Virgin Media⁷¹, Magnet and Digiweb also offer direct retail level access on their own access networks, although in the case of Magnet and Digiweb this is very localised geographically. Other SPs also offer direct fixed telephony services to categories of end users, mainly large businesses (for example, BT).
 - (b) **Indirectly**, where an Access Seeker uses wholesale input products provided by another SP over CG or NG networks in order to offer retail access services to end users.

⁶⁹ In general, 'OAOs' refers to SPs other than Eircom.

⁷⁰ Although it is technically feasible to provide Managed VoIP over Current Generation ('**CG**') broadband, ComReg is unaware of any SP offering Managed VoIP by means of CG broadband due, *inter alia*, to the need to manually assign Quality of Service ('**QoS**') indicators to such traffic, which is automatically assigned when using NG Broadband, and ongoing replacement of CG network assets with NG upgrades, culminating ultimately in the copper switch-off proposals issued by Eircom in April 2021. Furthermore, SPs have specifically indicated to ComReg that they only intend to offer Managed VoIP using NG Broadband.

⁷¹ As of Q4 2020, Virgin Media had 42% network coverage.

- 3.9 Wholesale input products, such as Eircom SB-WLR or White Label Voice ('WLV'), allow Access Seekers to offer RFTS to end users. Purchasing wholesale inputs enables easier entry into the RFTS market, as the purchasing Access Seeker can minimise investment in its own physical access infrastructure. Indirect access by means, for instance, of SB-WLR, facilitates competition by enabling Access Seekers to provide POTS-based RFTS to end users over FNA, without incurring the sunk costs of infrastructure investment.
- 3.10 At the time of the 2014 RFVA Decision, RFTS was predominantly provided over FNA. While FNA remains the predominant means of RFTS delivery,⁷² provision of Managed VoIP over NG Broadband has increased in the intervening period.
- 3.11 Accordingly, a key development since the 2014 RFVA Decision has been the growth (and potential growth possibilities) of RFTS provided by means of Managed VoIP. Managed VoIP routes internet protocol ('IP')-based phone calls over NG Broadband, rather than over FNA. This eliminates the need for SPs to maintain separate voice and data networks and permits cost savings through achieving economies of scope⁷³ by means of the provision of both voice and data over a single broadband network.
- 3.12 ComReg distinguishes three sub-categories of Managed VoIP,⁷⁴ which involves the provision of RFVC over an IP access path⁷⁵ on single or multiple channels:
- (a) Managed Voice over Broadband ('**Managed VoB**') allows for the transmission of RFVC over an NG Broadband access path. Managed VoB is generally provided to the end user over CATV or FTTx⁷⁶ networks, and may consist of RFTS dimensioned to the needs of residential end users, or business end users, depending on the number of access channels provided (for example, Virgin Media delivers its residential Managed VoB RFTS using a single access CATV based channel).

⁷² See Table 11.

⁷³ 'Economies of scope' refers to the supply-side situation that arises where a Service Provider produces given quantities of various products at a lower total cost than the cost of producing these quantities separately.

⁷⁴ ComReg's QKDR defines 'Voice over Broadband' as "IP-based services that facilitate voice calls to and/or from the PSTN over a broadband connection. With this service, the customer may either have broadband access from an ISP and acquire voice over broadband services from a separate entity, or have both broadband and voice over broadband services bundled together by the same supplier. Voice services bundled with digital TV services and delivered over digital cable TV networks should also be recorded here." The QKDR furthermore requests SPs to provide data on Managed VoB, SIP Trunking and IP connections equivalent to ISDN (i.e. Hosted PBX). Accordingly, the term 'Voice over Broadband' used in the QKDR equates to the term 'Managed VoIP' used in this Decision.

⁷⁵ The IP access path may be owned by the Managed VoIP SP, or, in the alternative, the Managed VoIP SP may procure access to another SP's IP access path.

⁷⁶ VDSL is the technology underlying FTTC. Accordingly, exchange-based VDSL (eVDSL) is included within FTTC.

- (b) Hosted private branch exchange (**'Hosted PBX'**) is a Managed VoIP product designed to meet the needs of business end users. The SP hosts the RFVC functionality and PBX features off-site, at the SP's location, thereby reducing the level of infrastructure investment incurred by the end user. The end user connects via IP to the SP to engage in RFVC.
- (c) Session Initiation Protocol Trunking (**'SIP Trunking'**) is another Managed VoIP product designed to meet the needs of business end users. Unlike Hosted PBX, SIP Trunking provides for RFVC delivered over IP at an on-premises PBX. This requires the end user to incur a greater level of infrastructure investment than Hosted PBX. SIP Trunks are multi-channel services comparable to the delivery of RFTS over ISDN FRA or PRA.

3.13 A number of retail SPs provide Managed VoB-based RFTS over CATV or FTTx, typically as part of a bundle alongside broadband, TV or mobile telephony:

- (a) Virgin Media launched its Managed VoB service as an add-on to its broadband and pay-TV offerings in 2006;
- (b) Eircom offers a Managed VoB service (eir Broadband Talk)⁷⁷ and a Managed VoIP service (eir SIP Voice)⁷⁸ to eligible residential and business customers connected to its FTTx network;
- (c) Vodafone delivers a home phone service by means of Managed VoB in areas where it purchases upstream broadband inputs in the form of Wholesale Local Access (**'WLA'**) from Eircom or SIRO;
- (d) Sky Ireland (**'Sky'**) delivers home phone service by means of Managed VoB in areas where it purchases NG Broadband access from Eircom or SIRO (via BT);⁷⁹
- (e) Imagine and other operators e.g. Digiweb offer Managed VoB over FWA;⁸⁰
- (f) Magnet and Digiweb both offer Managed VoB over both their own FTTx networks, and also over WLA purchased from Eircom and SIRO; and
- (g) Blueface offers a VoB service which relies on its customers having an existing broadband connection supplied by a third party – ComReg does not classify this as 'Managed VoB'.

⁷⁷ For further details, please see <https://www.eir.ie/eirbroadbandtalk/> accessed in April 2021.

⁷⁸ For further details, please see <https://www.eir.ie/business/lb/sip-voice/> accessed in April 2021.

⁷⁹ Sky makes use of Eircom's wholesale inputs via BT, however, Sky contracts directly with SIRO, while making use of BT's backhaul facilities and order management systems.

⁸⁰ 8.2% of Managed VoB based RFTS is provided over FWA. Of all FWA, 70% is Managed VoB. See paragraphs 3.29 to 3.34 below.

- 3.14 Thus, SPs that were previously active in separate markets now deliver similar bundles of RFTS over broadband, and thus compete with one another.⁸¹ As a result, two potential demand-side scenarios emerge in relation to end user choice of RFTS SP:
- (a) End users who value broadband highly may purchase a bundle with broadband as the primary component, but which also includes RFTS as an 'add-on'. Such end users are relatively more 'broadband-centric', and generally have greater choice in relation to their supplier of RFTS, because few SPs now sell standalone RFTS; and
 - (b) End users who primarily value RFTS are relatively more 'voice-centric' and may have less choice of SP. This is largely due to the shift away from standalone RFTS provided over FNA, and towards RFTS delivered as part of a bundle over NG Broadband.
- 3.15 Several SPs, varying by size, technological platform and geographical coverage supply RFTS. Broadly speaking, SPs fall into three categories, based on the extent of their own network investment:⁸²
- (a) **Independent SPs** (Eircom, Virgin Media) provide RFTS entirely or predominantly using their own network and infrastructure. They are not typically reliant on FACO inputs from other SPs;
 - (b) **Partially Independent SPs** (BT, Vodafone, Digiweb and Magnet Networks) operate a physical switching platform and, potentially, other infrastructure, but also rely, to varying degrees, on third-party wholesale network access to originate calls from their end users. The extent of these SPs' networks varies greatly; and
 - (c) **SPs with resale activities** (Sky and Pure Telecom) offer RFTS, but do not operate their own network infrastructure, and are thus reliant on wholesale access to other networks. When acting in a resale capacity these SPs purchase end-to-end voice call services (WLV, which does not require the Access Seeker to invest in its own physical switching and interconnect infrastructure) from a third-party network operator and resell/repackage that service in the form of a retail market offer.

⁸¹ For example, Eircom – a legacy fixed telephony provider, and Vodafone – a legacy mobile telephony provider – now offer TV services, while Sky – a legacy TV provider – now offers RFTS.

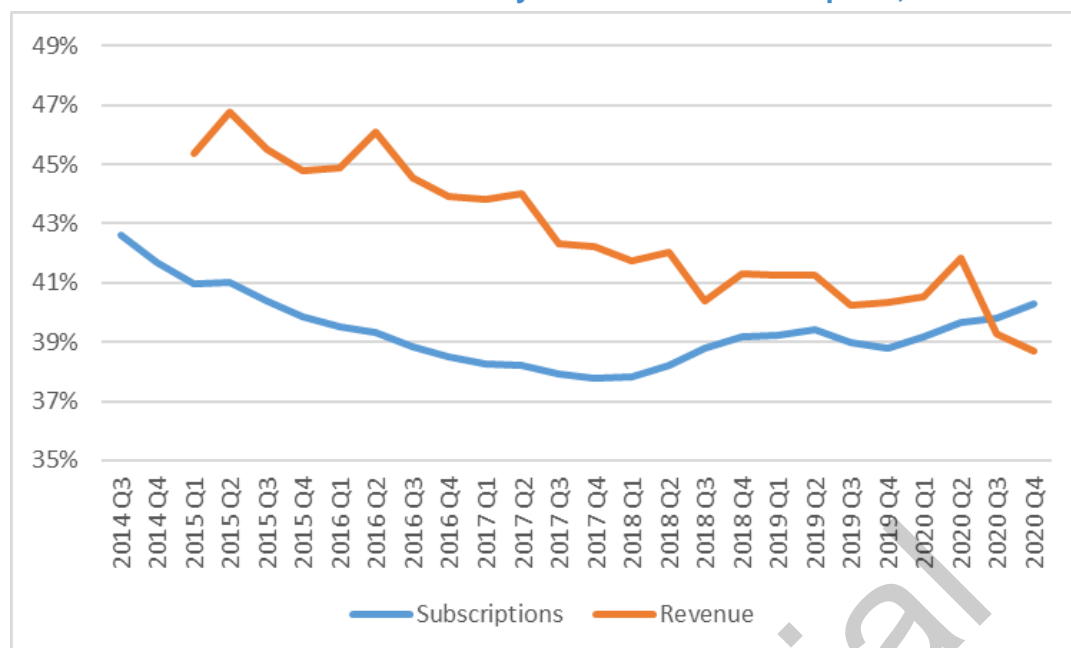
⁸² The list of SPs in this section is not intended as an exhaustive list of all active suppliers of RFTS in Ireland at present, but rather to provide some illustrative examples.

FACO and RFTS SPs

- 3.16 **Eircom** is currently the sole provider of SB-WLR to Access Seekers who do not operate a comprehensive network for the provision of RFTS. Eircom is also itself the largest provider of RFTS. Eircom owns and operates a ubiquitous FNA network (as defined in paragraph 3.7) and continues to deploy its FTTH broadband network. ComReg expects that, in time, but not within the lifetime of this market review, Eircom's FTTx networks will likely replace its FNA network (in those parts of the State where it is commercially viable to build such FTTx networks).⁸³ At present, RFTS delivered over FNA remains available to end users, and is the most common form of delivery of RFTS services, regardless of whether the premises is also passed by FTTx. Eircom provides RFTS (and other services) over both its FNA and FTTx networks, to business and residential end users.
- 3.17 Eircom also offers a WLV service which allows SPs to provide RFTS, effectively becoming SPs without the need to invest in their own interconnection and network access infrastructure (effectively the pure resale of the service). WLV allows Access Seekers to purchase end-to-end wholesale voice services. Eircom originates these calls on behalf of SPs who purchase WLV on its network.⁸⁴
- 3.18 As noted in Figure 2 below, Eircom's RFTS market share, measured by revenue has declined gradually but consistently within a narrow band over the period Q1 2015 to Q4 2020, while subscription numbers have remained reasonably stable. As of Q4 2020 there were a total of 1,327,000 RFTS subscriptions, a decline of 10.1% from in Q3 2014. As of Q4 2020, Eircom's share of these subscriptions was 40.3%, having fallen from 42.6% in Q3 2014 – a 5.5% decline. Over the same time period, its RFTS market share, measured by revenues, declined from 46.5% to 38.7% - a 15% decline.

⁸³ Eircom's proposed MSAN upgrade is likely to extend the serviceable life of the FNA network, up to the point of envisaged copper switch-off. See paragraph 5.35.

⁸⁴ Certain components of the underlying wholesale inputs to WLV are not regulated, notably call transit. The FACO component is the subject of this review.

Figure 2: Eircom RFTS market share % by revenue and subscription, Q3 2014-Q4 2020

Other RFTS Providers

- 3.19 Liberty Global plc (trading as UPC) completed its acquisition of Virgin Media UK in 2013, and in 2016 rebranded UPC in Ireland to **Virgin Media Ireland**. Virgin Media operates a CATV network, using the DOCSIS 3.0 and 3.1 standards, and is capable of providing RFTS by means of Managed VoB to approximately 946,500 premises. Virgin Media offers almost all of its RFTS on a self-supply basis on its own CATV network and also purchases a trivial volume of SB-WLR from Eircom (fewer than [redacted] of overall Virgin Media RFTS). As of Q4 2020, Virgin Media had 300,000 RFTS subscribers.⁸⁵ ComReg Quarterly Key Data Report ('QKDR') data suggest that, as of Q4 2020, Virgin Media accounted for 22.6% of Total RFTS subscriptions in the State.
- 3.20 **Vodafone Ireland** offers RFTS, retail broadband, TV and mobile telephony services to end users. Vodafone relies on the purchase of upstream inputs from Eircom (largely WLV, but also some SB-WLR) to provide RFTS over FNA, and from both Eircom and SIRO (in the form of WLA) to self-provide provide RFTS by means of Managed VoB. ComReg QKDR data suggest that, as of Q4 2020, Vodafone accounted for 13.6% of RFTS subscriptions in the State.

⁸⁵ As of Q4 2020, Virgin Media reported 435,200 'Fixed-Line Customer Relationships' in Ireland. See Liberty Global Q4 2020 Fixed Income Release, at p.22. Available online at <https://www.libertyglobal.com/wp-content/uploads/2021/02/Virgin-Media-Fixed-Income-Q4-2020-Release.pdf> Approximately 383,000 premises had a (standalone or bundled) internet subscription and 300,000 RFTS subscriptions were recorded.

- 3.21 **Sky** offers RFTS and retail broadband alongside its TV services. Sky purchases FACO products delivered over both FNA and NG Broadband (White Label VoIP)⁸⁶ from BT (based on its purchases of wholesale inputs). As of Q4 2020, Sky had a 13.6% market share in the RFTS market, as measured by retail subscriptions.
- 3.22 **Pure Telecom** is a resale-based SP which provides RFTS, broadband and cloud telecoms services. Pure Telecom purchases [X ██████████ X] from Eircom and BT, as well as WLV from Eircom, to originate, transit, and terminate voice calls to and from end users at a fixed location on its behalf. As of Q4 2020 Pure Telecom had a 3.9% RFTS market share, as measured by retail subscriptions.
- 3.23 Together, Eircom, Virgin Media, Vodafone, Sky and Pure Telecom account for 94% of Total RFTS subscriptions, as of Q4 2020.

Respondents' Views

- 3.24 ALTO submitted that competition in the provision of RFTS has taken far longer to develop than would ordinarily be expected, noting that, as of Q4 2019, 94.4% of total RFTS subscriptions are supplied by only 5 SPs. ALTO considered that this could be explained by the absence of effective processes for soft migration and bulk migration from WLR to VoIP. Based on the same reasoning, BT suggested that growth in VoIP over the same time period has been “*very modest*”, which is inconsistent with ComReg’s findings that upstream barriers to entry are being eroded due to the rapid introduction of NG Broadband.

ComReg’s Assessment of Respondents’ Views and Position

- 3.25 ComReg notes neither ALTO nor BT provided information concerning their expectations of how much Managed VoIP should have grown by in the market over the time period in question. Although referencing the statistic that 94.4% of total RFTS subscriptions in the market were provided by 5 of 27 SPs, as at Q4 2019, ComReg notes that this only partially reflects the competitive conditions in the market, or its dynamic nature. Figure 9, Figure 14, and Table 10 below indicate that the distribution of RFTS market shares, in terms of subscriptions, generated revenue, and Managed VoB-specific RFTS subscriptions, have evolved since the publication of the last market review.

⁸⁶ White Label VoIP is a wholesale end-to-end voice call service delivered over IP by BT analogous to White Label Voice delivered over FNA.

- 3.26 ComReg notes, however, that the evolution of market shares is not solely indicative of the increase in competition in the RFTS markets. ComReg also notes the importance of the change in consumer preferences. Increased competition in the provision of RFTS has been facilitated by the rollout of NG Broadband which, in turn, facilitates the provision of better quality of service to end users, and more specifically, the option for SPs to move from RFTS delivered over FNA to RFTS delivered by means of Managed VoIP. ComReg notes that, since the publication of the 2014 RFTS Decision, Managed VoIP subscriptions have risen by 43% (and 43% of which are provided by SPs other than Virgin Media) while over the same period, FNA-based RFTS subscriptions have decreased by 10%.
- 3.27 ComReg also notes at paragraph 3.71 that VDSL over Fibre to the Cabinet ('FTTC') and eVDSL⁸⁷ has superseded DSL over FNA as the most common means of accessing broadband, driven by, *inter alia*, advances in the functionality of VDSL (such as vectoring) and also the ongoing rollout of VDSL. This demonstrated that, while market shares have provided some evidence of a change in competitive conditions in the RFTS markets, the additional insights offered through examining consumer preferences (noting the increased demand for Managed VoB and the decrease in FNA RFTS subscriptions) indicated that competition and the ability to compete has, in fact, increased since Q3 2014.
- 3.28 Having considered Respondents' views above, ComReg is satisfied that competition in the RFTS markets has increased since the 2014 RFVA Decision and the 2015 FACO Decision. While market shares in the RFTS Markets have evolved, albeit slower than seemingly expected by ALTO and BT, indicators such as the change in consumer preferences and the increase in quality of service due to the rollout of NG Broadband and the associated increased ability to provide Managed VoB is reflective of the impact of competition on the retail markets. ComReg does, however, note that SPs have indicated they are only willing to provide Managed VoB on NG Broadband, thus Managed VoB can only be provided where NG Broadband is available.

⁸⁷ Exchange-based VDSL.

Fixed Wireless Access Providers

- 3.29 Voice services at a fixed location may also be provided by means of Fixed Wireless Access ('FWA'). FWA delivers voice services wirelessly via equipment located on nearby masts or towers and presented as a 'fixed' telephony service at the end user's premises. ComReg QKDR data record 61,480 FWA broadband subscriptions in Q4 2020, an increase of 23% from the 50,121 FWA subscriptions reported in Q3 2014, but nonetheless still being a small proportion of overall broadband subscriptions. As of Q4 2020, [redacted] [redacted]⁸⁸ Managed VoB subscriptions were delivered over FWA.
- 3.30 For context, FWA broadband subscriptions⁸⁹ peaked at 123,000 in Q1 2008, and current FWA subscription numbers are approximately equal to levels recorded in Q3 2006.
- 3.31 **Imagine** is a partially-independent SP operating the largest FWA network in the State that provides broadband coverage in predominantly rural areas via microwave links and Fixed LTE.⁹⁰ Imagine bundles RFTS with its broadband products. As of June 2021, Imagine states that its network coverage extends to 1,184,952 rural and regional premises (although this has not been verified by ComReg).⁹¹ Imagine also purchases a small amount of SB-WLR lines [redacted]
[redacted]
[redacted] [redacted], as well as Fibre to the Premises ('FTTP') VUA,⁹² from Eircom.
- 3.32 **Digiweb** is also a partially independent SP, which operates national wireless network and satellite services. Digiweb purchases VUA from SIRO, and a small volume of SB-WLR lines [redacted]
[redacted] [redacted] from Eircom. It provides broadband and RFTS to residential, business and public sector customers.
- 3.33 Since Q3 2018, both Imagine and Digiweb have been recorded under the broader OAO category in ComReg's QKDR. This means that neither OAO has a market share of 2% or more, which is the threshold used by ComReg for reporting SP data separately.
- 3.34 Imagine's Managed VoB subscriptions have increased by [redacted]
[redacted]⁹³ since Q3 2014, growing from [redacted]
[redacted]⁹⁴ in Q4 2020.

⁸⁸ In the range of 30,000 to 35,000.

⁸⁹ This refers to FWA broadband subscriptions, not FWA Managed VoB subscriptions.

⁹⁰ Fixed LTE is a wireless data connectivity standard providing high-speed bandwidth to a fixed location.

⁹¹ <https://www.imagine.ie/the-broadband-network/>, accessed on 15 June 2021.

⁹² Virtual Unbundled Access, or VUA, is Eircom's description of its Virtual Unbundled Local Access, or VULA, product. VUA is a virtual access product delivered over Eircom's NG Broadband network, which allows Access Seekers to purchase WLA to deliver retail services over that NG Broadband including broadband, RFTS and TV.

⁹³ Ranges from 90% and 100%.

⁹⁴ Ranges from 5,000 and 10,000%.

- 3.35 Having described, in general terms, the main RFTS SPs, the remainder of this section describes trends and developments in respect of the provision of RFTS since the 2014 RFVA Decision and the 2015 FACO Decision.

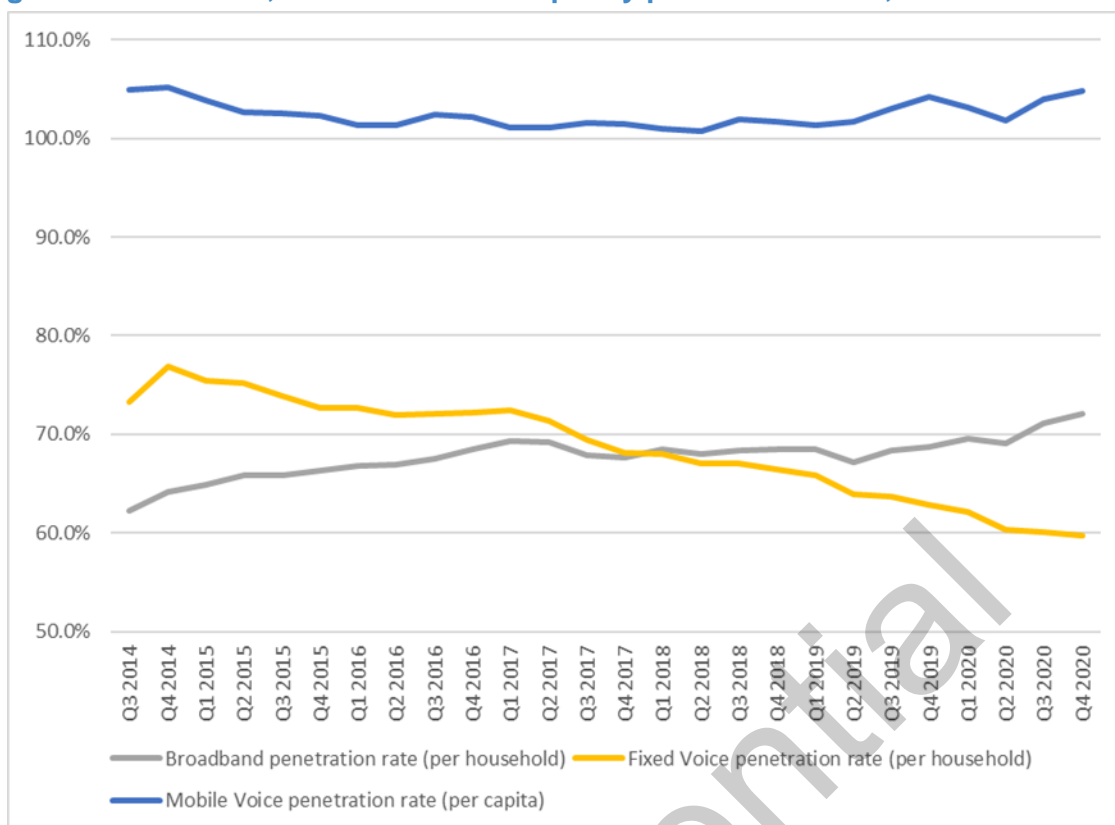
3.3 Regulatory and Market Developments

- 3.36 Since the publication of the 2014 RFVA Decision, the provision and consumption of electronic communications services have evolved, driven by technological developments and shifting consumer demand patterns.
- 3.37 Changing end user usage and preferences in respect of broadband access and bundled services may impact ComReg's market definition and competition assessments. The potential implications of these trends are assessed in greater detail in Sections 4 and 6 below.

Evolution of access infrastructure and technologies

- 3.38 Consumer usage patterns indicate a general and ongoing decline in the use of RFTS, as well as increased usage of broadband, mobile telephony, and bundled products. ComReg data indicate that, since the publication of the 2014 RFVA Decision, while household broadband penetration has increased to an all-time high of 72% of as Q4 2020, household RFTS penetration has declined by 6%.⁹⁵ Over the same period, per capita mobile phone penetration has declined marginally, but continues to exceed 100%, as set out below:

⁹⁵ In Q2 2019, the revision of figures, as outlined in the QKDR, resulted in a dip in RFTS penetration rates for this quarter, arising from revisions made by [§< ██████████ §>]. Additionally, a [§< ██████████ §>].

Figure 3: Broadband, RFTS & mobile telephony penetration rates, Q3 2014-Q4 2020⁹⁶

3.39 As noted in Table 1 below, RFTS can be measured in terms of the number of access paths, lines, or subscriptions. A **subscription** involves periodic payment for a single service, or multiple (bundled) services. **Access paths** are not synonymous with access lines as, for example, in the case of ISDN paths/channels, more than one path may be provided via a single ISDN line. A single subscription could mean being billed for multiple PSTN or ISDN lines as part of that subscription, and so may not be reflective of the number of actively used lines in the RFTS market. Thus, the overall number of access paths is likely to exceed the overall number of lines, which itself is likely to exceed the overall number of subscriptions. For instance, a single business subscription could include four ISDN BRA lines, which give rise to eight access paths. In the following sections, ComReg reviews RFTS trends in terms of subscriptions and access paths:

⁹⁶ Data taken from ComReg QKDR, Q3 2014 to Q4 2020.

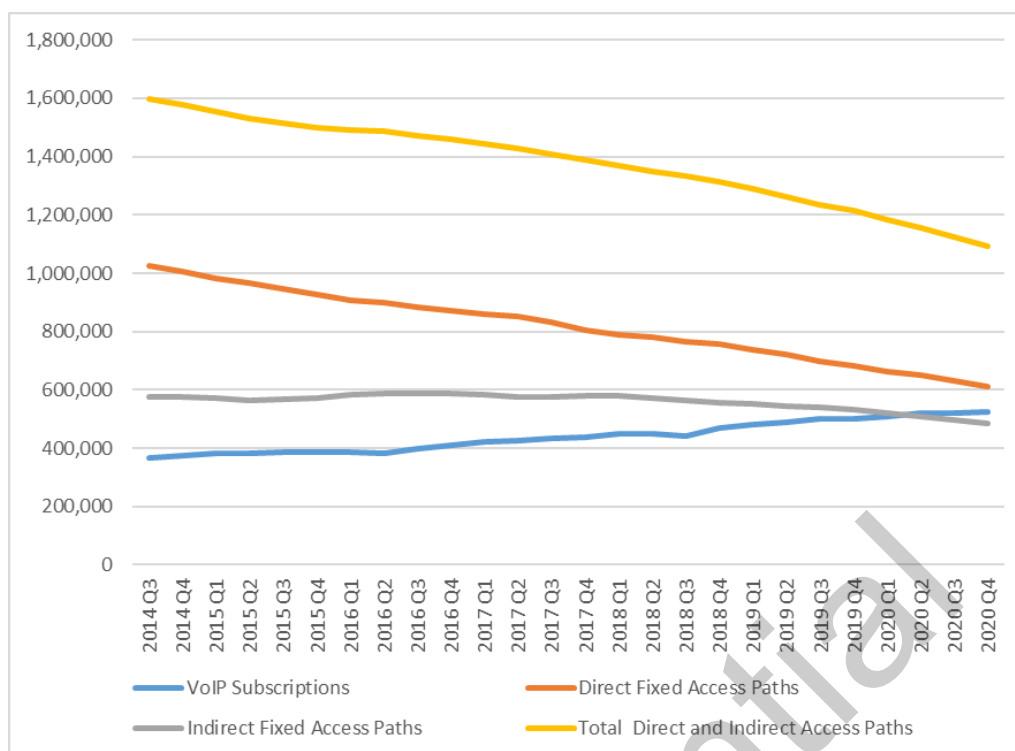
Table 1: Lines, Access Paths and Subscriptions

Product	Lines	Access paths (voice channels)	Minimum Subscription Required
PSTN	1	1	1
ISDN Basic	1	2	1
ISDN Fractional	1	15	1
ISDN Primary	1	30/31 ⁹⁷	1
Managed VoIP	1	Depends on VoIP product design	1
SIP Trunking	1 ⁹⁸	Depends on VoIP product design	1
Hosted PBX	1	Depends on VoIP product design	1

3.40 ComReg QKDRs indicate that the total number of FNA access paths has declined from just under 1.4 million in Q3 2014 to 1.09 million in Q4 2020. As illustrated in Figure 4 below, FNA access paths have declined by 32% since 2014. Over the same period, alternative RFTS technologies have experienced growth. Managed VoB has been the fastest growing platform, with subscription numbers increasing by approximately 43% from 367,010 to 523,988. This growth which, in large part, has offset the decline in FNA based subscriptions, appears to be concentrated in increases in Managed VoB subscribers serviced by SPs other than Virgin Media. Liberty Global results indicate that, over the time period in question, Virgin Media RFTS subscriptions decreased, from 336,000 to 300,000, as set out at paragraph 3.19 above.

⁹⁷ ISDN PRA has 32 channels, but, typically, one channel is reserved for sync, and another is reserved for signalling. However, if multiple ISDN PRAs are combined, one signalling channel is enough between them.

⁹⁸ Any of leased line, NG Broadband line, ADSL broadband line.

Figure 4: FNA Paths and Managed VoIP Subscriptions, Q3 2014-Q4 2020

- 3.41 Table 2 disaggregates FNA paths as at Q4 2020, whilst also describing the percentage change in the number of Managed VoIP subscriptions over the same time period (as indicated in Table 1, the number of access paths per individual line varies, depending on the type of product purchased). PSTN paths have declined by 30% since Q3 2014, while ISDN paths have declined by 37%. Of the 221,840 ISDN access paths, approximately 39% were BRA, 15% FRA and 46% PRA. This trend reflects how consumers and businesses access electronic communications networks at fixed locations:

Table 2: FNA Paths, and FNA and Managed VoIP Subscriptions, Q3 2014 – Q4 2020

	Q3 2014	Q4 2020	% change, Q3 2014 – Q4 2020
PSTN	1,247,416	870,385	-30%
ISDN Basic	132,936	86,662	-35%
ISDN Fractional	57,888	33,808	-42%
ISDN Primary	160,410	101,370	-37%
Total ISDN	351,234	221,840	-37%
Total PSTN & ISDN Access Paths	1,598,650	1,094,517	-32%
FNA RFTS Subscriptions	1,109,230	803,012	-28%
VoIP Subscriptions	367,010	523,988	43%
Total RFTS Subscriptions	1,476,240	1,327,000	-10%

Retail trends since 2014 RFVA Decision & 2015 FACO Decision

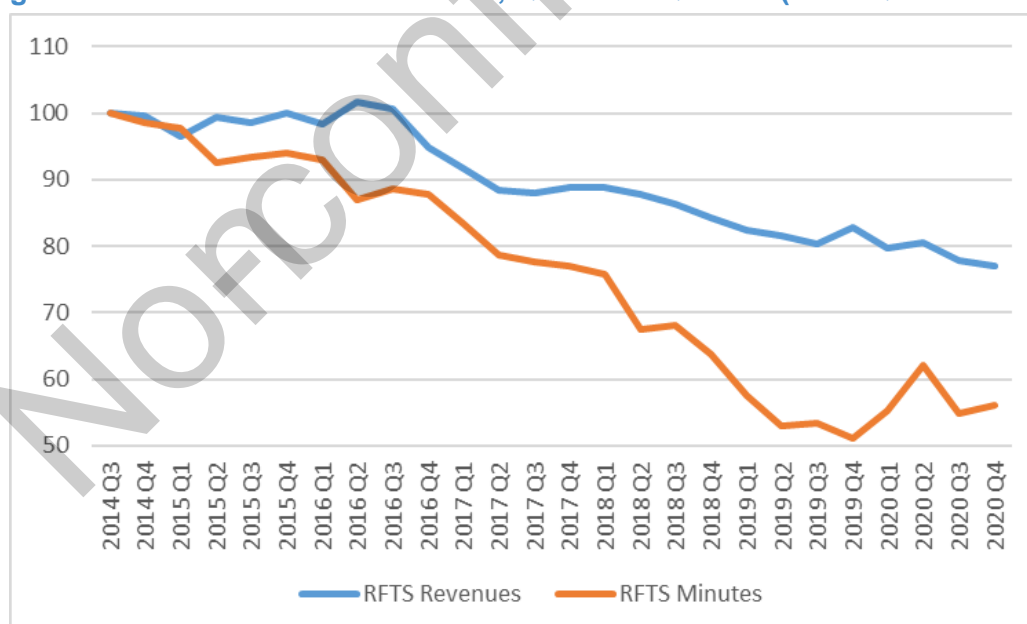
3.42 Since the 2014 RFVA Decision and 2015 FACO Decision, significant shifts have occurred in voice traffic levels and other retail trends, as discussed below. This section sets out these key changes which, in summary, are:

- (a) Persistent decline in RFTS traffic and revenues (paragraphs 3.43 to 3.48);
- (b) Mobile phone usage relative to RFTS usage (paragraphs 3.57 to 3.62);
- (c) Decline in FNA lines and subscriptions (paragraphs 3.63 to 3.67);
- (d) Stability in CATV subscription numbers (paragraph 3.68);
- (e) Increasing importance of NG Broadband (paragraphs 3.69 to 3.71);
- (f) Increased take-up of bundled retail services (paragraphs 3.72 to 3.95);
- (g) Convergence and Fixed-Mobile Substitution (paragraphs 3.96 to 3.113); and
- (h) Rollout of broadband networks (paragraphs 3.114 to 3.126).

Persistent decline in RFTS traffic

3.43 RFTS traffic and revenues (including both over FNA and broadband) have declined steadily since 2014. Based on QKDR data, Figure 5 shows that, from Q3 2014 to Q4 2020,⁹⁹ revenues attributable to RFTS traffic¹⁰⁰ have fallen by 23%, while volumes of traffic minutes have fallen by 44%:

Figure 5: RFTS Traffic and Revenues, Q3 2014 – Q4 2020 (Base Q3 2014 = 100)

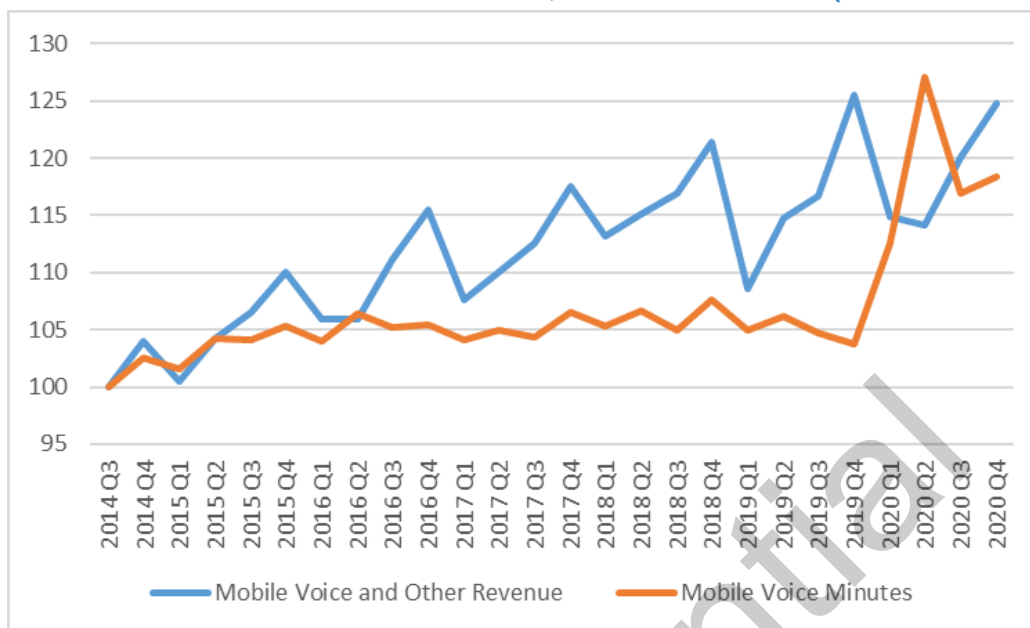


⁹⁹ ComReg notes that some of the figures/trends since Q1 2020 may be related to changes in consumption patterns arising from Covid-19 measures and may not therefore be representative of long-term trends.

¹⁰⁰ These revenues include retail revenue generated by the direct and indirect provision of RFTS, such as PSTN voice services and dial-up Internet services. This category also includes revenues from VoB services.

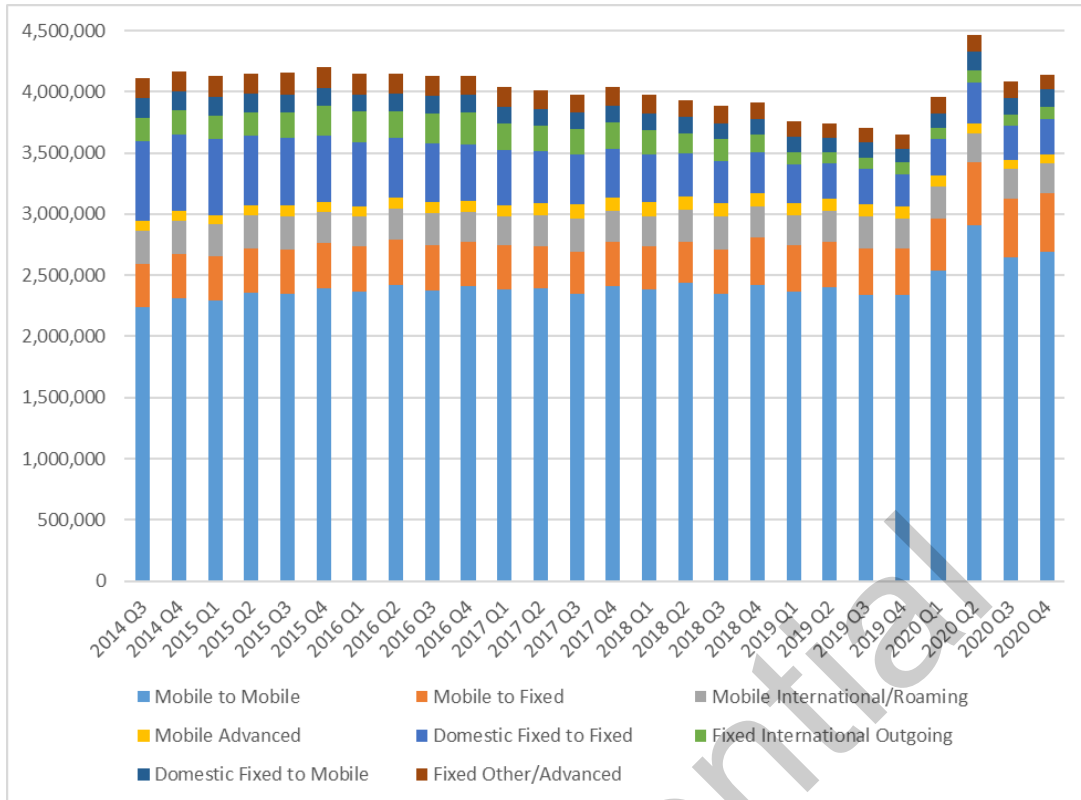
3.44 QKDR data indicate that, over the same period, mobile voice traffic and revenue have continued to increase, by 25% in the case of revenue, and 18% in the case of traffic, as illustrated in Figure 6 below:

Figure 6: Mobile Voice Traffic and Revenues, Q3 2014 – Q4 2020 (Base Q3 2014 = 100)



3.45 Figure 7 shows changes in categories of RFTS and mobile voice call volumes from 2014 to 2020. Over the period Q3 2014 to Q4 2020, total fixed and mobile call volumes have remained stable, although this masks a persistent decrease – of 11% as of Q4 2019, before the impact of the Covid-19 pandemic, which led to a sharp increase of 13% in the space of four quarters. Even accounting for increased call volumes over the course of the Covid-19 pandemic, the largest changes are decreased domestic fixed-to-fixed minutes (down 56%) and decreased fixed international minutes (down 46% over the same period):

Figure 7: Fixed and Mobile Voice Call Minute Volumes, Q3 2014 – Q4 2020



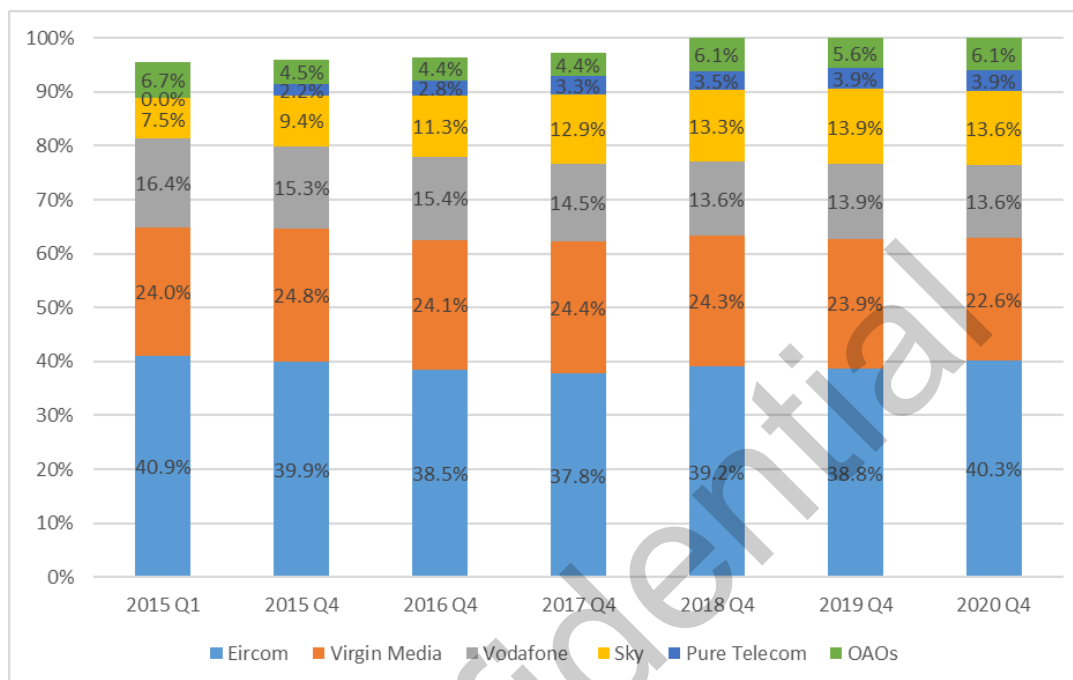
3.46 Figure 8 below shows the breakdown of RFTS by residential and business end users. The trend since Q3 2014 suggests that residential fixed voice minutes have dropped significantly (43%) while business fixed voice minutes have fallen less, albeit still significantly, by 45%.

Figure 8: Residential and Business RFTS Minute Volumes, Q3 2014 – Q4 2020



3.47 Market shares by subscription are presented in Figure 9 below. As of Q4 2020, Eircom's share has fallen slightly from 41.8% to 40.3% while Virgin Media decline slightly from 23.3% to 22.6%. Vodafone shares have decreased from 17% to 13.6%, while Sky holds a 13.6% share as of Q4 2020. Other changes over this period include a decrease in market shares for Digiweb and an increase for Pure Telecom. The share for OAOs¹⁰¹ overall has increased:

Figure 9: RFTS Market Shares by Subscription, Q1 2015 – Q4 2020¹⁰²



3.48 Overall, the trends described above are illustrative of an RFTS market in gradual decline, measured by traffic and revenues. However, total FNA and Managed VoB RFTS subscriptions over the same period have remained reasonably stable (as set out at Table 2 above), which may indicate that demand for RFTS is somewhat driven by demand for fixed NG Broadband services and broader retail bundles, with RFTS as an add-on for some, rather than by demand for standalone RFTS. This point is addressed in further detail at Section 4 below. However, according to the 2019 Residential Market Research, 23% of RFTS end users stated that their primary reason for retaining a fixed line is for use in case of emergency, which is then only followed by the 15% of end users who purchase a bundle of communications services which requires a fixed line.¹⁰³

¹⁰¹ The OAO category consists of the aggregate share of SPs who, individually, have market shares of less than 2%. In Q3 2018 Digiweb's market share fell below 2%, and it was therefore included in the OAO category.

¹⁰² These data are collected by ComReg from Q1 2015 onwards. Data for Q1 2015 to Q4 2017 do not sum to 100% as they exclude SPs which were separately reported at the time, but whose market shares now fall below 2%.

¹⁰³ Slide 85 of 2019 Residential Market Research Survey (sample size: n = 690).

Respondents' Views

- 3.49 Eircom considered that the significant decline in RFTS subscriptions delivered over FNA should not be ignored and suggested that ComReg should consider the lower decline in overall RFTS subscriptions to be more relevant to its analysis than the steeper decline in FNA RFTS subscriptions.
- 3.50 Eircom suggested that ComReg's assessment attempts to reinforce the analytical importance of RFTS subscriptions, but argued that subscription volumes do not accurately reflect consumer preferences, given that end users may retain an RFTS subscription without actively using it.
- 3.51 Eircom considered that the relatively stable number of RFTS subscriptions, and in particular dual access¹⁰⁴ households, is likely a function of the demand for other services, with which RFTS is bundled as a low cost add on.
- 3.52 Eircom therefore argued the appropriate indicator of consumer preferences should be RFTS usage, rather than RFTS subscription volume, and posited that ComReg had failed to recognise the importance of the decline in RFTS usage (measured by RFTS traffic minutes) in the context of overall competition in the RFTS markets. Eircom suggested that RFTS usage data show that a much smaller decline in Managed VoB minutes had offset the aggregate reduction in RFTS, when compared to the equivalent RFTS subscription data. Eircom noted that the decline (as of Q4 2019) in Managed VoB voice minutes (at 12%) was much lower than the decline in FNA RFTS voice minutes (at 54%). Again, however, Managed VoB minutes have increased substantially from Q4 2019 to Q4 2020.

Table 3: Changes in Managed VoB and traditional voice minutes, Q3 2014-Q4 2020

RFTS traffic minutes (000s)	Q3 2014	Q4 2020	% Change
Managed VoB RFTS	136,283	154,271	+13%
FNA RFTS	1,028,525	499,090	-51%
Total RFTS	1,164,808	653,361	-44%

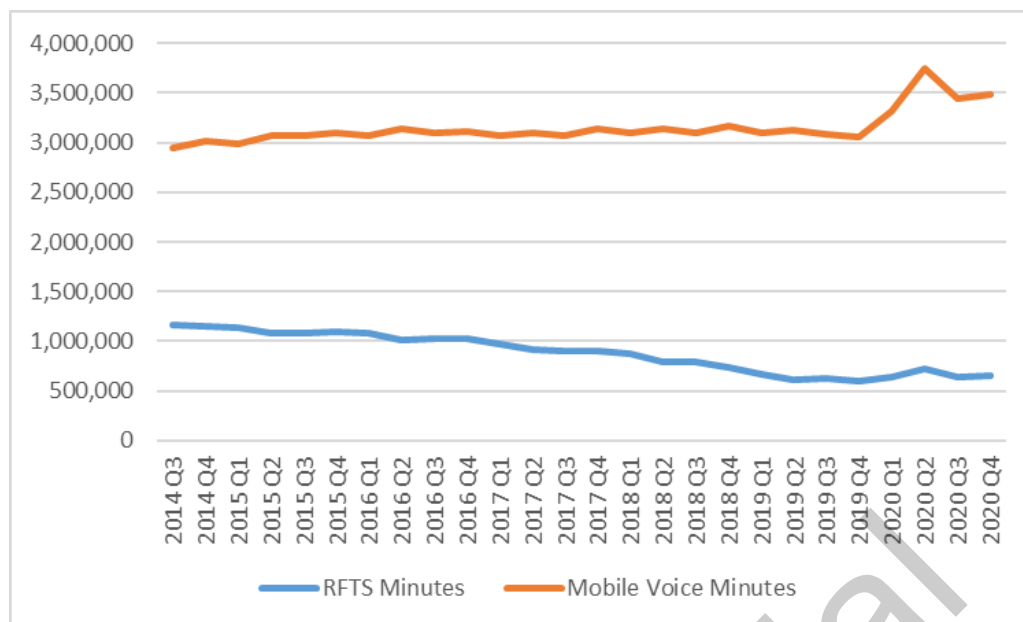
¹⁰⁴ Eircom has not defined 'dual access', but ComReg infers that it refers to households purchasing RFTS together with broadband.

ComReg's Assessment of Respondents' Views and Position

- 3.53 ComReg has primarily focused on RFTS subscriptions in its analysis, but has not ignored the decline in FNA RFTS subscriptions or indeed the decline in usage. ComReg notes that it is appropriate in its assessment to review the overall structure of the RFTS markets and any trends that may have impacted the provision of RFTS since ComReg's last review of the RFVA markets in 2014, and the FACO markets in 2015. RFTS delivery comprises both FNA RFTS and RFTS delivered by means of NG Broadband (Managed VoIP). For this reason, ComReg set out in Section 3 of the 2020 Consultation, and below, its analysis of subscriptions, revenue, traffic and usage patterns pertaining to each component, in order to conclude effectively on developments in the RFTS Markets as a whole. ComReg's position is that RFTS encompasses both FNA RFTS and Managed VoIP, therefore it is important to examine each component. However, the overall size and trends in the market is what is most important to its assessment.
- 3.54 ComReg notes that Eircom's claims in terms of the demand for RFTS being driven by the demand for other services. This is addressed in paragraph 3.93 below.
- 3.55 ComReg rejects Eircom's suggestion that it relied on RFTS subscription volumes as a single proxy for consumer preferences, or tried to reinforce its analytical importance, when conducting its analysis. ComReg also disagrees that it failed to recognise the decline in RFTS usage in the context of overall competition in the provision of RFTS.
- 3.56 ComReg notes that, in Section 3 of the 2020 Consultation, and again in paragraphs 3.43 to 3.48 above, the decline in traffic and change in usage patterns of FNA RFTS and Managed VoB RFTS are examined. To further facilitate its analysis, and in addition to QKDR data, ComReg also had regard to the 2019 Residential Market Research, the 2019 SME Market Research, the 2019 Mobile Experience Survey, and the 2018 Eurobarometer Survey where it analysed and recorded consumer RFTS usage patterns. ComReg's position is that, regardless of whether measured by traffic or subscriptions, the overall declining trend in RFTS is evident in either case.

Increase of Mobile phone usage relative to fixed phone usage

- 3.57 Over the period since the 2014 RFVA Decision, there has been steady growth in mobile voice traffic volumes, although the rate of increase has levelled off in recent years. This growth in mobile voice traffic is also reflected in the growth of mobile telephony subscriptions, which have increased from 4,888,130 in Q3 2014 to 5,234,027 in Q4 2020. Figure 10 below shows the trends in the volume of mobile and fixed originated voice minutes since Q3 2014.

Figure 10: Fixed and Mobile Voice Traffic Trends, Q3 2014-Q4 2020

- 3.58 Mobile voice traffic increased by 18% between Q3 2014 and Q4 2020 while, over the same time period, RFTS traffic declined by 44%. The number of fixed voice minutes as a percentage of all fixed and mobile voice minutes each quarter has declined from 28% in Q3 2014 to 16% in Q4 2020.
- 3.59 The 2019 Residential Market Research also showed that 49% of residential respondents had a fixed line, suggesting that up to 51% were mobile only households. ComReg notes that, of those 49% of survey respondents with a fixed line, 77% purchased the service as part of a bundle.¹⁰⁵ This shows an increase in the take up of bundled RFTS when compared with the 81% of survey respondents in the 2012 Market Research¹⁰⁶ who had a fixed line, 72% purchased RFTS as part of a bundle. As indicated in the 2019 Residential Market Research, the primary reason given by residential respondents for having a fixed line is to use it in cases of emergency (45%), followed by retaining the status quo of always having had one (34%). The 2019 Residential Market Research indicated that households with a fixed line primarily use it for receiving calls from other national fixed lines (30% daily), followed by calls from mobiles (26% daily).¹⁰⁷
- 3.60 Those households with both a fixed line and a mobile phone primarily use their mobile for calling other mobiles (71%) as opposed to other fixed lines (24%).¹⁰⁸

¹⁰⁵ 2019 Residential Market Research, slide 8 (sample size: n = 2011).

¹⁰⁶ See 'Retail Access to the Public Telephone Network provided at a Fixed Location for Residential and Non Residential Customers' ComReg Document 12/117a, October 2012 (the '2012 Market Research').

¹⁰⁷ 2019 Residential Market Research, slide 66 (sample size: n = 670).

¹⁰⁸ 2019 Residential Market Research, slide 74 (sample size: n = 690).

- 3.61 In contrast, the 2019 SME Market Research showed that only 4% of businesses do not purchase RFTS,¹⁰⁹ which indicates that RFTS remains important for a significant majority of businesses. The 2019 SME Market Research also indicated that businesses use RFTS for all types of calls (e.g. calls to national numbers, international numbers and mobile phones etc.).
- 3.62 However, the continued trend for households, and especially businesses, to retain RFTS (as well as a mobile telephony in many cases) may reflect a perception that mobile telephones are more expensive for making some types of calls. For example, 54% of respondents to the 2019 Residential Market Research perceived the cost of making a call from a mobile telephone to be more expensive than the cost of a call from a landline (when calling a national fixed landline).¹¹⁰ ComReg's QKDR shows that the consistent demand from most end users of both RFTS and mobile telephony indicates that these services are used in different ways. For example, survey respondents exhibit clear selection of mobile-to-mobile and fixed line-to-fixed line calls over mobile-to-fixed and fixed-to-mobile calls.

Decline in PSTN and ISDN fixed lines and subscriptions

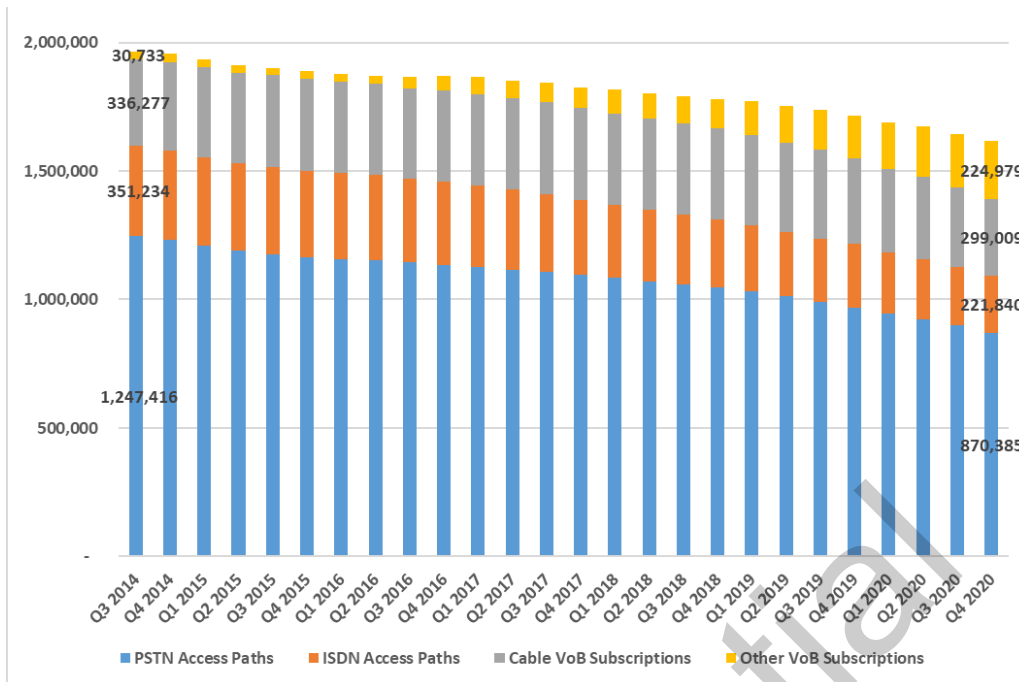
- 3.63 As set out at paragraph 3.41 above, total (direct and indirect) FNA paths have declined by 30% since Q3 2014 and stood at 1.09m in Q4 2020. While the total number of RFTS subscriptions has decreased over a six year period (by 10%), as set out in Figure 11 below, this has largely been driven by the decline in FNA RFTS subscriptions, and is partially offset by the increase in Managed VoB subscriptions.¹¹¹

¹⁰⁹ 2019 SME Market Research, slide 13 (sample size: n = 391).

¹¹⁰ 2019 Residential Market Research, slide 49 (sample size: n = 628).

¹¹¹ RFTS traffic has also fallen, from 1.16 billion minutes in Q3 2014 to 653 million minutes in Q4 2020, as illustrated in Figure 10.

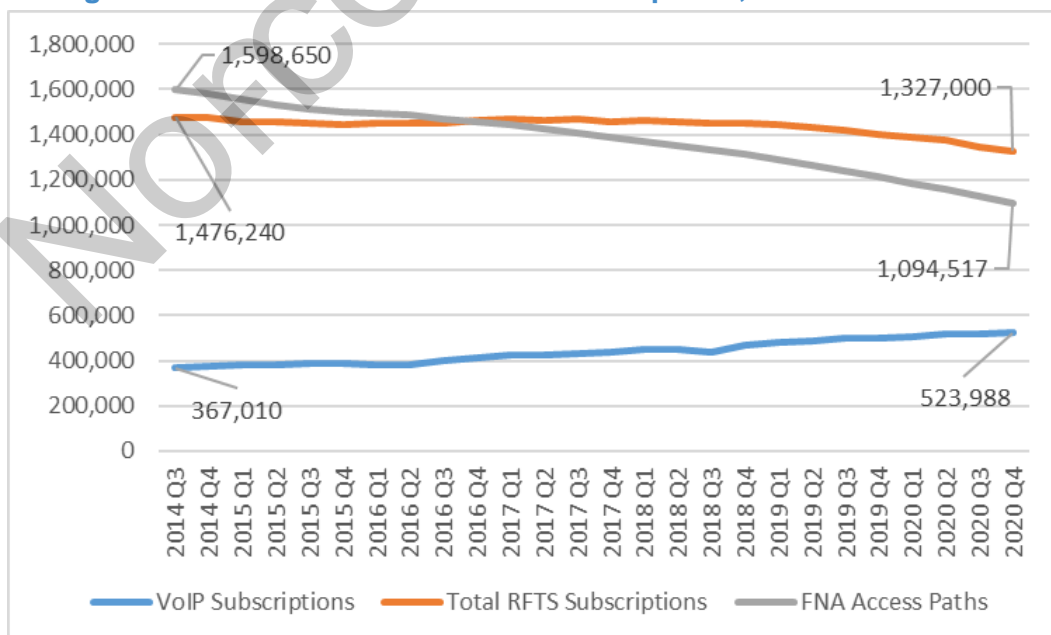
Figure 11: PSTN and ISDN Access Paths, Managed VoB subscriptions over CATV and Other Managed VoB subscriptions, Q3 2014 – Q4 2020



3.64 PSTN access paths have fallen 28% from 1.25 million access paths in Q3 2014 to 870,385 in Q4 2020. Overall demand for ISDN access paths has also decreased. ISDN BRA and FRA access paths have declined by 37%, from 351,234 access paths in Q3 2014, to 221,840 access paths in Q4 2020, as set out at Table 2 above. This is, in part, likely to be a reflection of end users migrating away from FNA RFTS to Managed VoB (see Figure 11).

3.65 Figure 12 gives the total number of RFTS subscriptions nationally (see Table 1 for information regarding the ratio of access paths to lines and subscriptions). Total RFTS subscriptions have remained reasonably stable since Q3 2014:

Figure 12: Total Retail Fixed Voice Subscriptions, Q3 2014 – Q4 2020



- 3.66 Measured by FNA and Managed VoIP RFTS subscriptions, the overall size of the RFTS market decreased by **10%** between Q3 2014 and Q4 2020. This figure masks two sharply divergent trends, however. Managed VoIP RFTS subscriptions increased by **43%** over this time period, while FNA RFTS subscriptions declined by **28%**. In light of its announced fixed network investment programme,¹¹² which will ultimately allow for the delivery of both RFTS and data services over FTTx, Eircom, as well as SPs utilising Eircom wholesale inputs for the provision of RFTS over FNA, is likely over time to progressively migrate end users to infrastructures capable of delivering Managed VoIP.¹¹³ Similarly, SPs will, where appropriate, also be able to make use of Eircom FTTx WLA/WCA, SIRO and NBI WLA (VUA) to also deliver Managed VoIP to end users, as an alternative to RFTS over FNA.
- 3.67 ComReg expects the decline in the provision of RFTS over FNA to continue, due, in part, to changing consumer preferences away from the provision of standalone RFTS, and towards the provision of RFTS bundled with other services (in particular NG Broadband), and also to the ongoing rollout and upgrade of FTTx and CATV networks. Nevertheless, FNA remains the predominant form of RFTS for households and businesses, accounting for 61% of total RFTS subscriptions, with Managed VoIP accounting for the remaining 39%. The continued importance of FNA in providing RFTS is reflected in Figure 12.

Stability in CATV subscription numbers

- 3.68 According to Virgin Media, as of Q4 2020, its CATV network had a reach of 946,500 homes passed,¹¹⁴ primarily in urban areas. As of Q4 2020, Virgin Media had approximately 383,000 broadband customers, and 300,000 Managed VoIP based RFTS customers.¹¹⁵ Figure 13 shows the evolution of Virgin Media RFTS subscriptions. As of Q4 2020, Virgin Media accounted for 57% of Managed VoIP subscriptions, and had a 22.6% RFTS market share, measured by subscriptions, despite an 11% decrease in RFTS subscriptions. This market share has been stable (variation of <1%) since at least Q1 2015.

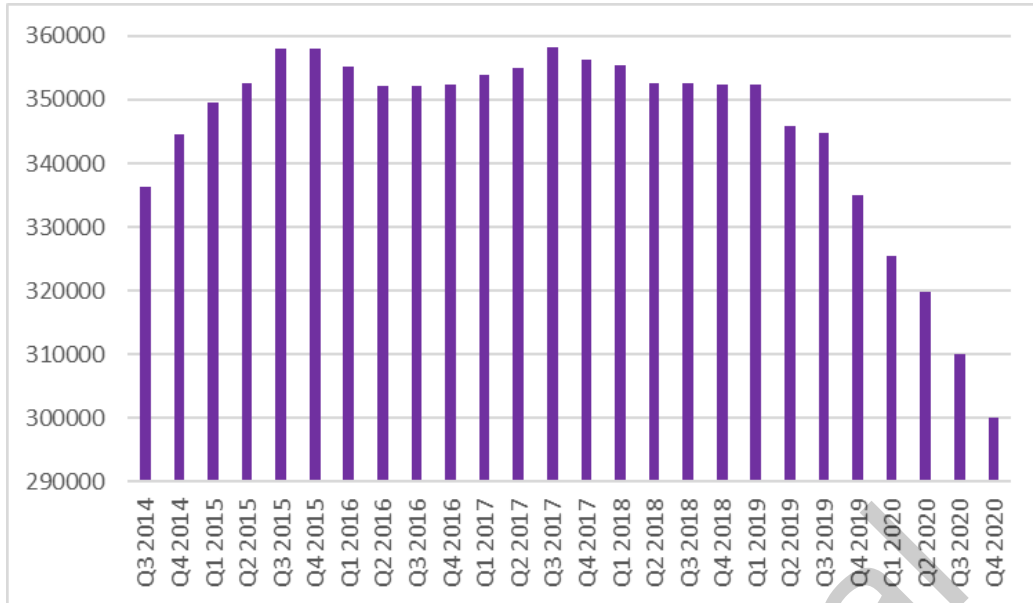
¹¹² <https://www.eir.ie/pressroom/eir-launches-0.5-billion-fixed-network-investment-programme/>

¹¹³ ComReg notes that Eircom's MSAN upgrade is likely to prolong the life of the FNA network up the point of envisaged copper switch-off.

¹¹⁴ Liberty Global Quarterly Fixed Income Releases, available online at <https://www.libertyglobal.com>.

¹¹⁵ *Ibid.*

Figure 13: Virgin Media RFTS Subscriptions Q3 2014 – Q4 2020¹¹⁶



Increasing importance of NG Broadband connections

3.69 The rollout of FTTx networks delivering high-speed broadband means that infrastructure is increasingly being put in place which allows for the delivery of Managed VoIP, in preference to RFTS over FNA. According to QKDR data, total fixed broadband subscriptions amounted to 1.52 million in Q4 2020, a 22% increase since Q3 2014. The estimated fixed broadband household penetration rate was 72.1% in Q4 2020,¹¹⁷ and the fixed broadband per capita penetration rate was 37%.¹¹⁸

Figure 14: Fixed Broadband Subscriptions by Platform, Q3 2014 – Q4 2020



¹¹⁶ Ibid.

¹¹⁷ ComReg QKDR Data, Q4 2020.

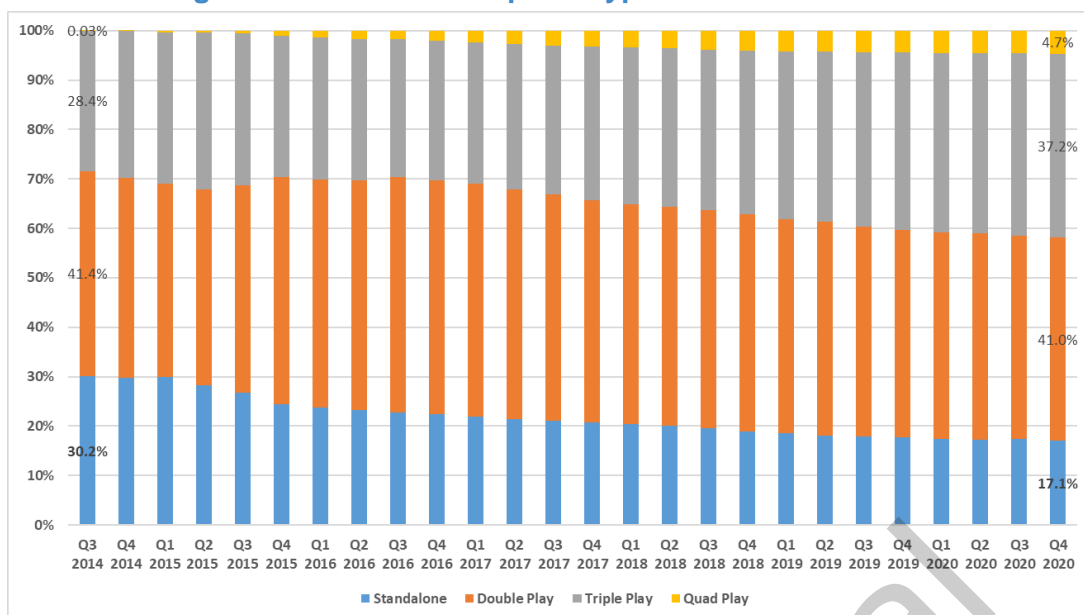
¹¹⁸ ComReg QKDR Data, Q4 2020.

- 3.70 Figure 14 shows broadband subscriptions by technology since Q3 2014. Comparing the 2014 RFVA Decision with Q4 2020, over both time periods, CATV, DSL and FTTC (VDSL) account for over 79% of fixed broadband connections, with the major change being the reversal of positions of DSL and FTTC, as Eircom replaces DSL with FTTC and eVDSL across its network.
- 3.71 VDSL over FTTC and eVDSL has superseded DSL over FNA as the most common means of accessing broadband, driven by advances in functionality and quality arising from NG Broadband network rollout. The number of end users availing of FTTC/eVDSL and DSL respectively has changed from 52% (DSL) and 14% (FTTC) at Q3 2014, to 12% (DSL) and 42% (FTTC) in Q4 2020. FTTP rollout has a 16% share of fixed broadband subscriptions as of Q4 2020, starting from 0.47% when FTTP connections first began to be recorded at Q2 2016. The increase in broadband subscriptions delivered over FTTC/eVDSL and FTTP in particular, and the decline in subscriptions delivered over DSL indicate that an increasing proportion of broadband end users are, in principle, capable of availing of Managed VoIP RFTS, rather than over FNA RFTS.

Increased take-up of bundled retail services

- 3.72 A further development since the 2014 RFVA Decision has been the growth in purchasing RFTS as part of a bundle containing other electronic communications services, rather than on a standalone basis. As of Q4 2020, 83% of Total RFTS subscriptions were sold as part of a bundle, with the remaining 17% sold on a standalone basis.
- 3.73 As illustrated by Figure 15 below, the most common types of fixed subscriptions provided by SPs in Ireland are:
- (a) Dual play, consisting of RFTS bundled with broadband (40%), mobile voice (<1%) or TV (<1%); and
 - (b) Triple play, consisting of RFTS with two of the other listed services in point 3.73(a).
- 3.74 The data presented in Figure 15 record the total number of RFTS subscriptions delivered on a standalone basis, and as part of a dual, triple, or quad-play package:

Figure 15: RFTS Subscription Types Q3 2014 – Q4 2020



3.75 49% of all standalone and bundled retail subscriptions purchased in Ireland include an RFTS component.¹¹⁹ Table 4 below illustrates that RFTS continues to be purchased by Irish end users, both on a standalone basis, and as part of a bundle, and is the third most popular component choice in both standalone and (dual, triple or quad-play) bundled purchases by end users. Thus, for example, 60% of all (standalone and bundled) subscription types include an RFTS component:

Table 4: Standalone and bundled subscription types including RFTS, Q4 2019-Q4 2020

Component	Q4 2019	Q4 2020
RFTS	63%	60%
Broadband	64%	67%
TV	48%	49%
Mobile telephony	8%	10%

3.76 As shown in Table 5 below, subscribers purchase RFTS on a standalone basis, or as part of a bundle which may include TV, broadband, or mobile telephony:

¹¹⁹ 2019 Residential Market Research, slide 8 (sample size: n = 2011).

Table 5: Percentage of Total RFTS subscriptions purchased on a standalone and bundled basis, Q3 2014 – Q4 2020¹²⁰

Subscription type	% of all RFTS subscriptions		
	Q3 2014	Q4 2019	Q4 2020
Standalone	30%	18%	17%
Double play	41%	42%	41%
Triple play	28%	36%	38%
Quad play	0	4%	4%
Total	100%	100%	100%

- 3.77 Thus, 17% of Total RFTS subscriptions are purchased on a standalone basis, compared with 30% at the time of the 2014 RFVA Decision. Dual play was the most common bundle option amongst the 83% of RFTS subscriptions purchased RFTS in a bundle in Q4 2019, with 70% being the equivalent figure in 2014. These data therefore indicate that 83% of RFTS consumers prefer to purchase RFTS as part of a bundle, rather than on a standalone basis.
- 3.78 ComReg data further suggest that RFTS is a component of almost all bundle types. While only 22.8% of all standalone subscriptions are RFTS subscriptions, over 95.3% of bundled subscriptions include an RFTS component, as Table 6 shows:

Table 6: RFTS subscriptions as component of all standalone and bundled subscription types, Q4 2019-Q4 2020

Type of subscription	% of subscription types which include RFTS component	
	Q4 2019	Q4 2020
Standalone	24.5%	22.8%
Double play	93% ¹²¹	83%
Triple play	99.6%	98.9%
Quad play	100%	100%
All bundled subscriptions	95%	95%
All subscriptions	63%	60%

- 3.79 The 2019 SME Market Research also indicated a high prevalence of businesses purchasing RFTS bundled with other products. Of the 96% of surveyed businesses who reported that they purchased RFTS, 69% reported purchasing RFTS as part of a bundle,¹²² with 90% of those bundles being comprised of RFTS and broadband.¹²³

¹²⁰ Data based on SP submissions to ComReg.

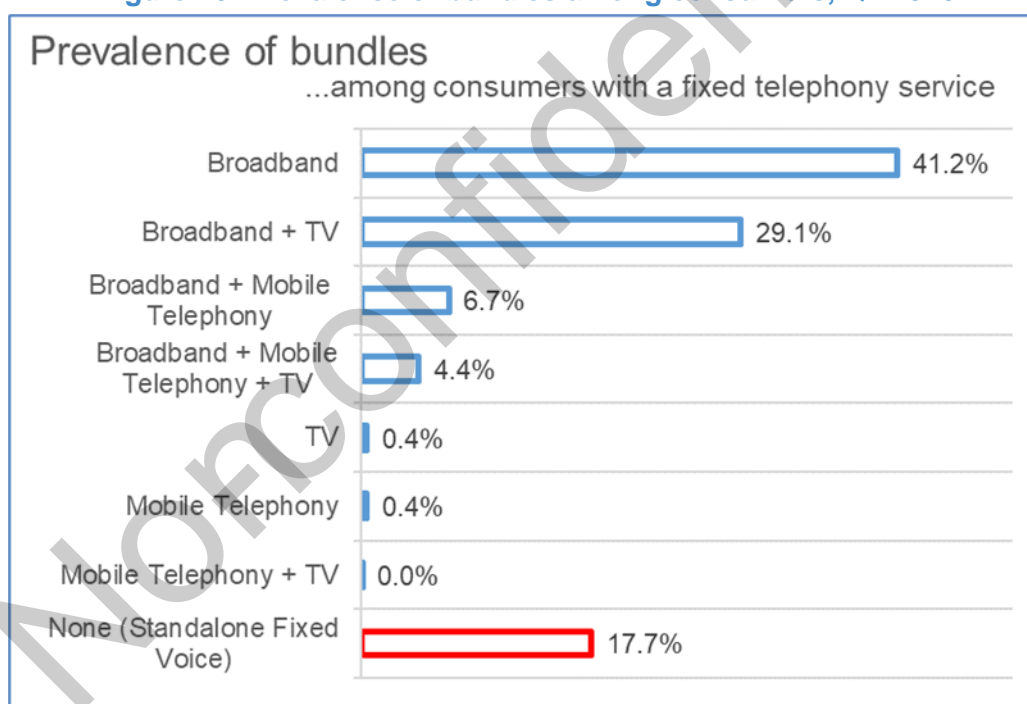
¹²¹ This means that 17% of double play subscriptions do not have an RFTS component (i.e. broadband and TV, broadband and mobile, or TV and mobile).

¹²² 2019 SME Market Research, slide 14. (sample size: n = 365).

¹²³ 2019 SME Market Research, slide 13. (sample size: n = 391).

- 3.80 Data set out above indicate that RFTS traffic has declined significantly since the 2014 RFVA Decision (Figure 10). However, the magnitude of the decline in RFTS usage is not reflected in RFTS subscriptions, either on a standalone or a bundled basis. Given that over 56%¹²⁴ of retail bundles include an RFTS component, this suggests that, for many households and businesses, the incremental cost of RFTS is likely to make up only a small portion of the overall cost of the product bundle. As indicated at paragraphs 3.59 and 3.62 above, while RFTS usage has declined, respondents still describe a preference for retaining RFTS.
- 3.81 This general trend of RFTS being increasingly sold as part of a bundle is supported by the 2019 Residential Market Research, which indicated that, at the time (Q4 2019), 77% of residential RFTS consumers interviewed purchased this product as part of a bundle.¹²⁵ The most commonly purchased bundle among these survey respondents was RFTS and broadband (46% of RFTS respondents purchased this bundle). Similar figures are seen in Figure 16. According to Q4 2020 QKDR data, dual play bundles, consisting of both RFTS and broadband are the most common bundle amongst consumers who purchase RFTS (41%):

Figure 16: Prevalence of bundles among consumers, Q4 2020



¹²⁴ 2019 Residential Market Research, slide 23. (sample size: n = 913).

¹²⁵ 2019 Residential Market Research, slide 8. (sample size: n = 2011).

- 3.82 From the end user perspective, purchasing bundles has benefits in terms of both convenience (receiving a single bill) and better value - on a like-for-like basis, it is typically cheaper to purchase a bundle from a single SP, than the same products individually from separate SPs. Consumers and businesses can benefit in terms of more predictable bills (whereby the consumption component of the bill is fixed, rather than variable) and, when chosen correctly, real cost reductions. These benefits were seen across both business and residential customers. Respondents to the 2019 SME Market Research indicated that bundles made it easier to manage a supplier (49%) and negotiate better discounts/best price (33%).
- 3.83 Table 7 below compares the prices of standalone RFTS, standalone broadband, and dual play broadband and RFTS bundles offered for sale by the five SPs which, according to Q4 2020 QKDR data, account for 93.9% of Total RFTS subscriptions (Eircom, Virgin Media, Vodafone, Sky and Pure Telecom).¹²⁶ The table suggests two key findings.
- 3.84 The **first** key finding is that, as of May 2021, of these five SPs, only Eircom and Pure Telecom actively offer standalone RFTS for sale (SPs may continue to offer RFTS on a legacy basis to existing customers). None of Vodafone, Virgin Media, or Sky offers a standalone RFTS product. Between them, the five SPs offer just five standalone RFTS products, but 13 bundled broadband and RFTS products. Accordingly, end users with a preference for bundled purchases face greater switching opportunities (between five SPs and 13 packages) than end users with a preference for standalone RFTS (between two SPs and five packages).
- 3.85 The **second** key finding is that the incremental cost to an end user of adding RFTS to their broadband purchase varies widely across SPs. To calculate the incremental additional cost which an end user could theoretically expect to pay, ComReg compares the prices of standalone broadband, and bundled RFTS and broadband products, and averages out the increment on a monthly basis over a notional 24-month period, excluding one-off set-up costs, which may vary:

¹²⁶ Table 7 presents data and calculations based on publicly available information on the relevant SPs' websites, as at May 2021. Not all offerings are listed as the full suite of products may not be available online.

Table 7: Broadband and RFTS bundles, May 2021

Package name	Bundle	Advertised cost (excl. Variable one-off set-up costs)	Av. monthly cost over 2 years	Cost of RFTS component	RFTS as % of Bundle
Eircom¹²⁷					
Off-peak Landline	Phone only	€39.99/pm	€39.99		
Anytime Landline	Phone only	€49.98/pm	€49.98		
150Mb Broadband + (Off-peak) Landline	BB + phone	€29.99 p/m for 12 months, then €59.99p/m	€44.99	€39.99	88%
500Mb Broadband + (Off-peak) Landline	BB + phone	€39.99 p/m for 24 months	€39.99	€39.99	100%
1Gb Broadband + (Off-peak) Landline	BB + phone	€49.99/pm, for 24 months	€49.99	€39.99	80%
Virgin Media¹²⁸					
250Mb Broadband	Broadband only	€40p/m for 12 months, then €60 p/m	€50.00		
500Mb Broadband	Broadband Only	€51 p/m for 12 months, then €71 p/m	€61.00		
1Gb Broadband	Broadband Only	€65 p/m for 12 months, then €85	€75.00		
250Mb + Home Phone	BB + phone	€43 p/m for 12 months, then €63 p/m	€53.00	€3.00	5.6%
500Mb + Home Phone	BB + phone	€54 p/m for 12 months, then €74 p/m	€64	€3.00	4.6%
1Gb + Home Phone	BB + phone	€65 p/m for 12 months, then €85 p/m	€78	€3.00	3.8%

¹²⁷ Phone only: <https://www.eir.ie/phone/> Broadband and phone: <https://www.eir.ie/broadband/>

¹²⁸ Broadband only: <https://www.virginmedia.ie/broadband/buy-a-broadband-package/> Broadband and phone: <https://www.virginmedia.ie/bundles/broadband-and-homephone/>

Vodafone ¹²⁹					
Simply Broadband	Broadband Only	€30 p/m for 12 months, then €50 p/m	€40.00		
Fibre 500Mb	Broadband Only	€30 p/m for 12 months, then €60 p/m	€45.00		
Fibre 1000Mb	Broadband Only	€40 p/m for 12 months, then €70 p/m	€55		
Simply Broadband + Talk	BB + Phone	€30 for 12 months, then €55	€42.50	€5	11.7%
Vodafone Fibre Broadband 500 and Landline	BB + phone	€30/pm for 12 months, then €65/pm	€47.50	€5	10.5%
Vodafone Fibre Broadband 1000 and Landline	BB + phone	€40 p/m for 12 months, then €75 p/m	€57.50	€5	8.7%
Sky ¹³⁰					
Ultrafast Max 1Gb	Broadband Only	€45 for 12 months, then €70	€57.50		
Ultrafast Plus 500Mb	Broadband Only	€35 for 12 months, then €60	€47.50		
Superfast 100MB	Broadband Only	€35 for 12 months, then €50	€40.00		
Sky Broadband Superfast & Talk Freetime	BB + Phone	€35 for 12 months, then €55	€45.00	€5	11.1%
Sky Broadband Superfast & Talk Anytime	BB + Phone	€42.50 for 12 months, then €62.50	€52.50	€12.50	23.8%
Ultrafast 150Mb + Talk Freetime	BB + Phone	€40 for 12 months, then €65	€52.50	€5	9.5%

¹²⁹ Broadband only: https://n.vodafone.ie/shop/broadband.html?c_id=&c_name=switcher-direct-traffic&c_source=switcher&c_medium=affiliates&c_term=switcher-direct&utm_source=switcher.ie&utm_medium=referral Note: BB + Phone Packages are all available as Broadband Only.

¹³⁰ <https://www.sky.com/ie/shop/choose/broadband-and-talk-selector/product-selection?irct=ShopBroadband-ROI-Prospect-BBUL-swcb-roi>

Pure Telecom ¹³¹					
Unlimited Broadband	Broadband only	€35 p/m for 12 months, then €40.00	€37.50		
Irish landlines	Phone only	€29 p/m	€29		
Irish mobiles	Phone only	€35.50 p/m	€35.50		
International	Phone only	€30.50 p/m	€30.50		
Instant Speed	Fibre BB + Irish landlines	€35.00 p/m for 12 months, then €40.00	€37.50	€0	

- 3.86 In the case of **Eircom**, two of its three dual play bundles are marginally cheaper than one of the standalone RFTS products, when averaged over 24 months. In the other case, on a like-for-like basis, the 1Gb Broadband dual play product is 25% more expensive than standalone RFTS, respectively.
- 3.87 In the case of **Pure Telecom**, their dual play bundle is the same cost as purchasing standalone broadband. However, it is possible to purchase standalone RFTS for 22.6% less than RFTS bundled with broadband.
- 3.88 For **Virgin Media**, standalone broadband is offered at speeds of 250Mb, 500Mb and 1Gb. A like-for-like comparison with the dual play bundles is carried out. Averaged over 24 months, the addition of RFTS adds from 3.8% or 5.6% to the price of standalone broadband.
- 3.89 For **Vodafone**, the RFTS component of a bundle accounts for between 8.7% to 11.77% of the overall price.
- 3.90 **Sky** offers Standalone Broadband and a bundled product consisting of both Broadband and RFTS. As a proportion of Sky Broadband and RFTS bundles, the RFTS component is between 9.5% and 23.8% of the overall price.
- 3.91 Accordingly, the incremental cost of adding RFTS to standalone broadband ranges from a net saving when purchasing a bundle, to 86.2%. These figures vary greatly across SPs. For example, with Pure Telecom, 'voice-centric' customers who value RFTS face very little incentive to add broadband to their package, (and, therefore, retain the incentive to continue to purchase standalone RFTS), while with other SPs such as Eircom, 'broadband-centric' customers face a much lower incremental cost to add RFTS, and may even pay less for a bundle than standalone voice under certain scenarios (when one-off setup costs, which may vary, are excluded).

¹³¹ Standalone phone: <https://www.puretelecom.ie/landline-service>, Fibre broadband and phone: <https://www.puretelecom.ie/fibre-broadband>

Respondents' Views

3.92 Eircom argued that the increasing trend of RFTS being sold as part of a bundle suggested that any continuing demand for RFTS is driven by demand for other telecommunications services, with the continued, but declining, provision of RFTS linked, in particular, to the progressive adoption of broadband access. Eircom indicated that the 2019 Residential Market Research supported this interpretation, noting, *inter alia*, that only 5% of respondents which purchased RFTS in a bundle considered RFTS to be the most important component of that bundle. Eircom also asserted that the 2019 Mobile Customer Experience survey suggested that a slight majority of end users who have access to both RFTS and mobile telephony retain RFTS due to inertia, rather than express preference for doing so.

ComReg's Assessment of Respondents' Views and Position

3.93 ComReg disagrees that “any” continuing demand for RFTS is driven by demand for other services. Eircom's assertion fails to take into consideration the 237,666 standalone RFTS purchasers whose demand is evidently not driven by demand for any other services. It additionally fails to consider that a small proportion of standalone RFTS purchasers also, separately, purchase bundles of other telecommunications services, indicating that their demand for bundled services in this case is not specifically linked to their demand for RFTS.¹³²

3.94 In respect of those end users which purchase Bundled LL-RFTS, ComReg considers that Eircom's interpretation of the 2019 Market Research results is open to question, and that continuing demand for RFTS as part of a bundle is not necessarily due to demand for other services in that bundle. According to the 2019 Residential Market Research, only 5% of overall respondents claim that RFTS is the *most* important element in their bundle. This does not mean that they do not deem RFTS to be important, rather that they consider another component of their bundle to be *more* important. ComReg also notes that, in the 2019 Mobile Customer Experience Survey, the most frequent answer given by respondents when asked for their rationale for retaining both a landline phone and a mobile phone is “*Making calls with the landline phone is cheaper*”.¹³³ This is only then followed by Respondents' assertions that their landline is required to facilitate their connection to broadband services. In addition, in certain cases, there is a noted cost benefit for end users who wish to purchase both RFTS and broadband, to do so as part of a bundle rather than on a standalone basis. ComReg notes that the differential cost in this case is also likely to drive the trend of end users purchasing their services as part of a bundle.

¹³² Slide 23 of 2019 Residential Market Research (sample size: n = 913).

¹³³ Slide 27 of 2019 Mobile Customer Experience Survey. (sample size: n = 1487).

3.95 Having considered Respondents' views above, ComReg's position is that although demand for RFTS is in gradual decline, it remains an important service to both standalone and bundled purchasers and does not agree that such demand is solely attributable to demand for other services.

Convergence and Fixed Mobile Substitution ('FMS')¹³⁴

3.96 Fixed-mobile convergence describes the development of technologies intended to progressively remove the distinctions between fixed and mobile telephony. At the extreme, convergence could lead to fixed-mobile substitution ('FMS'), or integration of fixed and mobile services in the same relevant market. The following technological and commercial developments may drive FMS:¹³⁵

- (a) SP participation in both fixed and mobile markets (although this could also be evidence of insufficient FMS, e.g. where distinct value propositions are offered to fixed and mobile customers);
- (b) The launch of new technologies which improve the performance of mobile networks, in particular, in relation to mobile broadband;
- (c) Devices adapted to fixed and mobile usage - depending on price and usage trends, converged devices relying on mobile network inputs may lead to increasing FMS to such convergent offers;
- (d) Commercial offers and usage habits; and
- (e) Lower Mobile Termination Rates ('MTRs').

¹³⁴ FMS refers to switching from FNA or broadband services to mobile broadband services.

¹³⁵ Further details in respect of FMS trends are set out in BEREC report (BoR (17)187, published in October 2017, and available online at https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/7311-berec-report-on-the-convergence-of-fixed-and-mobile-networks.

3.97 As set out above, RFTS is declining both in terms of revenues and volumes, while there has been growth in mobile voice call traffic volumes. In Q4 2020, mobile originating voice minutes accounted for 84% of all voice minutes (compared to 71% in Q3 2014¹³⁶), while traffic originating on RFTS accounted for the remaining 16% of all voice minutes (compared to 30% in Q3 2014),¹³⁷ However, as noted in the 2019 Residential,¹³⁸ even with access to mobile telephony services ('MTS'), end users nevertheless retain their fixed landline, albeit with a notable difference in usage patterns. Of the respondents with both RFTS and MTS, 66% said they would use RFTS for calls to other landlines (24% said they would use MTS), while 45% indicated that they would use RFTS for calls to international numbers (21% said they would use MTS). This can then be compared to the 74% of end users who use MTS for calls to other mobiles on the same network, compared with 15% who stated that they would use RFTS. This indicates that, while there is likely to be some substitutability between RFTS and MTS, the evidence suggests that end users consider RFTS and MTS to be broadly complementary rather than directly substitutable for each other.

3.98 Figure 17 below profiles recent volumes of originating RFTS calls by call type on a quarterly basis:

Figure 17: Share of originating RFTS calls Q3 2014 to Q4 2020¹³⁹



¹³⁶ ComReg QKDR Q3 2014.

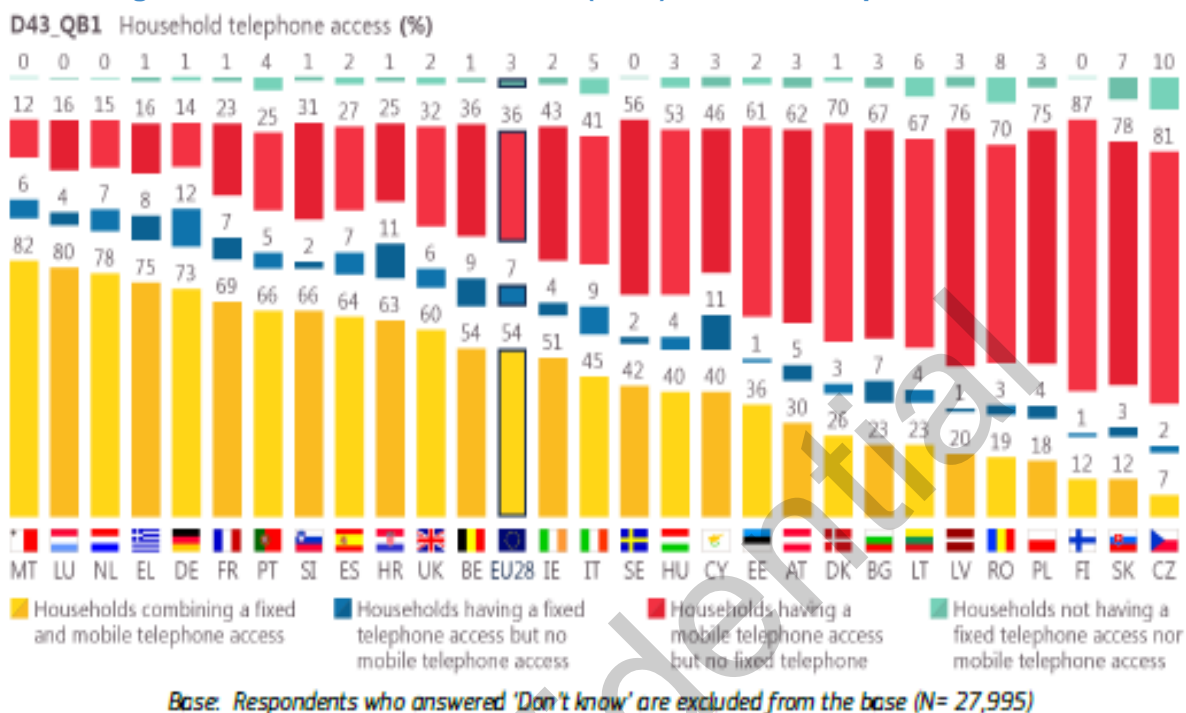
¹³⁷ ComReg QKDR, 2014 to 2020.

¹³⁸ Slide 74 of the Residential Market Research. (sample size: n = 690).

¹³⁹ Data taken from ComReg QKDR, Q3 2014 to Q4 2020.

3.99 As with voice traffic across Europe, fixed line penetration is also extremely heterogeneous across Europe with, at one extreme, 88% of Maltese households having fixed telephone access, compared to just 9% of Czech households, at the other extreme. Ireland sits in the middle, beside the EU average, with 55% of households having fixed telephone access:

Figure 18: Eurobarometer No. 462 (2018) - Overall Telephone Access¹⁴⁰



3.100 Figure 18 above suggests that dual access (i.e. having both fixed and mobile telephone access) is still the most common scenario, with the bare majority of Irish households (51%) having such access. 43% of households claim they have mobile only access while one in twenty-five (4%) have fixed access only.

¹⁴⁰ Eurobarometer edition 462: E-Communications and Digital Single Market (July 2018) at <https://publications.europa.eu/en/publication-detail/-/publication/57889a55-8fb6-11e8-8bc1-01aa75ed71a1/language-en>, p.31. Eurobarometer publishes special editions focussing on specific industries periodically; this is the last such editions which focussed on telecoms, and no further edition has been published since 2018.

- 3.101 As illustrated in Figure 3, ComReg observes a trend towards a higher mobile penetration rate per capita, and a lower rate of RFTS penetration rate per premises in Ireland. In Q4 2020, the mobile penetration rate was 143%, including mobile broadband and M2M, and 105%, excluding mobile broadband and M2M.¹⁴¹ This is reflected in the high rate of access to a mobile phone. According to the 2018 Eurobarometer cited above, 93% of Irish households have access to at least one mobile phone. 55% of households in Ireland retain a fixed telephone line, despite declining overall numbers of FNA, as set out at paragraph 3.99 above. Furthermore, according to ComReg QKDR data, as of Q4 2020, this has increased to 100% of Irish households having access to MTS, while 59.7% still retain access to RFTS.¹⁴²
- 3.102 According to the 2018 Eurobarometer special edition on telecoms, 43% of EU households and 36% of Irish households are mobile-only. In contrast, the 2019 SME Market Research indicates that only 23%¹⁴³ of businesses do not have fixed line access. This suggests that businesses continue to place a high value on access to RFTS, and this is reflected in RFTS traffic among business users (see Figure 8). The 2019 SME Market Research showed that businesses preferred to use RFTS for calls of all types, i.e. to other fixed lines, mobile, international. Furthermore, households surveyed¹⁴⁴ indicated continued usage of fixed line telephony, primarily using fixed lines to make calls to other fixed numbers while mobiles were used to make calls to other mobile numbers. In addition, 54% of household respondents perceive mobile voice services to be more expensive than fixed voice services when calling local/national fixed numbers.

Respondents' Views

- 3.103 Eircom noted that, while RFTS has been in decline, mobile call traffic volumes and originating minutes have increased, as has mobile phone ownership. Eircom therefore considered that consumer preferences suggest that customers are not only using RFTS significantly less, but also increasingly switching from RFTS to mobile voice. Eircom therefore expressed surprise that ComReg has concluded that mobile voice was not an effective substitute for RFTS, given the evidence presented by ComReg and its recognition of the increasing substitution between RFTS and mobile voice services.

¹⁴¹ ComReg QKDR Data Q4 2020

¹⁴² ComReg QKDR Data Q4 2020 – Penetration rates

¹⁴³ 2019 SME Market Research, slide 8. (sample size: n = 501).

¹⁴⁴ 2019 Residential Market Research, slide 74. (sample size: n = 690).

- 3.104 Eircom criticised ComReg's reporting of the 2019 Residential Market Research, which ComReg had interpreted as demonstrating that consumers may perceive that it is more expensive to make certain types of calls from a mobile phone. Given the convergence of pricing levels for fixed and mobile services, Eircom considered that this was a misconception on the part of a subset of customers with regard to the price of mobile to fixed calls. Eircom argued that it was unlikely that such a perception was a significant driver for the retention of RFTS subscriptions and was unlikely to impact FMS in any meaningful way.
- 3.105 Eircom further noted that ComReg's analysis in Table 6 of the 2020 Consultation did not consider bundles including mobile, as well as standalone mobile tariffs, and therefore failed to show that all-inclusive call packages are widely available on both fixed and mobile. Eircom concluded that this, in Eircom's view, highlighted ComReg's weakly substantiated basis for assessing FVCO and FA together. Eircom considered that ComReg had failed to adequately consider consumers' abilities to act independently, and that all-inclusive mobile calls packages are capable of acting as an indirect retail constraint on the upstream provision of both FVCO and FA.
- 3.106 In its Submission on behalf of Eircom, Copenhagen Economics ('CE') noted that evidence on market trends was indicative of increased FMS, and alluded to data and survey evidence from ComReg's Mobile Customer Experience Survey, QKDR data, and European Commission research, all of which demonstrated the prevalence of mobile phone ownership and usage, and the decline in RFTS ownership and usage. CE suggested that this trend was most evident for voice traffic in minutes, where RFTS traffic has decreased by more than 40%, while mobile voice traffic has continued to increase.
- 3.107 CE concluded that, on the whole, while there are some differences in usage patterns, fixed and mobile telephony are increasingly used for the same purposes, and the majority of customers have either fully abandoned RFTS or use it to a limited extent.

ComReg's Assessment of Respondents' Views and Position

- 3.108 ComReg notes Eircom's views in respect of mobile voice services as a potential substitute for RFTS. ComReg has set out its reasoning and position in this regard at Section 4 of this Decision. ComReg further notes that Eircom's claims that it failed to adequately consider consumers' abilities to act independently, and that MTS are capable of acting as an indirect retail constraint on the upstream provision of both FVCO and FA are addressed in Section 5 of this Decision.

3.109 Furthermore, ComReg considers that it has accurately reported the survey results from the 2019 Residential Market Research. Eircom stated that, given the convergence of pricing levels for fixed and mobile services, it was a misconception on the part of a subset of customers with regard to the price of mobile to fixed calls. ComReg's reporting of the survey results flagged this misconception in terms of the price differential. ComReg observes that at paragraph 3.97 in the 2020 Consultation, and, again, at paragraph 3.126(e) below, it noted

“.....end users tend to use fixed and mobile services in a complementary manner, for different purposes, and perceive price differences between the two services (even though actual price differences have been declining).”

3.110 ComReg disagrees that this purported misconception is unlikely to be a significant driver for the retention of RFTS subscriptions or impact FMS in any meaningful way. ComReg notes that, according to the 2019 Residential Market Research,¹⁴⁵ 54% of respondents perceived the cost of calls to national fixed landlines to be more expensive on a mobile phone than a landline, whereas 55% perceived costs to be higher to international numbers. This, in fact, coincided with respondents' calling behaviours, noting that 66% of respondents used RFTS for calls to national numbers, and 45% used RFTS to call international numbers. ComReg notes that it is this perception of cost which influences end user behaviour and, ultimately the likelihood of FMS.

3.111 ComReg notes Eircom's observation in respect of Table 6 of the 2020 Consultation. However, ComReg refutes Eircom's claims that mobile bundles were not considered as part of its analysis. Annex 4 of the 2020 Consultation outlined all publicly available offers, on both a fixed and standalone basis, from each of the primary mobile and RFTS SPs. These packages were then summarised in Table 25 and considered in ComReg's analysis in Section 4 of the 2020 Consultation.

¹⁴⁵ Slide 51 and 74 of 2019 Residential Market Research. (sample size: n = 409, n = 690).

- 3.112 ComReg noted some evidence that FMS is increasing in paragraph 3.80 of the 2020 Consultation. However, as noted in Section 4 of the 2020 Consultation, paragraph 4.323, while the direction of change is towards some substitutability with particular customers moving away from RFTS and related services to mobile services, in general, the evidence suggests that end users consider access through mobile networks and RFTS to be broadly complementary. As further noted in paragraph 4.323 of the 2020 Consultation, end users show a strong preference for purchasing both mobile as well as RFTS with a mix of RFTS and mobile services being used to meet different needs. In addition, as discussed in paragraphs 4.311 to 4.324 of the 2020 Consultation, the degree of FMS is not sufficiently strong, such that the impact on suppliers of the focal products amounts to a sufficiently effective and immediate constraint over the lifetime of this review.
- 3.113 Having considered Respondents' views above, ComReg's position is that any misconception on the part of end users, in terms of the cost of RFTS, does have an impact on the likelihood of FMS, as it appears relevant to the influence of actual end user behaviour. Evidence supporting this position is further detailed in Section 4. While ComReg notes that FMS appears to be increasing, ComReg's position is that RFTS and MTS continue to be broadly complementary rather than substitutable and are likely to remain as such for the period of this market review.

Rollout of broadband networks

- 3.114 A number of SPs are engaged in the rollout of NG Broadband networks.

Eircom

- 3.115 Eircom operates a near-ubiquitous copper FNA network, over which it provides wholesale and retail fixed telephony and broadband access. Eircom is currently rolling out its FTTx network, with 2.1 million premises passed by Eircom FTTx, as of Q4 2020. Eircom reports that in excess of 86% of the premises in the State are passed by Eircom FTTx capable of delivering Managed VoIP.¹⁴⁶ Eircom's initial FTTx network rollout plans included 300,000 rural premises which were originally part of the National Broadband Plan ('NBP') Intervention Area ('IA') and which, in April 2017 were removed from the IA following commitments made by Eircom to provide premises in rural Ireland with access to high speed FTTP broadband.¹⁴⁷

¹⁴⁶ As reported at https://www.eir.ie/pressroom/eir-announces-second-quarter-FY21-results-to-31-December-2020/#_ftn1 Eircom uses delivery points to count premises, of which there were 2.421 million at Q4 2020.

¹⁴⁷ <https://www.dccae.gov.ie/en-ie/communications/topics/Broadband/national-broadband-plan/frequently-asked-questions/Pages/Light-Blue.aspx> The underlying Commitment Agreement is available at <https://www.dccae.gov.ie/documents/Commitment%20Agreement.pdf>.

- 3.116 Subsequently, Eircom added another 40,000 premises to these initial 300,000 premises (the '**Rural 340k**').¹⁴⁸ This programme has now been completed.¹⁴⁹
- 3.117 Eircom is continuing to expand its FTTH network, which involves deploying fibre in its local access network - from its urban local exchanges to the end user premises. This enables Eircom to offer enhanced NG Broadband with higher download/upload speeds and with Quality of Service ('**QoS**') features.
- 3.118 Eircom's existing broadband network is predominantly based on FTTC/eVDSL technology. In the case of FTTC, this means that the existing local copper line (the '**local loop**') located between the nearest local telephone exchange (or equivalent) and the end user's premises is partially replaced with fibre, typically up to a local distribution point/cabinet located in closer proximity to the customer's premises. In the case of eVDSL, the VDSL equipment is located in the local telephone exchange (or equivalent) instead of a roadside cabinet. Eircom is also deploying a FTTP network, whereby the entire local copper loop is replaced with a fibre connection. These eVDSL/FTTx networks are capable of supporting high speed broadband, multimedia, and RFTS.
- 3.119 Although Eircom is expanding its FTTx network, it continues to utilise its existing FNA network in parallel to provide RFTS (although, in some cases, it provides RFTS by means of Managed VoB). Eircom's FNA network is likely to be capable of continuing to provide RFTS (and, in the presence of any regulation at the wholesale level, SB-WLR and WLW) over the lifetime of this market review. Nevertheless, within its broadband footprint, ComReg considers that Eircom Managed VoB will, over time, replace delivery of RFTS over FNA. In this regard, ComReg notes that Eircom self-supply of Managed VoB RFTS has increased from [§< ██████████
██████████
██████████] §<].

Virgin Media

- 3.120 Virgin Media offers TV, broadband, fixed and mobile telephony products, with speeds of up to 250Mb, 500Mb, and 1Gb.¹⁵⁰ As of Q4 2020, Virgin Media's fibre broadband network passed 946,500 premises.¹⁵¹ Virgin Media's network rollout plans have led to its expansion outside of Dublin and the regional cities to regional towns.

¹⁴⁸ <https://fibrerollout.ie/>.

¹⁴⁹ As of May 2021, these are the most recently-available data. See <https://www.dccae.gov.ie/en-ie/communications/topics/Broadband/national-broadband-plan/commercial-investment/Pages/Rural-Deployment-Progress.aspx>

¹⁵⁰ See <https://www.virginmedia.ie/broadband/buy-a-broadband-package/>.

¹⁵¹ Liberty Global Q4 2020 Preliminary Results, page 23, <https://www.libertyglobal.com/wp-content/uploads/2021/02/Virgin-Media-Fixed-Income-Q4-2020-Release.pdf>.

SIRO

3.121 SIRO is a joint venture between ESB and Vodafone which is rolling out a wholesale-only FTTP network. SIRO aims to pass 450,000 premises in 51 towns nationwide. As of Q4 2020, SIRO has passed 360,000 premises.¹⁵² SIRO has 12 customers (Vodafone, Digiweb, Sky, BT, Carnsore Broadband, Rocket Broadband, Kerry Broadband, enet, Blackknight Solutions, Airwire, Pure Telecom, Westnet, Magnet, and Nova Telecom),¹⁵³ some of whom offer services nationally, and some of whom offer localised services. For example, Carnsore Broadband and Rocket Broadband offer FTTP service in the south east only. Six vendors offer Managed VoIP - either Managed VoB to residential end users, or more advanced services to business end users (Vodafone, Digiweb, BT, Kerry Broadband, Airwire, and Westnet).

National Broadband Plan ('NBP')

3.122 In May 2019, Granahan McCourt was designated as the Preferred Bidder for the NBP.¹⁵⁴ Granahan McCourt has incorporated a new Irish registered company, NBI, to build, operate and maintain the NBP in the Intervention Area (the 'IA'). The NBP contract was awarded by the Department of Communications, Climate Action, and Environment ('DCCAE'), and was signed on 19 November 2019. It will require the successful bidder to build, maintain and operate a future-proofed, high-speed broadband network in the IA over a 25-year period. Following confirmation of State Aid Approval by the EC and contract closing requirements, DCCAE awarded NBI the contract for the NBP. NBI will maximise the use of existing Eircom pole and duct infrastructure.¹⁵⁵

3.123 The NBP defines high speed broadband as a minimum speed of 30Mb download and 6Mb upload.¹⁵⁶ However, the basic product that NBI will offer is 500Mb, with 1Gb also available.¹⁵⁷ The IA focuses on areas where there is no existing or planned commercial network, and 544,000 premises, as of Q1 2021. Although predominantly rural, the IA covers areas in all 26 counties, and all but four metropolitan Dublin constituencies.

¹⁵² ESB Annual Report 2020, at p.13. Available online at https://esb.ie/docs/default-source/investor-relations-documents/esb-annual-financial-results-2020.pdf?sfvrsn=12f907f0_2.

¹⁵³ <https://siro.ie/siro-drives-competition-in-the-broadband-market/> and <https://siro.ie/siro-announces-magnet-networks-as-its-latest-retail-partner/>.

¹⁵⁴ "Government Signs Contract for National Broadband Plan", <https://www.gov.ie/en/press-release/e15062-high-speed-broadband-for-11m-people-in-homes-schools-businesses-acro/>

¹⁵⁵ *Ibid.*

¹⁵⁶ "Delivering the National Broadband Plan", May 2019, <https://www.dccae.gov.ie/documents/Delivering%20the%20National%20Broadband%20Plan.pdf>.

¹⁵⁷ "What is fibre broadband?", <https://nbi.ie/what-is-fibre-broadband/>, accessed 21 January 2021.

3.124 Data provided to ComReg indicate that NBI intends to rollout over a seven-year period across the [REDACTED] EAs¹⁵⁸ in the State in which the NBP IA is located. As of Q4 2020, NBI has passed [REDACTED] premises, while network build is in progress for a further [REDACTED] premises by the end of 2021.¹⁵⁹ NBI's further projected rollout is broken down in Table 8 below, however it should be noted that NBI has indicated to ComReg that [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]]:

Table 8: Projected NBI Rollout [REDACTED]

	EAs ¹⁶⁰	Buildings ¹⁶¹	% of Buildings
Year 1	[REDACTED]	[REDACTED]	[REDACTED]
Year 2	[REDACTED]	[REDACTED]	[REDACTED]
Year 3	[REDACTED]	[REDACTED]	[REDACTED]
Year 4	[REDACTED]	[REDACTED]	[REDACTED]
Year 5	[REDACTED]	[REDACTED]	[REDACTED]
Year 6	[REDACTED]	[REDACTED]	[REDACTED]
Year 7	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]

¹⁵⁸ 'Exchange Areas', or 'EAs' refers to Eircom's Exchange Areas which, as outlined in Annex: 11, has been designated as the appropriate geographic unit of measurement in this Decision.

¹⁵⁹ As indicated to ComReg by NBI in April 2021.

¹⁶⁰ In numerous instances, NBI rollout at an EA is completed over two or more years.

¹⁶¹ While the NBI rollout consists of 544,000 premises (defined as 'Delivery Points' in the Eircode database), this amounts to only [REDACTED] coordinates. This difference arises where there are multiple units at a coordinate (e.g. apartment, office block), or where a building is both a business and a residential premises (e.g. B&B).

Imagine

3.125 Imagine provides broadband, largely over FWA, to end users in predominantly rural locations. FWA subscriptions decreased by only 1% between Q3 2014 and Q4 2019 (see paragraph 3.29), however between Q4 2019 and Q4 2020, FWA subscriptions jumped by 19%. In February 2019, Imagine announced plans¹⁶² to cover 1.1 million premises in underserved regional and rural areas with 150Mb connectivity using 5G 3.6GHz spectrum fixed infrastructure. The announced plan suggests that Imagine aims to build 325 sites to cover 1.1 million premises within 18 months, with additional sites to be added to meet demand as it arises. According to Imagine, this will include delivering services to more than 400,000 premises located in the NBP IA. As of May 2021, having deployed a pilot network, Imagine announced that its service was live and available in 264 areas, and currently passes 1.1 million rural and urban premises.¹⁶³ ComReg notes that the contended nature of FWA broadband (typically 24:1 or 48:1) differs significantly from FNA or NG Broadband, which typically has a low contention ratio, or is uncontended in practice. The higher contention ratios associated with FWA suggest that this service is unlikely to be able to serve 100% of end users residing in these areas without some level of service degradation.

Conclusions on Retail Trends

3.126 ComReg's position is that the following key trends are evident:

- (a) RFTS traffic is in consistent decline. However, market research data indicate that 49% of households¹⁶⁴ and 77% of businesses¹⁶⁵ continue to retain access to fixed telephony, while according to ComReg's QKDR for Q4 2020, 59.7% of households and 52% of business end users continue to retain RFTS;¹⁶⁶
- (b) There has been significant growth in NG Broadband access, measured by subscriptions, and growth in availability of broadband services;
- (c) The overall growth rate in total RFTS subscriptions has been relatively stable since the publication of the 2014 RFVA Decision, decreasing by just over 10% between Q3 2014 and Q4 2020. The decline in FNA RFTS subscriptions by almost 28% has, in part, been offset by the significant increase in the demand for Managed VoIP, which has grown by 43% over the same time period, as set out at paragraph 3.66 above;

¹⁶² <https://www.siliconrepublic.com/comms/imagine-5g-broadband-rural-ireland>.

¹⁶³ <https://www.imagine.ie/the-broadband-network/> accessed on 4 May 2021.

¹⁶⁴ 2019 Residential Market Research, slide 8. (sample size: n = 2011).

¹⁶⁵ 2019 SME Market Research, slide 8. (sample size: n = 501).

¹⁶⁶ ComReg QKDR Data Q4 2020 – penetration rates

- (d) There is a very clear trend towards end users purchasing RFTS as part of a bundle with other products, typically broadband or TV. Fixed broadband is the service most commonly bundled with RFTS delivered over DSL, FTTx or CATV; and
- (e) Of those households that purchase RFTS, retaining both fixed and mobile telephone access (i.e. dual access) is still the most common scenario. Mobile-only households account for 43% of households, according to 2018 Eurobarometer data. However, end users tend to use fixed and mobile services in a complementary manner, for different purposes, and perceive price differences between the two services (even though actual price differences have been declining).

Behavioural Trends in the provision of RFTS

3.127 In this sub-section, ComReg identifies and discusses key behavioural trends in the provision of RFTS. Paragraphs 3.43 to 3.48 above have identified a decline in RFTS traffic and revenue. Developments in Managed VoIP and standalone broadband ('**SAB**') are outlined at paragraphs 3.133 to 3.165 below. The 2019 Residential and SME Market Research highlights key trends in packages and bundles, including spend and types of bundles purchased.

Tendency for RFVC and RFVA to be sold together and purchased from a single supplier

- 3.128 ComReg has identified a strong and continued tendency for RFVC and RFVA to be purchased from a single retail SP.
- 3.129 At the time of the 2007 Decision¹⁶⁷ it was common for SPs to purchase wholesale CPS-only¹⁶⁸ from Eircom to provide RFVC to end users, with the end users purchasing the line rental element separately from Eircom. However, demand for CPS has been in ongoing and significant decline, falling from 148,854 CPS access paths in Q1 2007 to 26,148 in Q3 2014, to 20,159 in Q3 2015 and then to 5,643 in Q4 2020. As a consequence, the availability of standalone RFVC from SPs is now extremely limited. The evidence available to ComReg indicates that SPs demonstrate a strong preference for the purchase of SB-WLR and WLV products, rather than CPS, from Eircom.¹⁶⁹ These products enable Access Seekers making use of third-party networks to offer RFTS (that is, a bundle of both RFVC and RFVA) to retail end users.

¹⁶⁷ See "Market Analysis - Interconnection Market Review Wholesale Call Origination and Transit Services, Decision Notice D04/07, ComReg Document No. 07/80", October 2007 (the '**2007 Decision**').

¹⁶⁸ CPS is a wholesale FVCO product which allows an SP to offer its end users RFVC, while the end user continues to pay Eircom for retail line rental. CPS has been offered on a legacy-only basis since September 2016.

¹⁶⁹ In some cases, BT re-sells Eircom SB-WLR and/or combines Eircom's WLR with its own WLV service.

- 3.130 Apart from the provision of CPS and SB-WLR, Eircom also offers WLV (see paragraph 3.17). As of Q4 2020, Eircom sold 236,247 WLV Access Paths, 240,557 SB-WLR Access Paths, and just 5,643 CPS Access Paths.¹⁷⁰
- 3.131 As set out at Table 9 below, at Q4 2020¹⁷¹ copper based merchant market SB-WLR used by Access Seekers (excluding Eircom's self-supply) accounted for 50% of indirect access paths, compared to 69% in Q3 2014. WLV paths (which encompass SB-WLR and interconnection) account for 49% of total indirect access paths compared to 26% in Q3 2014. The share of CPS-only indirect access paths has declined by 75% since Q3 2014 and accounts for 1% of overall indirect access paths.
- 3.132 These developments are likely to reflect the complementarity at the retail level between RFVC and RFVA:

Table 9: Indirect Access Paths Q3 2014 – Q4 2020

Access Paths	2014 Q3		2020 Q4		Change Q3 2014 – Q4 2020
	N	%	N	%	%
Carrier Pre-Select	26,148	5	5,642	1	-78%
SB-WLR	398,653	69	240,557	50	-40%
White Label Voice	148,750	26	236,247	49	+59%
Total	573,551	100	482,446	100	-16%

Developments in Managed VoIP

- 3.133 As set out at paragraph 3.12 above, ComReg distinguishes three categories of Managed VoIP – Managed VoB, Hosted PBX, and SIP Trunking. Managed VoIP is increasingly used to provide RFTS to residential and business end users. In total, Managed VoIP minutes accounted for 23.6% of total RFTS minutes in Q4 2020, up from 11.7% in Q3 2014. There were 523,988 Managed VoIP subscriptions in Ireland at Q4 2020¹⁷² representing 39% of total fixed telephony subscriptions for that period. Growth in Managed VoIP subscriptions over this period is driven primarily by increasing take up of FTTx, rather than CATV. As the following table shows, Virgin Media's share of Managed VoIP subscriptions has decreased by 35% since Q3 2015:

¹⁷⁰ An 'access path' refers to the number of voice channels available so that, for example, a PSTN line equates to 1 access path, ISDN BRA equated to 2 access paths and ISDN FRA/PRA equate to 16 to 30 access paths.

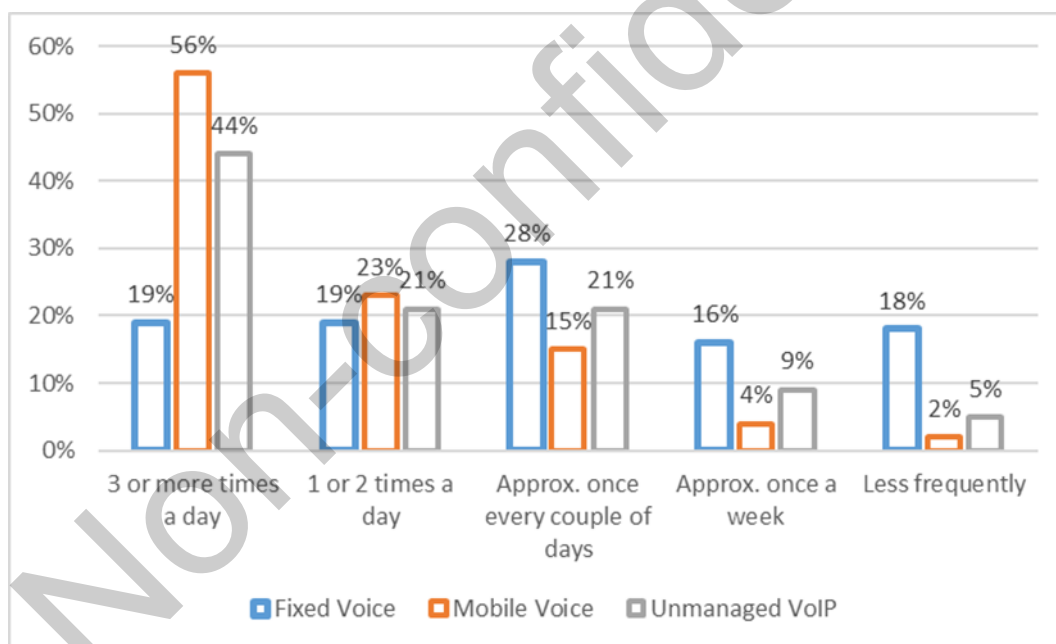
¹⁷¹ ComReg QKDR, Q4 2020.

¹⁷² ComReg QKDR, Q4 2020. Note that these traffic and subscription figures refer to Managed VoIP only and do not include Unmanaged VoIP OTT services such as Skype.

Table 10: Percentage change in Managed VoIP subscriptions, Q3 2015 – Q4 2020

Subscriptions	Q3 2015	Q4 2019	Q4 2020	% Change Q3 2015 – Q4 2020
Virgin Media ¹⁷³	357,864	335,171	300,000	-16%
Total ¹⁷⁴	387,581	499,813	523,988	+35%
Virgin Media % of Total	92%	67%	57%	-35%

3.134 There has also been an increase in the use of Unmanaged VoIP over-the-top ('OTT') services, used by consumers via a PC, laptop, smartphone or tablet in order to communicate with other users on these devices. The 2019 Residential Market Research indicated that 67% of households with a fixed broadband service in their home had used Unmanaged VoIP OTT services.¹⁷⁵ The reported usage for Unmanaged VoIP was quite substantial compared to other fixed voice services, with 65% of respondents who use Unmanaged VoIP services, using it more than once a day (compared to 38% for other fixed landline services and 79% for mobile voice telephony) as illustrated by Figure 19 below:

Figure 19: Usage of fixed voice, mobile voice and Unmanaged VoIP services¹⁷⁶

¹⁷³ Based on Liberty Global Quarterly Earnings Reports.

¹⁷⁴ Based on ComReg QKDR data.

¹⁷⁵ 2019 Residential Market Research, slide 68 (sample size: n = 1307).

¹⁷⁶ 2019 Residential Market Research, slides 59, 61 and 69. (sample size: n = 690, n = 1933, n = 1307).

- 3.135 In addition to the above, respondents to the 2019 Residential Market Research indicated a clear difference in usage preferences between Unmanaged VoIP and other voice telephony services. For example, household respondents indicated a clear preference for using RFTS to make calls to other fixed national numbers (e.g. 66% preferred to use their fixed voice telephony service for calls to national fixed numbers) whereas Unmanaged VoIP was cited as the communications method of choice for calls by only a very small number of respondents (e.g. only 2% preferred to use Unmanaged VoIP for calls to national fixed numbers). However, a higher number of respondents identified Unmanaged VoIP as their communications method of choice for international calls (15% preferred to use Unmanaged VoIP for international calls compared to 45% preferring RFTS and 21% preferring mobile voice telephony for making international calls).¹⁷⁷
- 3.136 Demand for, and availability of, Managed VoIP – including Managed VoB - has increased since the 2014 RFVA Decision and the 2015 FACO Decision. VoIP can be delivered in any of three different categories: Managed, Partially Managed and Unmanaged VoIP, which are defined in detail below. Additionally, it is also important to consider how Standalone Broadband services may contribute to changes in end user behaviour, enabling a move away from RFTS delivered over FNA, at both wholesale and retail level.

Managed VoIP Service Providers

- 3.137 Managed VoIP means that the SP provides both RFVC and RFVA over an IP access path to the end user, either directly on its own network, or indirectly, by renting access from a third party (for instance, using WLA or Wholesale Central Access ('WCA') inputs).¹⁷⁸ A Managed VoIP SP will also typically have its own switching platform, interconnect paths and numbering allocations, and can manage the quality of VoIP traffic on the IP access path to ensure that minimum QoS requirements for the provision of RFVC are met. Accordingly, service levels over Managed VoIP are intended to be broadly consistent with the standards and functional characteristics associated with FNA RFTS.
- 3.138 A number of Managed VoIP SPs are currently active in Ireland, including Virgin Media, Eircom, Vodafone, Magnet and Digiweb. Managed VoIP SPs typically have an allocation of geographic number ranges from ComReg, and they may also provide FVCT. Managed VoB services are provided over CATV and FTTx networks, and are typically provided as part of a bundle together with broadband or television services.

¹⁷⁷ 2019 Residential Market Research, slide 74. (sample size: n = 690).

¹⁷⁸ See ComReg Document No. 18/94 – “Market Review - Wholesale Local Access (WLA) provided at a Fixed Location Wholesale Central Access (WCA) provided at a Fixed Location for Mass Market Products”.

- 3.139 Managed VoIP minutes accounted for 23.6% of total RFTS traffic in Q4 2020, doubling from 11.7% in Q3 2014.¹⁷⁹ ComReg recorded 523,988 Managed VoB subscriptions in Ireland as of Q4 2020, an increase of 43% from the Q3 2014 figure of 367,010.¹⁸⁰
- 3.140 From an SP perspective, Managed VoIP gives rise to potential cost-savings arising from the ability to route voice calls over existing broadband data networks. This reduces the need to operate and maintain separate network infrastructure for voice services, thereby permitting cost savings through improved economies of scope and scale.
- 3.141 Some examples of such SPs include the following:
- (a) Virgin Media provides Managed VoB services as an optional add-on to its broadband and pay-TV services. Virgin Media Managed VoB is not actively available on a standalone basis (see Table 7), but only as part of a bundle.¹⁸¹
 - (b) Imagine offers Managed VoB services over FWA. As of Q4 2020, Imagine had [redacted] rural-based subscribers, of which [redacted] purchased Managed VoB.
 - (c) Digiweb offers Managed VoB services over FWA and very localised FTTP networks. As of Q4 2020, [redacted] Digiweb subscribers purchased Managed VoB.¹⁸²
 - (d) Magnet provides Managed VoB over very localised FTTP networks, and over SIRO. As of Q4 2020, [redacted] Magnet subscribers purchased Managed VoB.
 - (e) Eircom had [redacted] RFTS subscribers as of Q4 2020, of which [redacted] purchased Managed VoB, which represents [redacted] of all Managed VoB subscriptions.
 - (f) Vodafone had [redacted] RFTS subscribers as of Q4 2020, of which [redacted] purchased Managed VoB, which represents [redacted] of all Managed VoB subscriptions.
 - (g) Blueface offers business VoIP services over other SP networks and has [redacted] subscribers as of Q4 2020.

¹⁷⁹ See ComReg QKDR, Q3 2014 and Q4 2020.

¹⁸⁰ ComReg QKDR, Q4 2020. These traffic and subscription figures refer to Managed VoB only and do not include Unmanaged VoB OTT services such as Skype.

¹⁸¹ As at Q4 2020, Virgin Media's subscriber base accounted for 22.6% of the RFTS market.

¹⁸² Digiweb has a total of [redacted].

- 3.142 Eircom continues to offer RFTS over its FNA network. However, commensurate with its broadband rollout, currently largely consisting of FTTC/eVDSL, but with plans to rollout FTTP to 1.4 million premises over the next 5 years, Eircom has introduced a retail Managed VoB product (eir Broadband Talk).¹⁸³ However, having regard to Eircom's MSAN upgrade,¹⁸⁴ ComReg expects that Eircom's FNA network will likely continue to be used for the foreseeable future, including over the period of this market review, to provide RFTS to customers located outside its broadband footprint, or to customers within its broadband footprint who do not purchase broadband, or purchase broadband together with FNA-based RFTS.
- 3.143 As RFTS provided by means of Managed VoIP becomes more widespread over time, SPs are likely to move increasingly towards employing NG IP interconnection services, instead of traditional circuit-switched interconnection.¹⁸⁵
- 3.144 Since Eircom continues to be the main originator of RFTS, the shift from circuit-switched (current generation) interconnection to IP-based (next generation) interconnection at an industry level is dependent upon Eircom's migration to IP interconnection arrangements.¹⁸⁶ IP interconnection facilitates the handover of calls between networks using an SP's Wholesale Ethernet Interconnection Link ('WEIL').

Respondents' Views

- 3.145 BT noted that, from Q3 2015 to Q4 2019, the Managed VoIP subscriber base in the State appeared to have only grown by 133,000 subscriptions. Given that FTTC NGA has been available since 2013, BT surmised that Managed VoIP should have grown more rapidly than it, in fact, has. BT indicated that the growth of VoIP is sensitive to the 'space to trade' between Eircom's wholesale WLR price and the price of Standalone FTTC + (Cost of VoIP). BT therefore considered that ComReg needed to analyse the reasons for the slow growth of VoIP, focussing on the lack of effective bulk migration facilities, and the sensitivity of VoIP to the possibility of a margin squeeze.
- 3.146 Eircom disputed ComReg's description of Managed VoIP as "*an emerging trend in the market*", given that VoIP subscriptions now account for over one third of all RFTS subscriptions.

¹⁸³ <https://www.eir.ie/eirbroadbandtalk/>

¹⁸⁴ See paragraph 5.30.

¹⁸⁵ Interconnection is a wholesale arrangement or service that consists of a physical or logical connection between two (or more) networks, over which voice traffic is handed in order to facilitate calls to be made between end users that are connected to their respective SPs' networks.

¹⁸⁶ On October 1 2020, open eir published its Voice Interconnect over IP (VIX via WEIL) Product Description.

ComReg's Assessment of Respondents' Views and Position

- 3.147 ComReg notes that BT provided no information, or benchmark, indicating its expectation of Managed VoIP growth since Q3 2015. However, ComReg notes that Managed VoIP subscriptions have grown by 35% since Q3 2015, and also now account for nearly 39% of all RFTS subscriptions which, in ComReg's view, amounts to a substantial increase. ComReg also notes that the issue of a lack of fit for purpose bulk migration process is addressed in Section 11 of this Decision, while ComReg's analysis of the potential for a margin squeeze to occur in the wholesale markets, specifically in the Regional FACO Markets where there has been a finding of SMP, is set out in Section 9.
- 3.148 ComReg notes Eircom's disagreement over its description of Managed VoIP as being "*an emerging trend in the market*". ComReg notes that Managed VoIP has become more popular, in both absolute and relative terms, with end users since the publication of the 2014 RFVA Decision, having increased from circa 24% of all RFTS subscriptions in Q3 2014, to 36% in Q4 2019, and again to 39% in Q4 2020.
- 3.149 Having considered Respondents' views above, ComReg concludes that Managed VoIP is, arguably, no longer an emerging trend, and has grown substantially and consistently since the 2014 RFTS Decision. ComReg also notes that nothing of substance turns on this point in terms of ComReg's final position. ComReg also notes that there nonetheless remains a substantial cohort of end users that remain on FNA based RFTS.

Partially-managed VoIP Service Providers

- 3.150 Partially-managed VoIP differs from Managed VoIP, as the SP only controls part of the infrastructure that is used to provide the service. A partially-managed VoIP service may, for example, involve end users having an existing broadband connection supplied by a third party, but using a separate VoIP SP that has its own switch and associated interconnects, meaning that it can manage that part of the service directly.
- 3.151 Partially-managed VoIP SPs typically have numbers that are hosted by, and assigned to, another SP, for example, Eircom. However, some of these VoIP SPs have been assigned number ranges by ComReg.¹⁸⁷

¹⁸⁷ As set out at <https://www.comreg.ie/industry/licensing/numbering/number-assignments-availability/>.

Unmanaged VoIP Service Providers

- 3.152 A SAB service is a standalone broadband service without an RFTS or Managed VoIP component. Demand for SAB services is increasing, and SPs including, but not limited to, Eircom,¹⁸⁸ Vodafone,¹⁸⁹ Pure Telecom,¹⁹⁰ and Virgin Media¹⁹¹ offer SAB services with no fixed line phone (see Table 7). ComReg data indicate that, as of Q4 2020, there were [redacted] SAB subscriptions, having increased from [redacted] in Q3 2014. This amounts to [redacted] of all broadband subscriptions – that is, [redacted] of broadband subscriptions are purchased as part of a bundle. Of these [redacted] SAB subscriptions, [redacted],¹⁹⁷ were Eircom retail SAB subscriptions.
- 3.153 The emergence of SAB may enable growth of Unmanaged VoIP, particularly offered by Over-the-top ('OTT') SPs. Unmanaged VoIP services are web-based VoIP services accessed via a personal computer, laptop, smartphone or tablet to communicate with other users of the service on a compatible device. Unmanaged VoIP SPs include Skype, Viber and WhatsApp, for example.

Respondents' Views

- 3.154 Eircom suggested that ComReg's analysis dismisses the current prevalence of OTT usage on the basis that Unmanaged VoIP is currently only a valid substitute for making international calls by means of RFTS, while acknowledging that, on a forward-looking basis, ComReg allows for increased consumer preferences for the use of Unmanaged VoIP.
- 3.155 Eircom considered that ComReg therefore ignored competitive dynamics already present in the market, given that end users are switching from both RFTS and mobile voice to Unmanaged VoIP. Eircom argued that ComReg cannot dismiss growth in Unmanaged VoIP by suggesting that it will only be facilitated by growth in Standalone Broadband.

¹⁸⁸ <https://www.eir.ie/broadband-only>.

¹⁸⁹ <http://www.vodafone.ie/home/broadband>.

¹⁹⁰ <https://www.puretelecom.ie/residential/broadband-only>.

¹⁹¹ <https://www.virginmedia.ie/naked-broadband-only-deal/>.

¹⁹² In the range of 250,000-275,000.

¹⁹³ In the range of 100,000-125,000.

¹⁹⁴ In the range of 10-20%.

¹⁹⁵ In the range of 80-90%.

¹⁹⁶ In the range of 250,000-275,000.

¹⁹⁷ In the range of 15,000 – 20,000.

3.156 Eircom asserted that OTT services provide an indirect retail constraint, and was therefore unclear why ComReg has not considered this indirect constraint in its analysis of the relevant FACO markets, given the increased residential and business use of products such as Zoom, Microsoft Teams, or Google Hangouts, which can all be accessed via broadband and mobile calls. Eircom did not, however, provide evidence in support of its assertion.

ComReg's Assessment of Respondents' Views and Position

3.157 ComReg notes that the capacity of Unmanaged VoIP to act as a direct constraint on the provision of RFTS, or as an indirect retail constraint on the provision of FACO is considered as part of the market definition exercise.¹⁹⁸ The prevalence of Unmanaged VoIP and OTT services was considered in order to determine whether or not they pose an effective demand-side constraint on the RFTS focal product in paragraphs 4.224 to 4.238 of the 2020 Consultation. ComReg determined that, based on usage patterns, in addition to the differences between functional characteristics between these services and the focal product, Unmanaged VoIP is unlikely to act as an effective demand side constraint on the focal product, and ultimately, an indirect retail constraint at the wholesale level. ComReg addresses Eircom's comments in Section 4 in respect of RFTS, and Section 5, in respect of FACO.

Summary of Conclusions on Retail Trends and Developments

ComReg's Consideration of Respondents' Views

3.158 In their Submissions to the 2020 Consultation, Eircom, ALTO, BT and Vodafone all provided comments on ComReg's preliminary findings in respect of retail trends set out in the 2020 Consultation. ALTO, BT, and Vodafone agreed that ComReg had identified the main developments in the provision of RFTS, which are most relevant in assessing the relevant markets. ALTO and BT also made a number of additional comments which were addressed in the text above.

3.159 Eircom agreed that ComReg had identified some of the main retail trends and developments, but argued that the assessment was deficient in respect of some trends which, in its view, reduced its ability to act independently of competitors and consumers. Eircom's comments were also addressed in detail above.

3.160 Having regard to all of the Respondents' Submissions, ComReg is satisfied that, other than where specifically indicated above, it has identified the key retail trends and developments which occurred since the publication of the 2014 RFVA Decision.

¹⁹⁸ See paragraphs 4.241 onwards.

Overall Conclusion and Final Position

- 3.161 Further to the above assessment of retail trends in the provision of RFTS, ComReg's position is that a number of key trends may be observed.
- 3.162 While the number of retail SP participants has increased, a gradual decline in FNA RFTS subscriptions, and in RFVC traffic, is evident. Since the publication of the 2014 RFVA Decision (in Q3 2014), residential RFTS subscriptions have declined by 10% and business RFTS subscriptions have declined by 11%. However, as indicated in Eurobarometer data, a (declining) majority of households (55%) continue to have retail voice connections at a fixed location.
- 3.163 The purchase of RFTS as part of a bundle is an increasingly popular choice for end users. As of Q4 2020, 83% of end users purchased RFTS as part of a bundle (dual, triple or quadruple play), compared to 70% in Q3 2014.
- 3.164 The increasing footprint of NG Broadband has enabled SPs to offer multiple propositions, and move towards convergence, with the barriers between separate markets and a number of separate SPs being slowly eroded:
- (a) Managed VoIP subscriptions have continued to increase, and a number of SPs now offer Managed VoIP;
 - (b) Managed VoB SPs are continuing to provide services, particularly with bundled services over CATV and FTTx;
 - (c) Through innovation and development, SPs are responding to market changes and are retaining market share, resulting in the emergence of new services (e.g. WiFi calling);
 - (d) Wholesale and retail SPs (e.g. Eircom, SIRO, Imagine and Virgin Media) are moving towards full IP-based infrastructure.
- 3.165 Managed VoIP continues to grow in the RFTS market, and a number of SPs offer Managed VoIP services, although it should be noted that just 5 SPs - Eircom, Virgin Media, Vodafone, Sky and Pure Telecom respectively - account for 94% of total RFTS subscriptions, as of Q4 2020.

4 Relevant RFTS Market Definition

- 4.1 In this section, ComReg defines the relevant markets for Retail Fixed Telephony Service ('**RFTS**') and the geographic extent of each such market, having regard to the specific circumstances prevailing in the State. As noted previously, neither the 2014 EC Recommendation nor the 2020 EC Recommendation identifies 'access to the public telephone network at a fixed location for residential and non-residential customers' as a market susceptible to *ex ante* regulation. Accordingly, ComReg must carry out the 3CT¹⁹⁹ at the local level to determine whether the duly-defined relevant markets should, in principle, be subject to ongoing *ex ante* regulation or whether, in the alternative, it is appropriate to remove existing regulation.
- 4.2 In Section 4 of the 2020 Consultation, ComReg set out its preliminary views on the appropriate RFTS Market definitions from both a product market and a geographic market perspective. ComReg's overall preliminary conclusion was that there are three distinct markets for RFTS (the '**Relevant RFTS Markets**'), each of which is national in scope:
- (a) **Market 1a:** Standalone Low-Level RFTS ('**Standalone LL-RFTS**') including RFTS over PSTN and ISDN BRA and any Managed VoB delivered over NG Broadband on a standalone basis;
 - (b) **Market 1b:** Bundled Low-Level RFTS ('**Bundled LL-RFTS**') including RFTS over PSTN and ISDN BRA and Managed VoB delivered over (and with) NG Broadband on a bundled basis together with any of broadband, television or mobile services; and
 - (c) **Market 1c:** High-Level RFTS ('**HL-RFTS**') including RFTS over ISDN FRA and PRA and any Hosted PBX or SIP Trunking forms of Managed VoIP delivered over NG Broadband, including, on a standalone basis or on a bundled basis together with any of broadband, television or mobile services.
- 4.3 Of the five Submissions received, ALTO, BT and Vodafone broadly agreed with ComReg's preliminary conclusions in respect of the RFTS product markets, subject to a number of comments which are addressed in the body of the text below. In the case of ALTO, this agreement was subject to upstream wholesale FACO supply to Access Seekers not being restricted or interrupted.

¹⁹⁹ The 3CT set out at Article 67(1) of the European Electronic Communications Code (Directive (EU) 2018/1972) sets out the criteria that must be cumulatively satisfied in order to determine that a relevant market should be - or continue to be - subject to *ex ante* regulation. The three criteria are

- a. the presence of high and non-transitory barriers to entry;
- b. a market structure which does not tend towards effective competition within the relevant time horizon;
- c. the insufficiency of competition law alone to adequately address the market failure(s) concerned.

The 3CT is also outlined on pages 26 to 28 of the 2014 Recommendation.

- 4.4 BT argued that the RFTS market is disproportionately reliant on WLR, due to the slow and expensive rollout of LLU. Accordingly, BT considers that the RFTS market has unique traits including a lower level of voice infrastructure competition and a greater dependency on WLR migrations to VoIP.
- 4.5 Eircom disagreed with ComReg's preliminary findings in a number of respects, which are addressed below. In particular, Eircom queried:
- (a) ComReg's proposal to combine RFVA and RFVC as a single product i.e., FNA RFTS and assess this as the appropriate focal product; and
 - (b) ComReg's finding that mobile telephony does not pose an effective demand-side constraint on the focal product.
- 4.6 ComReg provides an overview of these Respondents' Submissions, along with its response to specific issues raised in the Section below.
- 4.7 Below ComReg sets out its position, having considered Respondents' views, on the appropriate Relevant RFTS Market definitions from both a product market and geographic market perspective as follows:
- (a) Summary of the 2014 RFVA Decision (discussed in paragraphs 4.9 to 4.16 below);
 - (b) Identifying the focal product, which is the initial product against which potential substitute products are assessed (discussed in paragraphs 4.17 to 4.195 below);
 - (c) Whether any alternative RFTS products should be included in the Relevant RFTS Markets, having regard to the effectiveness of any direct constraints from demand-side substitutes or supply-side substitutes, including self-supplied inputs (discussed in paragraphs 4.196 to 4.428 below);
 - (d) The geographic scope of the Relevant RFTS Markets (discussed in paragraphs 4.429 to 4.494 below); and
 - (e) Overall conclusions on the Relevant RFTS Markets (discussed in paragraphs 4.495 to 4.496).

- 4.8 As part of its assessment, ComReg considers Respondents' Submissions to the 2020 Consultation, the 2019 Market Research, information provided by SPs in response to ComReg requests for information, using both statutory information gathering powers (Statutory Information Requests ('SIRs')), and on a non-statutory basis (Informal Information Requests ('IIRs')), as well as other available data, including ComReg's QKDRs. ComReg uses this information to inform its analysis, rather than as a definitive source for the definition of the Relevant RFTS Markets. In addition, given the absence of clear and precise data regarding elasticities of demand for RFTS and potential substitutes, ComReg considers the Hypothetical Monopolist Test ('HMT') in a general sense (see paragraph 4.198), and uses this as an additional tool to inform its consideration of relevant issues alongside available qualitative and other data.

4.1 Summary of Market Definition in 2014 RFVA Decision

- 4.9 This section gives a brief description of the candidate products in the RFVA markets and summarises the conclusions of the 2014 RFVA Decision.

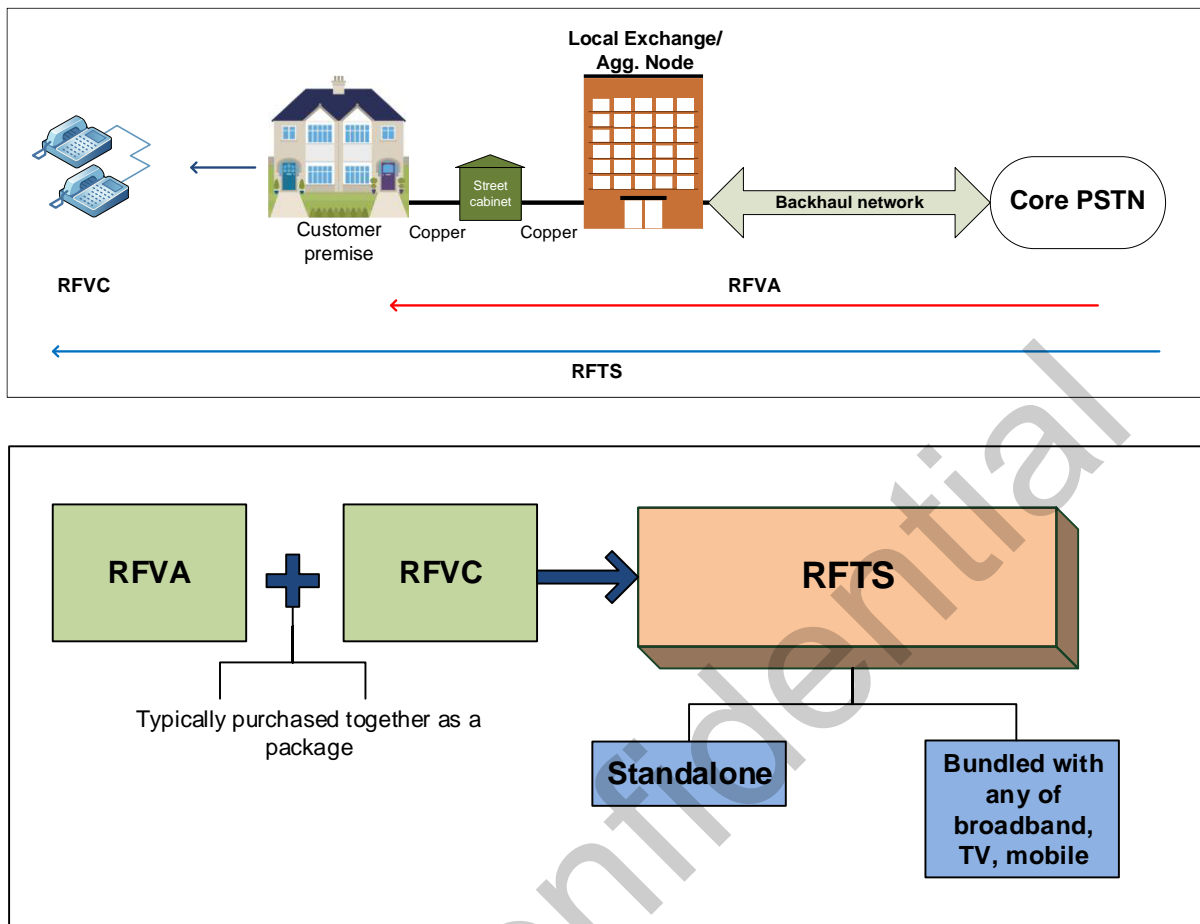
Overview of Candidate Products in RFVA Markets

- 4.10 RFVA²⁰⁰ is a retail service which provides a connection or access at a fixed location to the PSTN or equivalent for the purpose of making and/or receiving telephone calls, as well as related services. RFVA provides the network access necessary for the provision by SPs of a RFVC service. Together, RFVA and RFVC provide RFTS.
- 4.11 RFVA can be thought of as retail line rental, a physical access path running from the local exchange (or street cabinet) to the end user's premises, while RFVC can be thought of as the ability to make (that is, 'originate') calls from a fixed handset, by virtue of having RFVA. Figure 20 below gives an overview of RFVA and RFVC. RFVA and RFVC are typically purchased together as a package of RFTS, for which end users pay a single bill to a single SP. RFTS can be purchased either as a standalone product or in a bundle comprising RFTS together with any of broadband, TV and mobile voice telephony. As of Q4 2020, RFTS is most frequently bundled with broadband, as the broadband access path can, in many cases, also be used for the delivery of RFTS by means of Managed Voice over Broadband ('VoB').²⁰¹

²⁰⁰ Commonly referred to as '(retail) Line Rental'.

²⁰¹ 'Managed VoB' differs from 'Unmanaged VoB' services such as Skype or WhatsApp, in that the SP providing Managed VoB can manage the quality of the voice traffic on the IP access path, to assure minimum Quality of Service ('QoS') standards.

Figure 20: Overview of RFTS



4.12 While it is, in principle, possible for end users to purchase RFVA and RFVC separately from different SPs, the data show a consistent trend whereby end users exhibit a strong preference for purchasing both RFVA and RFVC in a bundle of RFTS from a single SP, as illustrated by Figure 21 below.

Conclusions from the 2014 RFVA Decision

- 4.13 In the 2014 RFVA Decision, ComReg concluded that RFVA and RFVC were in separate markets, primarily on the basis that competitive conditions in the provision of RFVA and RFVC had the potential to evolve separately over the course of the market review period.²⁰² Accordingly, ComReg did not define a Relevant RFTS Market consisting of **both** RFVA and RFVC at the time. ComReg was of the view that competitive pressures for RFVA and RFVC were likely to somewhat differ, as end users could partially unpick RFVC from a bundle of RFVA and RFVC. However, as set out in paragraph 4.15 below, the market definitions, as defined in the 2014 RFVA Decision, did allow for the inclusion of RFVC. ComReg's SMP assessment was further clarified in the 2013 RFVA Consultation,²⁰³ based on analysis carried out by Oxera on behalf of ComReg of a SSNIP of a hypothetical Retail Fixed Voice Access and Calls ('**RFVAC**') product (equivalent to RFTS).
- 4.14 Oxera's analysis suggested that most end users would not purchase RFVA and RFVC separately in response to a SSNIP of RFVAC and, therefore, that they may fall into the same market (and that a wider bundle (e.g. RFVAC with broadband) was not part of this market). However, consistent with ComReg's observation in the initial 2012 RFVA Consultation, Oxera also noted that the precise definition had limited implications for remedies for the RFVA market, since it was unlikely to alter a finding of whether SMP is present on the market.
- 4.15 In the 2014 RFVA Decision, ComReg defined three Relevant RFVA Markets (the '**2014 RFVA Markets**')
- (a) **Market 1a: Standalone Lower-Level Voice Access**, comprising access via a PSTN, ISDN BRA or analogous broadband connection (CATV, FTTx, FWA or DSL), that is used to provide PSTN voice, ISDN voice or Managed VoIP service sold on a standalone basis, or in a package with fixed voice calls ('**Standalone LLVA**');
 - (b) **Market 1b: Bundled Lower-Level Voice Access**, comprising access via a PSTN, ISDN BRA or analogous broadband connection (CATV, FTTx, FWA and DSL), that is used to provide PSTN voice, ISDN voice or Managed VoIP service sold in a product bundle which includes any of broadband, television or mobile services (and which product bundle may include fixed voice calls) ('**Bundled LLVA**'); and

²⁰² At paragraph 4.195.

²⁰³ Two RFVA Consultations issued: (i) "Market Review: Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non Residential Customers", ComReg Document 12/117, 26/10/2012, (the '**2012 RFVA Consultation**'); (ii) "Supplementary Consultation to ComReg Document 12/117 - Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non-Residential Customers: Market definition", ComReg Document 13/95, 17/10/2013, (the '**2013 RFVA Consultation**').

- (c) **Market 1c: Higher-Level Voice Access**, comprising access via ISDN FRA or ISDN PRA that is used to provide voice services sold either on a standalone basis, in a package with fixed voice calls, or in a product bundle which includes any of broadband, television, or mobile services (and which bundle may also include fixed voice calls) ('HLVA').

4.16 ComReg was then of the view that the geographical scope of each of the three Relevant RFVA Markets was national (notwithstanding the emergence of some localised competitive pressures, particularly insofar as RFVA is sold as part of a bundle with other services). ComReg considered that the conditions of competition in the Relevant RFVA Markets were sufficiently homogenous to suggest a national geographic market at that time.

4.2 Product Assessment of Relevant RFTS Markets

Identifying the Focal Product

4.17 The first step in the product market definition is identifying the relevant focal product. According to BEREC,

“The focal product is defined as the main product under investigation and the focal area is the area under investigation, in which the focal product is sold. The definition of the focal product may depend on specific market conditions and on the issues that NRAs want to address during the market analysis.

(.....) an NRA should start by identifying the focal product considering their national market conditions. One of the possible criteria chosen by NRAs might be to define the focal product as the one where competition problems are believed to exist.”²⁰⁴

4.18 As noted in paragraph 4.13, the 2014 RFVA Decision²⁰⁵ concluded that RFVA was the appropriate starting point for defining the focal product. ComReg ultimately concluded that RFVA and RFVC were in separate markets, primarily on the basis that competitive conditions in access (RFVA) and calls (RFVC) had the potential to evolve separately over the market review period. As ComReg outlined, the competitive pressures for RFVA and RFVC were likely somewhat different, as end users may partially unpick RFVC, whereas this is not the case for RFVA. Furthermore, ComReg was of the view that, regardless of whether RFVC was included in the same relevant market as RFVA, the assessment of SMP would not alter significantly and, hence, the precise definition had limited implications for relevant remedies to be imposed in the market as, in both cases, the bottleneck was RFVA.

²⁰⁴ BEREC Report on Impact of Fixed-Mobile Substitution in Market Definition, at p.12. BoR 12 (52), 24 May 2012. Available online at: https://www.berec.europa.eu/eng/document_register/subject_matter/berec/reports/363-berec-report-impact-of-fixed-mobile-substitution-fms-in-market-definition

²⁰⁵ At paragraph 4.197.

- 4.19 In determining the appropriate starting point for the analysis of the Relevant Markets in this assessment, ComReg considers the following key questions:
- (a) Should the Focal Product include RFVA and RFVC as a single product offering? (see paragraphs 4.21 to 4.76 below);
 - (b) Is the appropriate Focal Product a standalone RFTS product or a bundle of RFTS and other services? (see paragraphs 4.77 to 4.111 below);
 - (c) Are calls made to all types of telephone numbers in the same RFTS market? (see paragraphs 4.112 to 4.137 below); and
 - (d) Are low-volume and high-volume RFTS users in the same relevant market? (see paragraphs 4.138 to 4.189 below).
- 4.20 ComReg may, if justified by the evidence available, define one or more focal products (e.g. RFVA and RFVC). As with the FACO market assessment, the focal product does not distinguish between the types of telephone numbers being called. In paragraph 4.134 below, ComReg set out its position that, at the retail level, there are unlikely to be separate markets for calls made from a fixed location to different types of telephone numbers. ComReg notes that RFTS encompasses call origination to all number types including geographic, non-geographic²⁰⁶ and mobile numbers. Thus, the same infrastructure can be utilised by SPs to deliver originated calls, irrespective of the number called.

Should the Focal Product include RFVA and RFVC as a single product offering?

- 4.21 In line with the Notice on Market Definition, and the SMP Guidelines, ComReg's starting point when defining a relevant market is to consider a narrow set of RFVA services – the focal product - and to examine whether the relevant market should be expanded beyond the narrow focal product to include other services, taking account of demand-side and supply-side substitutability considerations.
- 4.22 This sub-section considers whether the focal product should include RFVA and RFVC as a single product, or whether they constitute separate products, from a market definition perspective. RFVA and RFVC are largely complementary products, in the sense that both access and calls must be purchased in order to make a voice call. RFVA and RFVC may also be economic complements if an increase in the price of access reduces the demand for calls, or vice versa.
- 4.23 Consistent with guidance on the assessment of bundles for market definition purposes, in addition to the SSNIP tests, ComReg also considers the following factors:

²⁰⁶ Pursuant to ComReg Decision D15/18, from 1 December 2019, a call to an 1850, 1890, 0818 or 076 non-geographic number ('NGN') cost no more than the cost of calling a landline number. From 1 January 2022, the five NGN ranges will be reduced to two. The 1850, 1890, and 076 ranges will be withdrawn and the 1800 (Freephone) and 0818 range will remain.

- (a) Economies of scale and scope;
- (b) Transaction costs faced by end users;
- (c) Differences in competitive conditions; and
- (d) End user behaviour.

4.24 ComReg's position is that the appropriate focal product is standalone FNA RFTS (RFVA and RFVC in a single product offering over Eircom's PSTN network). The evidence available to ComReg suggests that the incidence of end users purchasing RFVA and RFVC from separate SPs is low, at 0.52% of total direct and indirect FNA paths (i.e. PSTN and ISDN) as at Q4 2020.

4.25 As at Q4 2020 there were 870,385 PSTN access paths in the State, as outlined in Table 11 below. PSTN remains the predominant means of delivering RFVA, and has been regulated to date by ComReg pursuant to the 2014 RFVA Decision and the related 2015 FACO Decision:

Table 11: FNA Paths and Managed VoIP Subscriptions Q4 2020²⁰⁷

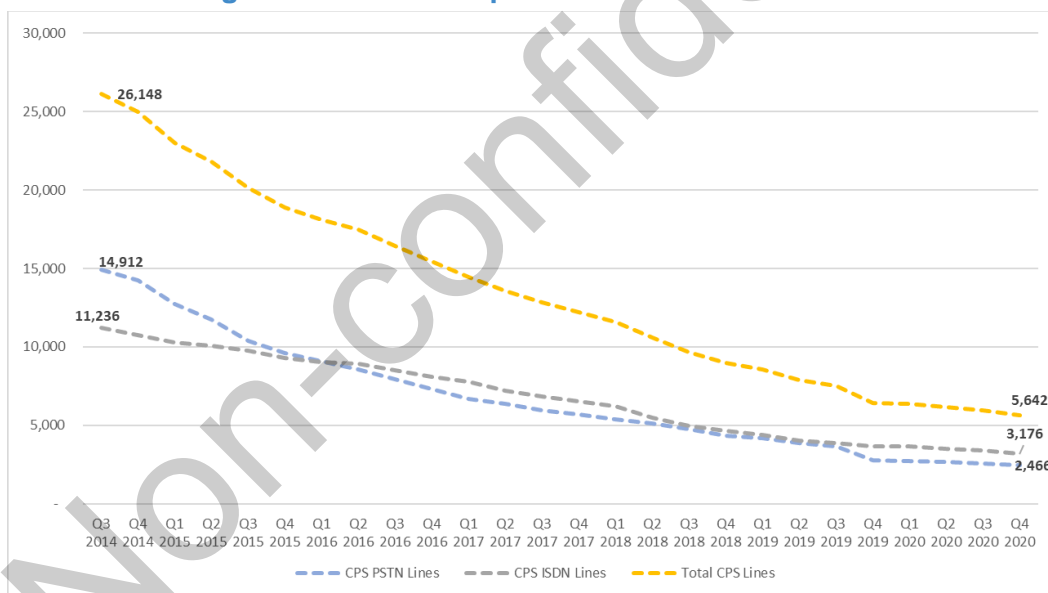
Path Type	Q4 2020	Change Q4 2019 – Q4 2020	Change since 2014 RFVA Decision Q3 2014 – Q4 2020
PSTN	870,385	-10.2%	-30.2%
ISDN Basic	86,662	-8.6%	-34.8%
ISDN Fractional	33,808	-9.2%	-41.6%
ISDN Primary	101,370	-11.5%	-36.8%
Total ISDN	221,840	-10.0%	-36.8%
Total PSTN and ISDN access paths	1,092,225	-10.1%	-31.7%
Managed VoIP Subscriptions	523,988	4.8%	42.8%

4.26 As noted in paragraph 4.13, in the 2014 RFVA Decision, ComReg concluded that RFVA and RFVC were in separate markets, primarily on the basis that competitive conditions in the provision of RFVA and RFVC had the potential to evolve separately over the course of the market review period.

²⁰⁷ As noted in paragraph 3.39 (and Table 1), RFTS can be measured in terms of the number of access paths, lines, or subscriptions. A **subscription** involves periodic payment for a single or multiple (bundled) services. **Access paths** are not synonymous with access lines as, for example, in the case of ISDN paths, more than one path may be provided via a single ISDN line. A subscription could mean being billed for multiple PSTN or ISDN lines, and so may not be reflective of the number of actively used lines in the RFTS market. Thus, the overall number of access paths is likely to exceed the overall number of lines, which itself is likely to exceed the overall number of subscriptions. For instance, a single business subscription could include four ISDN BRA lines, which give rise to eight access paths.

- 4.27 ComReg was of the view that competitive pressures for RFVA and RFVC likely differed as end users may partially unpick RFVC (from a bundle of RFVA and RFVC). Further, ComReg was of the view that, regardless of whether RFVC was included in the same relevant market as RFVA, the assessment of SMP was unlikely to significantly differ and, hence, the precise definition has limited implications for relevant remedies to be imposed in the market as, in both cases, the ‘bottleneck’ was RFVA.
- 4.28 In the current market review, ComReg’s position is that competitive conditions in the provision of RFVA and RFVC have not evolved separately since the 2014 RFVA Decision (and are unlikely to sufficiently so evolve), as discussed in the following paragraphs.
- 4.29 As of Q4 2020, there were 5,642 CPS²⁰⁸ access paths. This suggests that a trivial amount of end users purchased RFVC and RFVA from different SPs, and hence the bulk of end users purchase RFVA and RFVC in a bundle. The majority of CPS lines are provided to non-residential end users. In general, there has been a downward trend in the purchase of CPS at the wholesale level since 2014 by approximately 75%, as illustrated below:

Figure 21: Total CPS paths – Q3 2014 to Q4 2020



4.30 In response to ComReg’s IIR, BT noted [X [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED] X].

²⁰⁸ CPS allows the user to receive all or a portion of calls from one SP and RFVA from another SP (usually Eircom).

- 4.31 ComReg's position is that RFVA and RFVC are not effective substitutes, as RFVA is a key component required to offer RFVC. However, ComReg notes that purchasing RFVC inherently requires some form of fixed access (line rental). Thus, these complementarities often lead to the bundling of RFVA and RFVC, and competition may take place in the provision of RFVA and RFVC as a bundle (i.e. RFTS), rather than as individual products.
- 4.32 In bilateral meetings with ComReg and responses to IIRs, BT indicated [REDACTED]
[REDACTED]
[REDACTED] [REDACTED]. CPS is no longer available to purchase from open eir, having been discontinued on 8 September 2016, except for legacy sales.²⁰⁹ This suggests that competition has not evolved separately for RFVA and RFVC over the period since the 2014 RFVA Decision.
- 4.33 In the following sections, ComReg considers whether RFVA and RFVC should be considered as distinct products that fall into separate markets (i.e. not considered substitutable) or whether, for identifying the focal product, RFVA and RFVC should be considered as a single product offering (i.e. RFTS).

Economies of scale and scope

- 4.34 It is probable that economies of scale and scope are associated with the supply of RFVA and RFVC, as RFVC is supplied over RFVA. Economies of scale generally refer to the cost advantages that a large-scale SP may have over a smaller SP, where the marginal cost of production decreases as the quantity of output produced increases. This typically occurs where significant upfront capital investment and sunk costs are involved in providing a service. Economies of scope refer to the potential efficiencies which may be gained by a firm jointly producing a range of goods and services, e.g. where a communications network could be used to provide RFTS, TV and broadband services simultaneously.
- 4.35 The provision of RFVA and RFVC involves common inputs and infrastructure such as network costs, shared billing systems, customer services, and various other administrative and business costs which may be shared across RFVA and RFVC. This means that the additional cost incurred by an RFVA SP of providing certain types of voice calls (i.e. on-net calls) on a per-call or per-minute basis can, in some cases, be relatively low.

²⁰⁹ See documentation at https://www.openeir.ie/Products/Voice/Carrier_Pre_Select/

- 4.36 ComReg data indicate that Access Seekers are purchasing very little CPS (that is, standalone FVCO) and have migrated to SB-WLR and WLV, which allow an Access Seeker to offer a bundled RFTS product to end users (see Figure 23).²¹⁰ Where CPS provides RFVC functionality only, and requires an end user to purchase RFVA separately from Eircom, SB-WLR acts as a one-stop shop for Access Seekers and, consequently, end users. As of Q4 2020 (see Figure 23), SB-WLR is in decline, as is WLV,²¹¹ an end-to-end wholesale voice product provided by Eircom which incorporates FACO, Transit and other non-regulated elements, which enables Access Seekers to resell RFTS to retail customers without the need for their own interconnect infrastructure. As WLV includes line rental and FVCO, SB-WLR is ultimately an input to WLV.
- 4.37 ComReg's research suggests that the largest RFTS SPs (Eircom, Virgin Media, Vodafone, Sky and Pure Telecom) do not offer a standalone RFVC product for sale independently of RFVA, and their RFTS offering integrates line rental and calls into a single package.
- 4.38 RFTS SPs typically charge a fixed price for bundles, inclusive of an allocation of voice call minutes. The number and scope of these inclusive minutes typically varies with the cost of the bundle. For example, Eircom's entry-level RFTS product, Off-Peak Landline, is advertised at a price of €39.99 per month, which includes both RFVA and unlimited off-peak calls to Irish fixed line numbers.²¹² Standalone RFVA is priced at €25.78 per month from Eircom,²¹³ €25.50 per month from Pure Telecom (with a €3.50 add on for unlimited Irish landline calls).²¹⁴ Full prices of standalone RFTS packages from these SPs are outlined in Table 17 below.
- 4.39 Generally, RFVA is charged on a monthly basis at the same rate, regardless of RFVC usage, while calls to mobile or international numbers are typically priced at a marginal rate per unit that differs depending on the destination of the call. However, increasingly, SPs are offering RFTS bundles that include allocations of minutes to mobile and international numbers (see Annex: 6 below for RFTS and Mobile packages by SP). For example, Eircom's 'Anytime Landline' product is advertised at a price of €49.98 per month, which includes both RFVA and unlimited calls to Irish landlines and mobiles, and to selected international landlines and mobiles.²¹⁵

²¹⁰ SB-WLR allows the user to purchase calls and line rental from one single SP.

²¹¹ The exception being Q4 2019, which saw SB-WLR access paths rise above WLV access paths (see Figure 23).

²¹² Off-Peak Landline, details of which were accessed on <https://www.eir.ie/phone/> on 28 April 2021.

²¹³ Details of which were accessed on <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/Pt1.1.pdf> on 28 April 2021.

²¹⁴ Details of which were accessed on <https://www.puretelecom.ie/landline-service> on 28 April 2021.

²¹⁵ Anytime Landline, details of which were accessed on <https://www.eir.ie/phone/> on 28 April 2021.

- 4.40 ComReg's position is that economies of scale and scope are relevant in the provision of RFTS, as SPs increasingly offer wider bundles of communications services to end users, including RFVA, RFVC, and often other services such as broadband. There is also evidence that Access Seekers purchase high volumes of SB-WLR and WLV compared with CPS, and SB-WLR is itself bundled with wholesale broadband inputs, as illustrated in Figure 23. The fact that Access Seekers can achieve economies of scale in the provision of RFTS as a single product to the end user rather than providing only RFVA or RFVC products suggests that end users value a bundle of RFTS over purchasing RFVA and RFVC separately.

Transaction costs faced by end users

- 4.41 Markets for bundled products arise from the presence of significant transaction costs, since end users seek to reduce transaction costs by purchasing a single bundle of multiple products. In comparison, end users are likely to face greater transaction costs when purchasing single services from multiple SPs. These costs include the time involved in setting up and monitoring individual accounts associated with each service and making regular payments for services. From an end user perspective, this may be secondary to the fact that bundles typically offer cost savings, compared to buying services such as phone and broadband separately. For example, buying Eircom basic RFTS ('Off-Peak Landline') for €39.99 and Vodafone '500 Fibre Broadband'²¹⁶ for €30, totalling €69.99 per month, is more expensive than buying Vodafone '500 Fibre Broadband & Talk' which is €30 per month.²¹⁷
- 4.42 An SP is likely to respond to these end user demand characteristics by marketing products that include both RFVA and RFVC. ComReg's 2019 Residential Market Research²¹⁸ indicated that the vast majority of end users purchase bundled products consisting of RFVA and RFVC from a single SP – the survey showed that just 4% of landline users purchased RFVC and RFVA from separate SPs.²¹⁹ In addition, 77% of fixed landline owners (those with fixed landline, irrespective of whether they actively use it for making/receiving calls) purchased their fixed landline in a bundle with other services.²²⁰

²¹⁶ Accessed April 2021: <https://n.vodafone.ie/op/broadband.html> €30 per month.

²¹⁷ Accessed April 2021: <https://n.vodafone.ie/shop/broadband.html> €30 per month after initial 6 month discount (voice included with free calls to Irish landlines).

²¹⁸ In March 2021 ComReg published a Connectivity Survey conducted by Red C, some of the questions included in the 2019 Market Research are reflected in this survey. Although there are variations in the data produced by both surveys, ComReg considers that this is indicative of the declining nature of the RFTS market. The survey is available online at <https://www.comreg.ie/publication-download/connectivity-survey>

²¹⁹ Slide 35 of the 2019 Residential Market Research.

²²⁰ Slide 8 of the 2019 Residential Market Research.

- 4.43 The high demand for such bundles suggests that end users face some transaction costs and seek to reduce such costs through bundling (i.e. receiving a single bill for all services). The high prevalence of bundling also suggests that end users construe RFVA and RFVC as a single product (i.e. RFTS), rather than as separate products with different usage characteristics.
- 4.44 SPs offer Managed VoIP bundled with broadband. The distinction between RFVA and RFVC – and, accordingly, the interpretation of transaction costs - is less relevant in the case of broadband and Managed VoIP bundles, and is considered below in paragraphs 4.206 to 4.273.

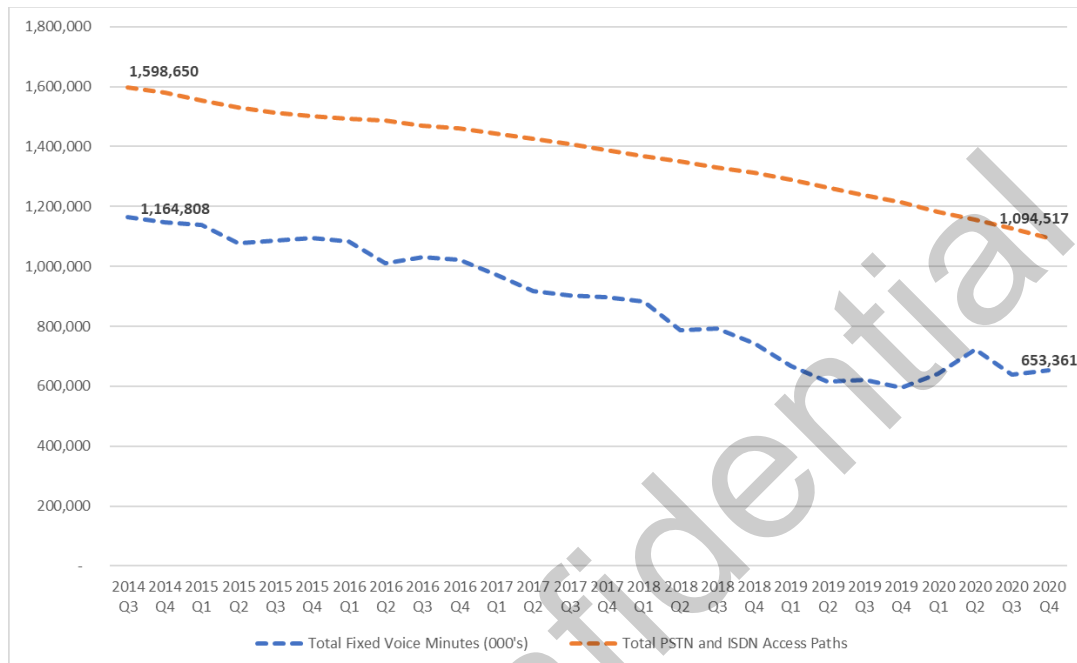
Differing competitive conditions

- 4.45 Markets for bundled products are less likely to arise in circumstances where competitive conditions differ substantially between the components of a bundle. In practice, if an end user is likely to unpick a bundle in response to an increase in the price of one component of the bundle, or of the overall bundle, it may be the case that the products in the bundle constitute separate markets. Thus, variations in demand and supply conditions between elements of the bundle may imply that each element forms a separate relevant market.
- 4.46 As FNA RFVA can support RFVC, DSL and VDSL broadband internet access, end users may retain an RFVA connection to avail of broadband provided by their SP. For example, FNA and FTTC broadband is delivered over the PSTN access connection to the end user's premises. An end user's bill for standalone broadband, in the case of FNA and NG Broadband (FTTC in this example) typically includes a line rental charge for the access connection (i.e. the same access path that is used for RFVA).
- 4.47 The 2019 Residential Market Research showed that, of respondents who purchased their fixed landline service as part of a bundle (77% of landline owners), 56% purchased it as part of a bundle with broadband.²²¹ In addition, one SP [X [REDACTED] X] indicated to ComReg as part of its response to the 2019 IIR that, in recent years, new line installs for RFTS had increased month on month, due in part to increased demand for broadband provided over these PSTN lines.
- 4.48 Data available to ComReg indicate that the rate of decline in fixed traffic minutes has been greater than the decline in demand for RFVA, which suggests that some end users are retaining their fixed access line, but making fewer fixed voice calls, as illustrated in Figure 22 below.

²²¹ Slide 26 of the 2019 Residential Market Research.

4.49 ComReg is also aware that this difference in rate of decline may be due to some end users retaining their RFVA line in order to receive calls rather than make them. However, ComReg’s Market Research does not show a large divide between landline owners’ frequency of making and receiving calls on their landline, with the 37% making calls daily and 39% receiving calls daily.²²²

Figure 22: Fixed Access and Fixed voice traffic trends, Q3 2014 to Q4 2020



4.50 ComReg’s position is that end users are unlikely to unpick a bundle of services in response to a SSNIP of RFVA, as the purchasing choice in relation to RFVA is often driven by a demand for RFTS and other services such as broadband.

4.51 ComReg notes that the general trend in the declining numbers on fixed voice minutes was slightly disrupted in Q1 2020 with total fixed voice minutes rising from 594,387,173 minutes to 642,988,000 minutes. This trend continued into Q2 2020, with total fixed voice minutes rising again to 724,479,678 minutes. ComReg attributes this change in end user behaviour to differing circumstances caused by the Covid-19 pandemic, including, *inter alia*, restrictions on mobility, and a higher incidence of working from home. It remains to be seen therefore whether such trends will continue over a medium time horizon.

²²² Slide 59 & 60 of the 2019 Residential Market Research.

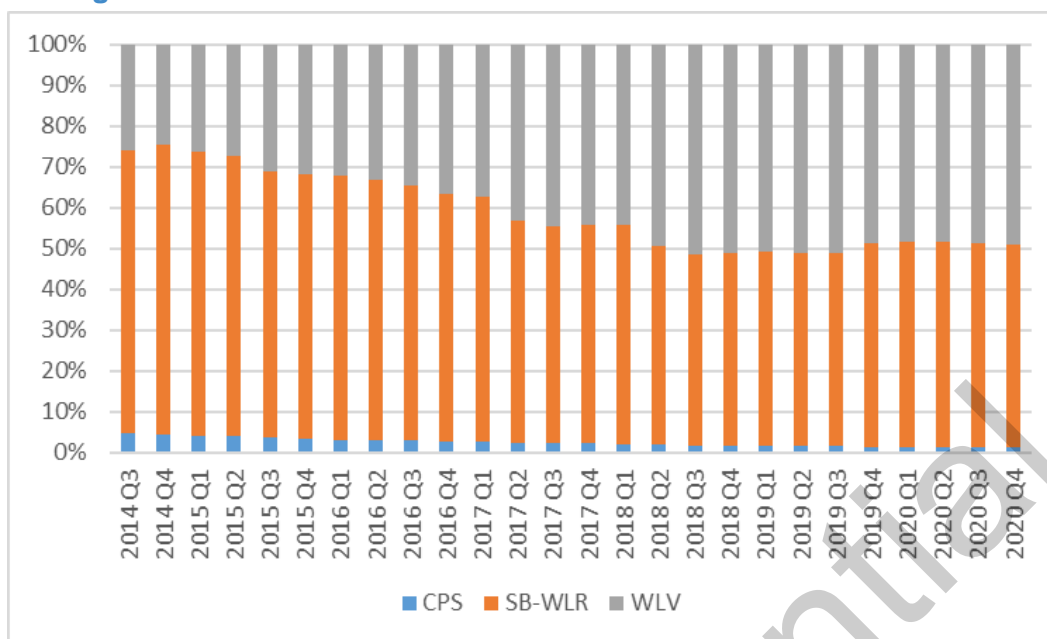
- 4.52 For example, ComReg research shows that, as of April 2020, 67% of all those now working, were working from home to some degree. This is compared to 37% of people who worked from home to some degree prior to 1 March 2020. Of those working from home, 11% used their landline in order to carry out work related duties, while 66% use their home broadband.²²³ ComReg believes that this is indicative of the overall increased reliance on telecommunication services, especially those capable of hosting digital meeting platforms, during the current public health emergency. While recent data do not conform with established trends in the RFTS Market, ComReg considers that this does not give rise to sufficient grounds for revising the product market definition; rather it is a temporary response to a 'Black Swan' event.

End User Behaviour

- 4.53 ComReg's position on the relevant market definition is informed by data relating to end user behaviour surrounding RFVA and RFVC.
- 4.54 ComReg QKDR data indicate that, as of Q4 2020, purchases of CPS by Access Seekers accounted for 1.2% of total wholesale FNA access paths (i.e. SB-WLR, WLV and CPS) or 0.52% of total FNA access paths (wholesale, Eircom retail and other SPs' FNA access paths). As illustrated below in Figure 23, purchases of CPS have fallen dramatically since the publication of the 2104 RFVA Decision. This suggests that the prevalence of end users purchasing RFVA and RFVC from separate SPs is very low compared to the rest of the market. Some SPs have indicated to ComReg that their CPS customers are legacy only and that no new customers are offered CPS, with Eircom having discontinued new CPS orders as of 8 September 2016 (see paragraph 4.32).²²⁴ Thus, RFTS end users generally do not have the option of purchasing RFVA and RFVC from separate SPs:

²²³ Slide 19, 20 & 21 of ComReg's Impact of Covid-19 on Consumer Use and Perception of Telecommunications Services. ComReg 20/61.

²²⁴ ComReg issued IIRs to seven SPs in April 2019 with a response date of May 2019, including BT, Eircom, Pure Telecom, Virgin Media, Vodafone, Sky and SIRO.

Figure 23: Wholesale Indirect FNA Access Paths Q3 2014 – Q4 2020

- 4.55 The 2019 Residential Market Research examined how end users thought about RFVA and RFVC. Survey respondents were separated into three categories based on how they thought about their RFTS bill. Of respondents who had a fixed line, just 4% indicated that they purchased access and calls separately.²²⁵ This proportion was slightly higher among urban respondents and among those aged 55+. When this 4% group was probed, 10% of them said that they think about the cost of line rental and calls separately, while 57% indicated that they are more concerned with the overall cost of the telephone package or bundle.²²⁶ This perception of the close relationship between these products, particularly in relation to assessing the value of packages and choosing an SP, is consistent with the purchasing behaviour of end users.
- 4.56 On the business side, 88% of SMEs with RFTS indicated they purchased line rental and calls from the same SP, while 8% purchased from separate SPs.²²⁷

Respondents' Views

- 4.57 Eircom disagreed that the focal product should consist of both RFVA and RFVC. In the 2014 RFVA Decision, ComReg concluded that RFVA and RFVC were in separate markets on the basis that competitive pressures for RFVA and RFVC were likely to differ, and had the potential to evolve separately over the course of the market review.

²²⁵ Slide 35 of the 2019 Residential Market Research.

²²⁶ Slide 36 of the 2019 Residential Market Research.

²²⁷ Slide 37 of the 2019 SME Market Research.

- 4.58 ComReg has now changed its position from 2014 and has identified standalone FNA RFTS as the appropriate focal product. Eircom argued that, while end users generally purchase RVA and RFVC together, ComReg has failed to recognise that competitive pressures on RFVA and RFVC have evolved since 2014.
- 4.59 Eircom suggested that, on the RFVA side, end users have already substituted away to broadband while, on the RFVC side, end users have already substituted away to OTT services and Managed VoIP.
- 4.60 Eircom also argued that ComReg's decision to assess FACO as a single product upstream appeared to lead to confusion as to the actual competitive dynamics in downstream retail markets. ComReg's characterisation of FACO as a single product assessed at paragraphs 5.8 to 5.100 below. Eircom also asserted that ComReg had incorrectly focussed on the importance of subscriptions, as opposed to the more relevant usage parameter. This is discussed further in Section 3, paragraphs 3.53 to 3.56.
- 4.61 Lastly, Eircom asserted that the decision to assess RFVA and RFVC jointly as RFTS meant that ComReg failed to appreciate the impact of the increased usage of mobile services on RFVC.

ComReg's Assessment of Respondents' Views and Position

- 4.62 While ComReg did conclude that RFVA and RFVC were in separate markets in the 2014 RFVA Decision, a different approach was taken in the 2015 FACO Decision. ComReg stated;
- "The appropriate starting focal point at the retail level for the assessment of potential product substitutes for RFTS is RFVC made from a fixed line telephone connected to a narrowband network (together being RFTS)."*
- 4.63 However, ComReg notes that the inclusion, or otherwise, of RFVA within the assessment would be unlikely to have a material impact on the result in any case. This is because most customers prefer to purchase RFVA and RFVC from a single supplier given their complementary nature and therefore switching generally occurs across the two services in tandem.
- 4.64 In the 2020 Consultation, ComReg set out its views on the complementary nature of RFVA and RFVC, arguing that both should be considered as a single combined focal product. This preliminary conclusion was further bolstered by, among other things, the low incidence of standalone CPS being purchased at the wholesale level which was reflective of both calls and access being sold in combination at the retail level. As such, consumers cannot purchase RFVC independently of RFVA on the basis of wholesale FNA purchases.

- 4.65 Figure 23 above illustrates wholesale CPS purchases as at Q4 2020 – 5,642 CPS access paths. This suggests that a trivial amount of end users purchased RFVC and RFVA from different SPs, and, hence, the bulk of end users purchase RFVA and RFVC in a bundle. There has been a persistent downward trend in purchases of CPS at the wholesale level since the 2014 RFVA Decision by approximately 75%, as illustrated above. ComReg notes that the 2015 FACO Decision removed the obligation on Eircom to provide standalone CPS and, as of September 2016, it has not provided new CPS sales, and only does so on a legacy basis to Access Seekers.
- 4.66 While Eircom's Submission acknowledged that customers generally purchase RFVA and RFVC together, its view was that end users have substituted away from RFVA and RFVC to different products, thus suggesting the presence of different competitive dynamics. ComReg notes that, at the focal product stage, the assessment does not involve a complete analysis of substitution possibilities. The selection of a focal product(s) is, rather, the starting point from which ComReg considers its substitutability assessment.²²⁸ Given the link between RFVA and RFVC, ComReg does not consider that competition has evolved sufficiently differently for these products since 2014 to warrant defining separate product markets. This is further substantiated by end users' preferences to purchase RFVA and RFVC in a bundle, which signals to ComReg that it is appropriate in the light of the evidence of end user behaviour to define a bundled focal product.
- 4.67 Eircom stated that it is inappropriate to consider RFVA and RFVC as a single focal product on the grounds that RFVA and RFVC display different competitive dynamics - end users have substituted away from RFVA to broadband, and from RFVC to OTT services/Managed VoIP, respectively. ComReg considers, rather, that there is evidence of end users having substituted from both traditional copper based RFVA and RFVC to Managed VoIP delivered over broadband – that is to say, away from the focal RFTS product to an RFTS demand-side substitute.
- 4.68 Eircom's assertion that competitive dynamics vary between RFVA and RFVC is echoed by both BT and ALTO. However, as outlined in paragraphs 4.28 to 4.47 above, ComReg does not consider that any variances are sufficient to result in the need to consider RFVA and RFVC as separate focal products.

²²⁸ BEREC Report on Impact of Fixed-Mobile Substitution in Market Definition, at p.12. BoR 12 (52), 24 May 2012. Available online at https://www.berec.europa.eu/eng/document_register/subject_matter/berec/reports/363-berec-report-impact-of-fixed-mobile-substitution-fms-in-market-definition

- 4.69 As evidenced by Figure 3, RFTS ownership and usage has declined since 2014. However, it is ComReg's view that end users' actual substitution patterns do not indicate they are unpicking RFTS to RFVA and RFVC. While it is the case that consumers are choosing Managed VoIP delivered over broadband as opposed to FNA RFTS, ComReg characterises this as full RFTS to RFTS substitution. Although it is true Unmanaged VoIP is not a full RFTS substitute and could be deemed to be a form of RFVC, ComReg does not consider it is an effective substitute. This is discussed further in paragraphs 4.71 to 4.73 below.
- 4.70 In the 2020 Consultation, ComReg proposed to include Managed VoIP delivered over NG Broadband in the RFTS relevant product market. Based on demand patterns, sufficient end users appear to have substituted to Managed VoIP (where available from their SP) as the RFVC component with broadband as the RFVA component, making Managed VoIP delivered over broadband an effective substitute for RFTS. This supports the proposition that Managed VoIP is an effective demand-side substitute to the focal product.
- 4.71 In relation to OTT, ComReg's preliminary view in the 2020 Consultation²²⁹ was that Unmanaged VoIP (OTT services) delivered over broadband or mobile telephony does not constitute an effective substitute to RFTS for various reasons, including call quality and range of numbers called.²³⁰
- 4.72 ComReg's view is that Unmanaged VoIP OTT services, whether provided over fixed broadband or mobile telephony, are not effective substitutes for RFTS, whereas Managed VoIP, as outlined in the 2020 Consultation, is effectively substitutable with RFTS (either when provided with fixed broadband or on a standalone basis). This distinction is made on the basis of both supply side conditions, and demand side evidence. Managed VoIP SPs typically have their own switching platform, interconnect paths and numbering allocations, and can manage the quality of VoIP traffic on the IP access path to ensure that minimum QoS requirements for the provision of RFTS are met, while Unmanaged VoIP SPs cannot do so. With regard to demand side evidence, ComReg's 2019 Market Research showed that, among residential respondents, only 14% of those without a fixed landline considered the ability to use Unmanaged VoIP OTT (Skype, WhatsApp etc.) services as the main reason for not having a fixed landline. If end users viewed Unmanaged VoIP as a substitute for RFTS, ComReg would expect this number to be higher.

²²⁹ See paragraphs 4.224 to 4.238.

²³⁰ Slide 93 of the 2019 Residential Market Research.

- 4.73 ComReg's 2019 Market Research also showed a clear distinction between which types of calls survey respondents make with OTT services and those they make with a fixed landline. For example, while 69% of Survey Respondents use a landline to call another national fixed landline, only 2% of Survey Respondents would use an Unmanaged VoIP service to make this type of call. This trend is also reflected in calls to non-geographic numbers, with no Survey Respondents using Unmanaged VoIP to make a call to these types of numbers.²³¹ ComReg notes that this may be due to the lack of interoperability between certain OTT services and traditional public telephony network.²³² ComReg considers that this further limits the substitutability of Unmanaged VoIP services.
- 4.74 If sufficient end users were switching from (either standalone or bundled) RFTS to unmanaged OTT, then it could be the case that SAB subscriptions would rise, on the basis that they are either procuring or retaining broadband in order to use OTT. However, SAB subscriptions only comprise 17% of total fixed broadband subscriptions as at Q4 2020.²³³ Broadband bundles including RFTS or other services comprise 82% of total fixed broadband subscriptions, as at Q4 2020.
- 4.75 ComReg accordingly concludes that there is limited scope for competitive constraints to evolve for RFVA and RFVC separately, which implies that they should be construed as a single focal product, and not as two separate products falling into separate markets. This view draws, *inter alia*, on ComReg QKDR data on CPS purchases and on the 2019 Market Research. This was also ComReg's approach in the 2015 FACO Decision.²³⁴
- 4.76 For these reasons, ComReg considers RFVA and RFVC together as RFTS. As illustrated in Figure 23, just 1.2% of non-Eircom RFTS involves the provision of RFVA and RFVC from separate SPs. However, ComReg considers that the inclusion, or otherwise, of RFVA within the assessment would be unlikely to have a material impact. This is because most customers prefer to purchase RFVA and RFVC from a single SP, given their complementary nature and, therefore, switching generally occurs across the two services in tandem. This is especially the case, given that end users typically cannot purchase RFVA and RFVC separately.

²³¹ Slide 74 of the 2019 Market Research.

²³² While Skype allows calling users not using the platform, Viber and WhatsApp only allow calls to other users of the app. In order to use FaceTime, the call recipient must also have an Apple product.

²³³ ComReg QKDR data.

²³⁴ See paragraph 3.4(a) of the 2015 FACO Decision.

Is the appropriate focal product a standalone RFTS product or a bundle of RFTS and other services?

- 4.77 This section considers the relevance of bundling to the choice of focal product, in light of recent trends showing that a high proportion of RFTS subscriptions are bundled with other services such as broadband, TV and mobile telephony. No Respondents commented on this point specifically.
- 4.78 Table 12 below gives a breakdown of total RFTS subscriptions, as at Q4 2020. The data show that 83% of RFTS subscriptions are bundled with at least one other service. Bundles comprising RFTS and fixed broadband are the most common combination, accounting for 81% of subscriptions with an RFTS component. A similar trend is evident in the 2019 Residential Market Research, which showed that, of those respondents with a fixed landline as part of a bundle of services, the majority (56%) had a bundle of at least fixed landline and broadband, while just 5% had a quad-play bundle:²³⁵

Table 12: Total Subscriptions to Retail Fixed Telephony Service Q4 2020

Subscription type	Subscriptions	% Total
SA RFTS	226,489	17%
RFTS and TV	4,983	<1%
RFTS and broadband	534,140	40%
RFTS and mobile voice	5,457	<1%
RFTS, broadband, TV	395,443	30%
RFTS, mobile voice, broadband	98,166	7%
RFTS, mobile voice, TV	120	<1%
RFTS, broadband, TV, mobile voice	62,292	5%
Total RFTS Subscriptions	1,327,000	100%

- 4.79 ComReg considers below whether the trend towards consumption of bundled offers implies that the relevant starting point for ComReg's assessment of product market substitutability should be a bundle including RFTS and at least one of broadband, TV or mobile telephony.

Economies of scale, scope and density

- 4.80 Economies of scale, scope and density are associated with providing RFTS and other related telecommunications services, which can be achieved across both the operational and administrative activities of the SP. Economies of scale and scope are defined in paragraph 4.34; economies of density refer to potential efficiencies associated with supplying customers who are geographically concentrated.

²³⁵ Slide 26 of the 2019 Residential Market Research.

- 4.81 The additional cost incurred by an SP associated with providing broadband in addition to RFTS can, in some cases, be low, depending on the nature of the wholesale inputs. For example, when providing broadband by means of VDSL (FTTC), Eircom uses the same copper access path that it uses to provide RFTS. VDSL requires additional equipment such as DSLAMs and backhaul, which is not required to provide RFTS. While the cost of providing this additional equipment is significant on a standalone basis, it is less significant when compared to the hypothetical overall cost of replicating Eircom's PSTN network. Therefore, Eircom can achieve economies of scope when it provides RFTS and broadband, as it can leverage part of the PSTN network for RFTS. Economies of scale arise as RFTS or broadband subscriptions increase.
- 4.82 Virgin Media uses its CATV network to provide both broadband and RFTS by means of Managed VoIP. Accordingly, the additional cost incurred by Virgin Media when bundling RFTS with its broadband service is likely to be low and limited to the cost associated with shared capacity in the broadband network, and the cost of providing RFTS customer premises equipment ('CPE'). Similarly, Access Seekers that have invested in backhaul facilities to provide RFTS and/or broadband achieve economies of scale in the provision of RFTS when they use the same access path for both RFTS and broadband.
- 4.83 The uneven (existing and planned) deployment of alternative broadband networks capable of delivering RFTS suggests the presence of economies of density in urban areas, and the comparative absence of such economies of density in more rural areas. Virgin Media and SIRO have both concentrated their network rollout in areas of higher population density, while NBI will service areas of lower population density, largely in rural areas on a non-commercial basis based on public policy considerations, due to commercial decisions taken by SPs not to incur the costs of network rollout to those areas.
- 4.84 These opportunities for economies of scale and scope are reflected in the marketing behaviour of many SPs, which are increasingly focused on selling product bundles to end users, as illustrated in Figure 12 above.

Transaction costs faced by end users

- 4.85 As set out at paragraph 4.41, bundle markets are more likely in the presence of significant transaction costs. End users may seek to reduce transaction costs by choosing a single supplier of multiple telecommunications services.

- 4.86 SPs have responded to this demand pattern by offering bundled products that appeal to residential and business end users who have a preference for purchasing RFTS and other services, such as broadband, from a single SP, as indicated in Table 12 above. In addition, ComReg's 2019 Residential Market Research indicates that 77% of fixed landline owners purchased a landline as part of a bundle of services.²³⁶ 50% of survey respondents with more than one product had a bundle.²³⁷ Similarly, ComReg's 2017 ICT survey showed that 56% of survey respondents had a bundle and that just over a third of those with bundled services had a broadband and landline bundle, with 22% having broadband and TV.²³⁸
- 4.87 On the business side, the 2019 SME Market Research showed that two thirds of SMEs with more than one telecommunications service purchased them as part of a bundle. Of those SMEs that bundled services, fixed landline and fixed broadband was most prevalent bundle (74%).²³⁹ SME respondents expressed their main reason for bundling as "*easier to manage one provider*".²⁴⁰
- 4.88 SPs may also have a preference for offering bundled products, as end users may be 'stickier' and less likely to switch to alternative SPs, the greater the transaction costs involved in doing so. Furthermore, the margin an SP earns on a bundle may be driven by a focal or anchor product in the bundle. For example, SPs have indicated to ComReg that there are greater profit margins on bundles that include broadband, where broadband is the key driver of demand for the bundle.²⁴¹
- 4.89 The high degree of end user demand for bundled products suggests that end users face some level of transaction costs, leading them to purchase services in a bundle (i.e. receive a single bill) to reduce transaction costs, but also because SPs offer discounts in bundling (e.g. RFTS and broadband). However, developments in network technology may reveal the limits of demand for bundles. In particular, for end users who cannot purchase broadband, or who have a preference for standalone RFTS, the requirement to purchase broadband in order to have RFTS provided by means of Managed VoIP is a constraint on end users switching away from standalone RFTS provided by means of FNA.²⁴²

²³⁶ Slide 8 of 2019 Residential Market Research.

²³⁷ Slide 21 of 2019 Residential Market Research.

²³⁸ 2017 ICT Survey, slides 14 and 15.

²³⁹ Slide 28 of 2019 SME Market Research.

²⁴⁰ Slide 29 of 2019 SME Market Research.

²⁴¹ ComReg issued Informal Information Requests to seven SPs in April 2019 with a response date of May 2019, including BT, Eircom, Pure Telecom, Virgin Media, Vodafone, Sky and SIRO.

²⁴² Standalone RFTS end users are discussed in paragraphs 4.93 to 4.100 below.

End User Behaviour

- 4.90 ComReg QKDR data and the 2019 Market Research provide useful insights into the willingness of end users to purchase RFTS on a standalone basis or bundled with other telecommunications services.
- 4.91 As set out above, subscription data available to ComReg suggest that a significant proportion of end users value the provision of services (RFTS, broadband or TV) on a bundled basis and, therefore, purchase product bundles tailored according to their preferences and valuation of the wider bundle of services, as illustrated in Table 12. However, a proportion of end users continues to purchase RFTS on a standalone basis.
- 4.92 The 2019 Residential Market Research indicated that 23% of residential end users (that have a fixed landline) purchased RFTS on a standalone basis,²⁴³ while 31% of SMEs (that have a fixed landline) report this to be a standalone service.²⁴⁴ This suggests that a small cohort of residential and SME end users show a preference for purchasing a fixed landline on a standalone basis. Residential end users that purchased standalone RFTS tended to be older (23% were aged 55+) and were evenly spread across urban, suburban and rural locations.²⁴⁵

Standalone RFTS end users

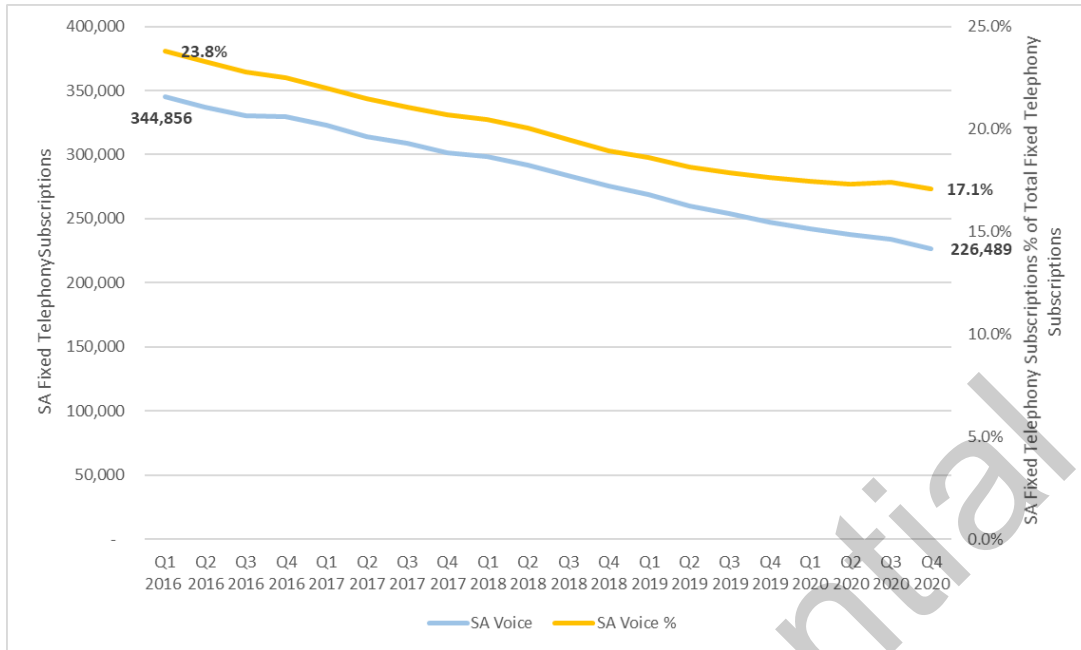
- 4.93 ComReg has undertaken an analysis of standalone RFTS end users in terms of demographics, location, preferences and broadband availability.
- 4.94 Figure 24 below indicates that 17.1% (226,489) of RFTS subscriptions are purchased on a standalone basis as at Q4 2020, having declined by 34% since Q1 2016. This is broken down as 58% being among residential end users and 42% being among non-residential end users:

²⁴³ Slide 8 of the 2019 Residential Market Research. This amounted to 12% of the total sample of 2,011.

²⁴⁴ Slide 15 of the 2019 SME Market Research.

²⁴⁵ Slide 8 of the 2019 Residential Market Research.

Figure 24: Standalone RFTS end user subscriptions – Q1 2016 to Q4 2020



4.95 Figure 25 and Figure 26 below outline SP market shares for standalone RFTS subscriptions. Eircom holds a higher market share (49%) among residential end users compared to business standalone RFTS end users (31%):

Figure 25: Residential Market Shares among Standalone RFTS End Users (subscriptions) – Q2 2015 to Q4 2020

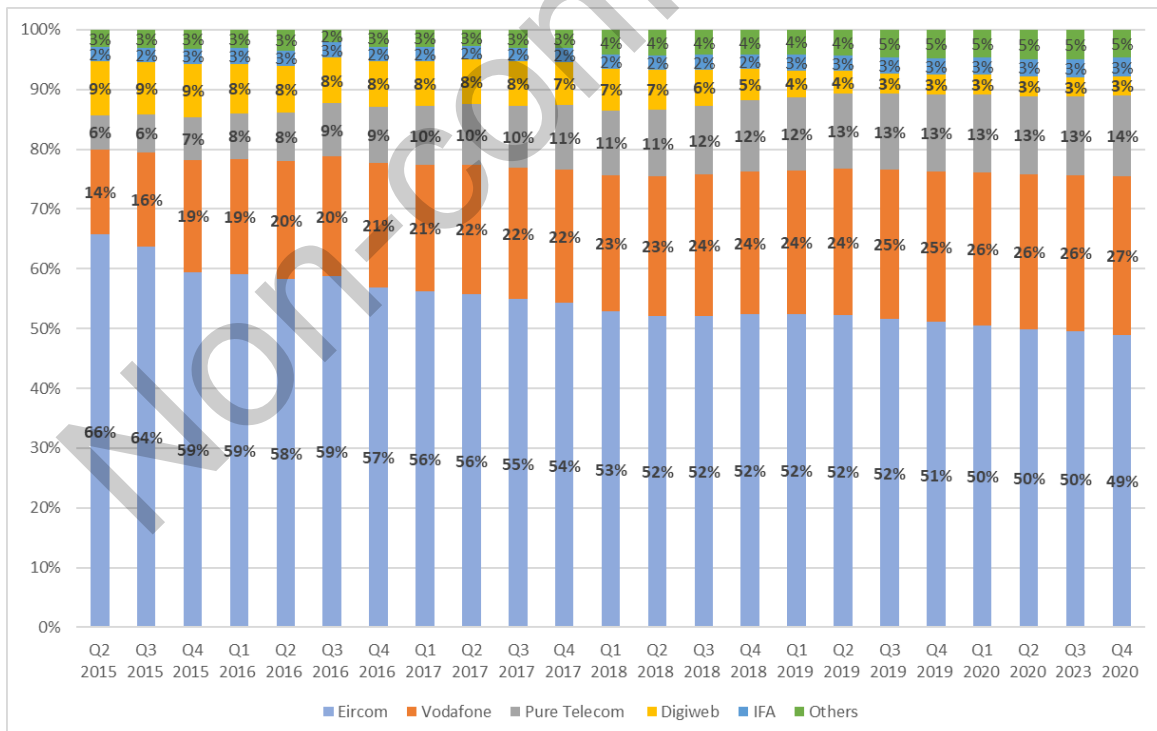
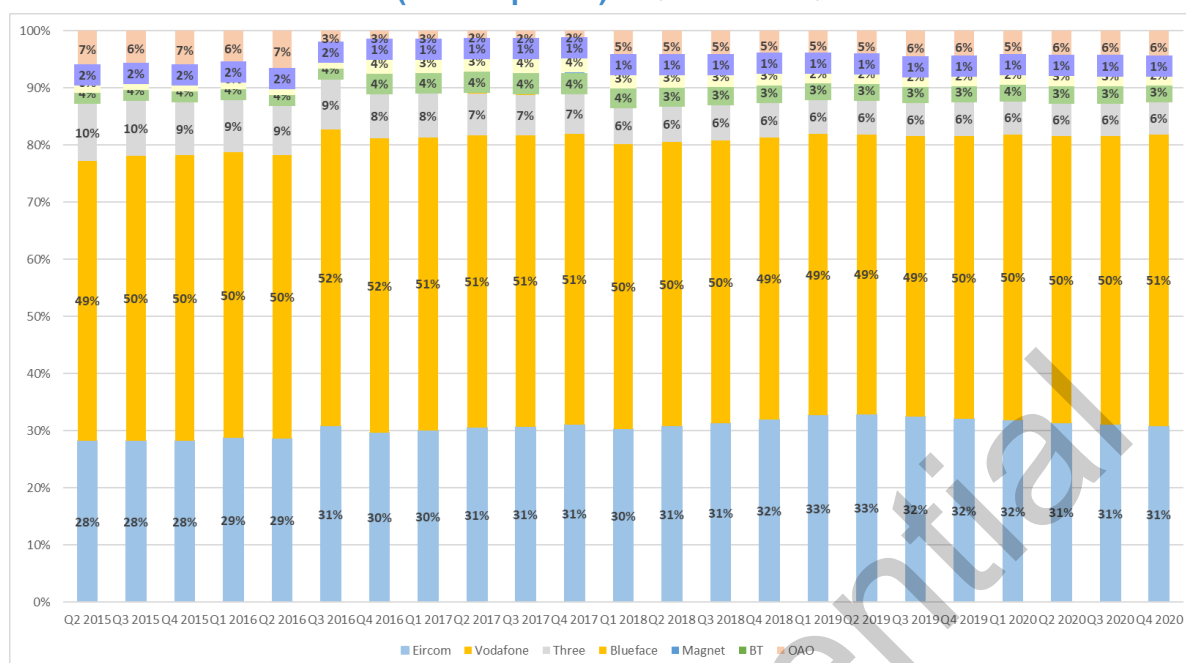


Figure 26: Business Market Shares among Standalone RFTS End Users (subscriptions) – Q2 2015 to Q4 2020



4.96 In ComReg's view, discrete demand for standalone RFTS will persist where end users:

- (a) Have NG Broadband services available, but nevertheless choose to purchase RFTS on a standalone basis because they do not wish to purchase multiple services and would thus not value a bundle comprising RFTS and any of broadband, TV or mobile voice. These end users have a preference for standalone RFTS instead of bundled RFTS over NG Broadband (i.e. broadband with Managed VoIP-based RFTS);
- (b) Have NG Broadband services available, and purchase RFTS and broadband/other services ('**Split Purchasers**') from separate SPs. In this case, bundling is a possibility, but the end user chooses not to bundle these products due to inertia, or specific product preferences. These end users have a preference for standalone RFTS and standalone broadband/TV over RFTS bundled with TV/broadband; or
- (c) Do not currently have NG services available, which may discourage the possibility of purchasing a bundle of services with RFTS (unless it is a bundle of RFTS with CG broadband). These end users do not have the choice of purchasing bundled RFTS with NG Broadband. Were NG Broadband services to become available in these areas, some might switch to a bundled service, some might remain on their standalone RFTS, and some might become Split Purchasers.

- 4.97 For those end users that purchase RFTS on a standalone basis despite having access to broadband, TV and mobile bundles, it is unlikely that significant numbers would switch to purchasing RFTS in a bundle in response to a SSNIP of RFTS. This is because their demand characteristics suggest that they may place less value on a bundle of services.
- 4.98 Conversely, for Split Purchasers, it is possible that, in response to a SSNIP of RFTS, they could be incentivised to bundle their RFTS to avail of cost savings and reduced transaction costs.
- 4.99 For those end users that purchase RFTS on a standalone basis and do not currently have access to NG Broadband, a SSNIP of RFTS is unlikely to impact their purchasing behaviour, as switching to a bundle of RFTS and broadband is not an option. When the rollout of NBI has completed, and many of these end users have access to NG Broadband, it is possible that such end users might switch to a broadband bundle in response to a SSNIP of RFTS.
- 4.100 According to the 2019 Residential Market Research, of respondents that had a landline, 23% purchased on a standalone (non-bundle) basis. Of this group, 60% had a landline only, while 22% were Split Purchasers (i.e. had a bundle of other services in addition to fixed landline) and 18% were considered 'inert' – where they purchased the landline but did not actively use it.²⁴⁶ For those on a standalone landline that do not have broadband, 64% indicated that they did not need or use the internet, 19% indicated that they did not know how to use the internet and 5% indicated that internet was not available in their area.²⁴⁷ Where end users were located in areas where broadband was unavailable or too slow, 27% would switch to a bundle of broadband and RFTS and 16% would purchase broadband but keep RFTS with their current SP, while 14% would drop RFTS and purchase broadband only.²⁴⁸

²⁴⁶ Slide 8 of the 2019 Residential Market Research.

²⁴⁷ Slide 18 of the 2019 Residential Market Research.

²⁴⁸ Slide 19 of the 2019 Residential Market Research. Sample sizes too small to divide this group into standalone RFTS and bundled RFTS (where applicable).

- 4.101 In relation to end user price sensitivity in response to a SSNIP, in response to a price increase of €4 per month on the total cost of the RFTS bill (10% SSNIP), 68% of those on standalone RFTS indicated that they would not change their behaviour while 32% indicated they would “*definitely change behaviour*” or “*maybe change behaviour*”.²⁴⁹ For those that would definitely/maybe change their behaviour (a small sample), 32% indicated that they would cancel the subscription with their current SP (including switch SP and/or cancel RFTS), 28% said they would keep the subscription but make fewer calls and 18% said they would stay with their current SP but switch to a cheaper calls package.²⁵⁰ Those that would remain with their current SP said they would use their mobile phone more for calls and texts (41%) and make fewer RFTS calls (32%).²⁵¹
- 4.102 This suggests that residential standalone RFTS purchasers may not necessarily switch to a bundle of RFTS and broadband, either in response to a SSNIP of RFTS, or if broadband became available.
- 4.103 The 2019 SME Market Research indicated that 31% of SMEs that have a fixed landline report this to be a standalone service.²⁵² ComReg’s market research partner, RedC, noted²⁵³ that, given the small base sizes of SME respondents qualifying for four indicative SSNIP scenarios, the results would not have been reliable, and were accordingly not shown in the report. Taken on of these indicative scenarios, for example, of the approximately 252 SME respondents who indicated that they purchase FNA RFTS in a bundle along with other services, four indicated that they would ‘definitely’ or ‘maybe’ change behaviour in response to a €4 increase in the total cost of their bill.
- 4.104 ComReg infers from the failure of the 2019 SME Market Research to generate large enough samples to explore potential responses to an indicative SSNIP that an ever smaller amount of this already statistically unreliably small cohort would then positively indicate that it would switch to a specific identified alternative such as, for example, mobile telephony or Unmanaged VoIP.

²⁴⁹ Slide 98 of the 2019 Residential Market Research. The SSNIP amount of €4 comprises 10% of line rental cost (€25.78) and 10% of call cost (average €20 per month), rounded to nearest euro.

²⁵⁰ Slide 99 of the 2019 Residential Market Research. Small sample size.

²⁵¹ Slide 100 of the 2019 Residential Market Research. Small sample size.

²⁵² Slide 15 of the 2019 SME Market Research.

²⁵³ Slide 75 of the 2019 SME Market Research.

- 4.105 ComReg further notes that the 2019 SME Market Research indicates that high proportions of respondents report being sticky to their existing RFTS provider, and also being unaware of the cost of RFTS. Respondents falling into these categories are less likely to be sensitive to price increases, and are therefore more likely to be characterised as infra-marginal customers who will be less likely to change their behaviour in response to a SSNIP of RFTS. In particular, 40% of SME respondents indicated that they did not know how much they paid for their RFTS in each billing period,²⁵⁴ 33% of SME respondents indicated that they did not check billing details or usage statistics,²⁵⁵ while 60% of respondents indicated that they had been with their current RFTS provider for at least 3 years.²⁵⁶
- 4.106 These SME respondent findings are, in ComReg's view, consistent with RedC's conclusion that the sample sizes it had generated in respect of changes to behaviour in response to a SSNIP were too small to be analytically meaningful.

Conclusion in relation to the appropriate focal product

- 4.107 Overall, ComReg's analysis suggests that end users exhibit an increasing preference for purchasing RFTS together with other telecommunications services in a bundle. However, a substantial proportion of end users continues to purchase standalone RFTS, for a number of reasons. According to the 2019 Residential Market Research, where standalone RFTS end users do not have broadband this appears to be a revealed preference (paragraph 4.100 above); however, a subset of these end users may switch to a bundle of broadband and RFTS when NG Broadband becomes available in their area. The cohort of standalone RFTS end users as of Q4 2020 remains significant (226,489 or 17.1% of total RFTS subscriptions) but has declined significantly since the 2014 RFVA Decision, when it was close to 600,000 end users.²⁵⁷
- 4.108 ComReg's position is, accordingly, that standalone RFTS constitutes a separate market to RFTS sold as part of a bundle of services.
- 4.109 As previously noted in paragraph 4.76, RFVA and RFVC are largely purchased jointly and are defined as a single RFTS product in this Decision. ComReg considers that, given current market circumstances, end users purchasing RFTS would, in response to a SSNIP (of RFVA, RFVC, or both) be unlikely or unable to unpick the individual bundle elements and substitute to alternative products, such that it would render the SSNIP unprofitable.

²⁵⁴ Slide 39 of the 2019 SME Market Research.

²⁵⁵ Slide 48 of the 2019 SME Market Research.

²⁵⁶ Slide 59 of the 2019 SME Market Research.

²⁵⁷ Paragraph 5.17 of the 2014 RFVA Decision.

- 4.110 Accordingly, ComReg's view is that the standalone FNA RFTS product is the appropriate focal product for the current market definition assessment, rather than a product bundle incorporating RFTS and other services such as broadband. Given the high degree of complementarity between RFVA and RFVC, ComReg considers that the focal RFTS product consists of both call origination and line rental i.e., both the RFVA and RFVC components.
- 4.111 However, where residential and business end users consume RFTS and other telecommunications services, such as broadband, there is scope for substitution between standalone RFTS, and RFTS bundled with other services, depending on the nature of the individual end user and whether a HM of standalone RFTS is constrained from imposing a SSNIP on standalone RFTS by bundled RFTS.

Are calls made to all types of telephone numbers in the same RFTS market?

- 4.112 No Respondents commented on this point specifically.
- 4.113 A fixed telephone can be used to call various types of telephone numbers. These include, but are not limited to, other local or national fixed line or mobile phones, international fixed line or mobile phones, and non-geographic numbers ('**NGNs**') (including, but not limited to, low/shared cost numbers, freephone numbers, special rate services numbers and competition line numbers).²⁵⁸ ComReg notes that some NGNs are being withdrawn. Since 1 December 2019, a call to an 1850, 1890, 0818, or 076 NGN has cost no more than a call to a landline number and is to be included in call bundles that include calls to landlines. Calls to 1800 remain free. In addition, from 1 January 2022, the number of NGN ranges will be reduced from five to two. All NGNs apart from 1800 Freephone and 0818 Standard Rate will be withdrawn.²⁵⁹
- 4.114 ComReg considers below whether calls made to different types of numbers fall in a single product market, or whether they form separate retail markets.

Product characteristics

- 4.115 A telephone call involves the connection over a telephone network between a calling party and a called party.

²⁵⁸ NGNs are sometimes referred to as Number Translation Codes ('**NTCs**'), being NGNs, which have no physical destination address of their own but can reach real destinations and/or real services once they are translated into other number types.

²⁵⁹ ComReg Decision D15/18 (Document No. 18/106); see also <https://www.comreg.ie/industry/licensing/numbering/ngn-review/>.

- 4.116 The functionality involved in providing call capability varies depending on the type of destination number being called. For example, the provision of a local 'on-net' call²⁶⁰ by the customer of an SP can be managed entirely on the SP's own network, without the need to purchase wholesale voice call termination service from a third party SP.²⁶¹ If two Eircom RFTS customers call each other, Eircom does not incur third party FVCT charges as the call stays within its network. Conversely, an RFVC made, for example, to a mobile telephone number involves the purchase of Mobile Voice Call Termination ('**MVCT**'). Thus, if a Digiweb RFTS customer calls a Vodafone mobile customer, Digiweb will incur MVCT charges as Vodafone charges Digiweb for terminating the mobile call on its network. However, the point of handover of off-net calls remains the same – via a point of interconnect.
- 4.117 Calls to Premium Rate Services ('**PRS**') and calls to NGNs can involve the provision of services via the call, for example, calls to technical helplines, advice centres, competition lines and other entertainment services. In some cases, this involves charges being levied on the calling party for those services, or, indeed, the party receiving the call being charged for it (the latter occurring through, for example, the pass-through of wholesale and other charges arising from the provision of FVCO or Transit to the terminating network with which the called party has the retail contractual relationship).
- 4.118 While there are some differences in the characteristics of different types of RFVC, there are also many similarities. The initial phase of a retail call (equivalent to FVCO) involves the same network equipment regardless of the type of destination number called. All FSPs must interconnect either directly or indirectly with other FSPs or MSPs in order to provide an RFTS. This involves the routing and handing over of originated calls to other networks for Transit or termination when necessary. Transit for calls to NGNs and mobile numbers involve an Intelligent Network ('**IN**')²⁶² look-up to determine the destination network; Transit to ported geographic and mobile numbers can also involve the need to query number porting databases to identify the subscriber's network provider. For this reason, an FSP that has the facilities in place to provide one type of outbound call is generally well-placed to provide all types of outbound calls, indicating a high degree of supply-side substitutability in the provision of different types of calls.

²⁶⁰ 'On-net call' refers to a call between two subscribers that share the same SP for their provision of RFTS (e.g. Vodafone customers). An 'off-net' call refers to a call between two subscribers that each have a different SP for their provision of RFTS (e.g. a Vodafone customer calling a Digiweb customer).

²⁶¹ Although implicit, within an on-net call is the SP's self-supply of FVCT to itself.

²⁶² An IN look-up is essentially a query issued by an SP to relevant databases which then allows identification of the relevant SP to which the call should be routed to for termination.

Retail Pricing

4.119 To reflect variation in the cost of providing calls to different called parties (and other reasons such as willingness to pay etc.), FSPs typically charge different retail prices for different call types. ComReg has observed the following variations in pricing between different types of calls:

- (a) **Local and national calls:** these are typically provided at a lower price than other call types, and there is often no distinction between the retail price charged for making such calls i.e. the price of a local call and a national call is the same. Often an allocation of local and national minutes (either a set or unlimited amount and sometimes restricted to off-peak times) is included in packaged or bundled price plans, or offered at a reduced rate (or at no extra cost per minute) at the weekend.²⁶³ Local/national calls that are made after any inclusive package or bundle minutes have been used up typically incur an up-front retail charge for setting up a call and then a per-minute rate. This per-minute charge often differs according to whether the call was made at a peak or off-peak time.
- (b) **International calls:** these are typically more expensive than local and national calls. However, it is becoming more common for a limited, or in some cases unlimited, number of minutes for calls to international numbers to be included in RFTS packages, although typically to specified international destinations only.²⁶⁴

²⁶³ Eircom, Vodafone, and Virgin Media charge between 3c and 9c per minute for out-of-bundle local and national calls (this can be subject to call set-up charges of up to 29c or minimum call fees). This compares to prices ranging between 22c and 29c for calls to mobile numbers and between 11c and €9 for international (fixed/mobile) call charges levied by these three SPs. For example, Vodafone charges 4.5c per minute for an Irish landline-to-landline call (plus 9.8c connection fee), while an Irish landline to Irish mobile call costs 22c per minute (plus 9.8c connection fee). Prices were retrieved from SP websites on 28 April 2021.

Eircom: <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/Pt2.3.2.pdf>

Virgin Media: https://www.virginmedia.ie/pdf/terms/VM_CRM_21715_Charges-Website_JANUARY20v2.pdf

Vodafone: <https://n.vodafone.ie/shop/broadband/charges.html>

²⁶⁴ For example, Virgin Media's '250Mb Freedom Broadband and Home Phone' includes 400 minutes to select international numbers (total standard cost is €43 per month). Quote retrieved on 28 April 2021: <https://www.virginmedia.ie/broadband/buy-a-broadband-package/250-mb-freedom-broadband-world-talk/>.

- 4.120 Calls from a fixed line telephone to mobile numbers are typically more expensive than calls to a local or national landline (geographic numbers).²⁶⁵ However, the inclusion of mobile minutes in bundles with fixed voice calls is becoming more prevalent.²⁶⁶
- 4.121 The price of making calls from a fixed telephone to NGN and PRS telephone numbers typically varied in the past, however, as noted in paragraph 4.112, ComReg has harmonised the costs of these types of calls.

End User Behaviour

- 4.122 In considering whether RFVC to different types of numbers falls within a single product market, it is useful to consider residential and SME calling patterns. The 2019 Residential Market Research asked respondents with a fixed line telephone to indicate the distribution of outbound calls made from their fixed line telephone across different call types by various frequencies (daily, weekly, monthly). The following call distributions were recorded on a daily basis:²⁶⁷
- (a) 24% of outbound calls are made to local/national fixed line numbers;
 - (b) 20% of outbound calls are made to mobile numbers;
 - (c) 7% of outbound calls are made to international phone numbers; and
 - (d) 4% of outbound calls are made to PRS numbers.
- 4.123 SME respondents did not display strong tendencies towards any particular types of calls.²⁶⁸
- 4.124 As shown in Figure 27, traffic volumes provided by SPs²⁶⁹ show the following overall call distributions in terms of traffic generated from fixed line telephones:
- (a) 43% to local/national fixed line numbers;
 - (b) 22% to mobile numbers;
 - (c) 16% of calls to international phone numbers; and
 - (d) 19% to other (including PRS) numbers.

²⁶⁵ See, for example, Eircom's retail outside of a bundle call charges, which are 9c per minute for calls to eir mobile and 29c a minute for calls to other mobile operators. <https://www.eir.ie/opencms/export/sites/default/content/pdf/pricing/Part2.1.pdf>

Similarly, Vodafone charge 22c per minute for calls made from a fixed line to a mobile phone and Virgin Media charge 26c per minute. <https://n.vodafone.ie/shop/broadband/charges.html>
https://www.virginmedia.ie/pdf/terms/VM_CRM_21715_Charges-Website_JANUARY20v2.pdf

Prices retrieved 28 April 2021.

²⁶⁶ See Table 17 to Table 22 below and also Annex 3 of this Decision.

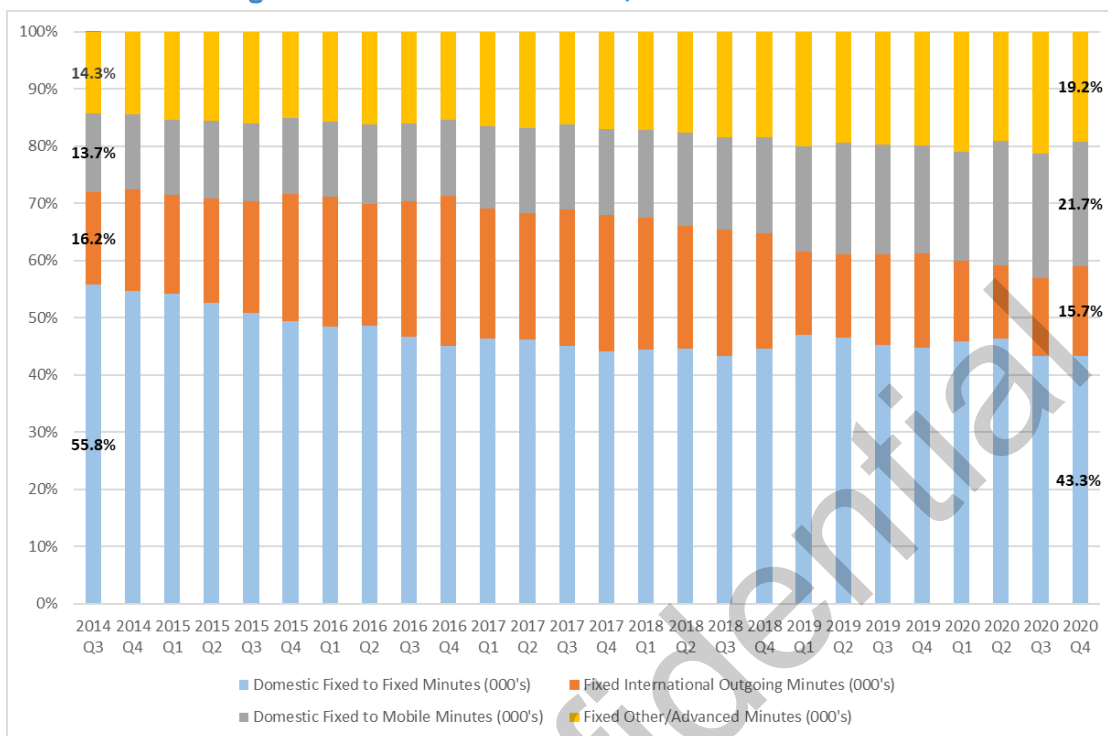
²⁶⁷ Slide 73 of the 2019 Residential Market Research.

²⁶⁸ Slide 52 of the 2019 SME Market Research.

²⁶⁹ ComReg QKDR Q4 2020.

4.125 Figure 27 indicates that the bulk of RFTS calls are made to other RFTS numbers (i.e. fixed-to-fixed calls):

Figure 27: RFTS call minutes, Q3 2014 to Q4 2020



4.126 These call distributions indicate that RFTS subscribers use their fixed line telephone predominantly to make local and national calls, although the ability to make all call types is likely to be important.

4.127 Table 13 below, taken from the 2019 Residential Market Research,²⁷⁰ sets out the views of those residential respondents with both a fixed line telephone and mobile phone in response to questions as to which device they would primarily use to call different types of telephone numbers:

²⁷⁰ Slide 74 of the 2019 Residential Market Research. Respondents were asked: “For each of the following types of calls, please select whether you would primarily use your fixed landline, Mobile phone or Skype/WhatsApp etc. for each call type.” N=690. Note that that survey fieldwork was undertaken prior to ComReg’s Decision D15/18 in relation to standardising costs of NGNs.

Table 13: Residential preferences - device use by call type

Calls to:	Fixed line phone in your home	Mobile phone	Skype/ OTT	Not applicable/ Don't know
Local/national fixed line phones	66%	24%	2%	9%
Mobile phones on the same network as your mobile phone	15%	74%	5%	7%
Mobile phones on a different network to your mobile phone	16%	68%	9%	7%
International numbers	45%	21%	15%	19%
PRS numbers	20%	15%	2%	63%
Directory enquires	34%	14%	0%	52%
1800 numbers	37%	17%	0%	45%
(Callsave) 1850 or (lo-call) 1890	40%	17%	0%	44%

4.128 Table 14 below sets out the views of SME respondents on this same issue:

Table 14: SME preferences - device use by call type²⁷¹

Type of call	Fixed line	Mobile phone	Skype/ OTT	No preference
Local/national fixed line	82%	35%	2%	7%
Mobile phones	71%	48%	2%	8%
International numbers	67%	26%	4%	19%

4.129 Table 13 and Table 14 suggest that, for the majority of residential and SME respondents with both a fixed line and a mobile phone, the fixed line telephone was the preferred platform when making calls to other fixed local and national numbers, international numbers, PRS numbers, directory enquiry numbers and 1800 numbers. The notable exception is for calls made to mobile numbers among residential respondents, for which a mobile, rather than a fixed line telephone, was the preferred means of the making calls.

²⁷¹ Slide 52 of the 2019 SME Market Research. Respondents were asked: "Thinking about the types of calls your employees make from your business premises, please select what your employees would primarily use for each of the following call types. If there are several options which your employees would primarily use, please select multiple options." N=390.

- 4.130 The 2019 Residential Market Research also asked respondents about their primary means of making calls to friends/family, with 54% using their mobile phone to call friends/family, 27% using landline and 19% indicating either landline or mobile.²⁷² The proportion using landline was higher among those aged 55+ and in rural locations. For those on a standalone landline, the proportion citing fixed landline as primary method to call friends/family was 44%. When asked about calling other people, 56% cited mobile phone as the primary method and this was highest in urban areas and among younger cohorts of the sample.²⁷³
- 4.131 While Unmanaged VoIP (in particular, Skype) was not commonly used as a primary means of making local or national calls, 15% of households reported using Skype as their primary means of making international calls (Table 13). This suggests that the relatively higher price of calls made to international numbers from a fixed line telephone or a mobile phone may have encouraged some households to use Unmanaged VoIP instead of making international calls using their fixed line. This may, to some extent, explain why some FSPs now include in RFTS packages an inclusive number of minutes for calls to international destinations.
- 4.132 Responses to ComReg's 2019 Residential Market Research indicated that households with both a fixed line telephone and a mobile telephone predominantly use a mobile telephone to make calls to other mobile telephones. This is especially so for on-net mobile calls, with 74% of respondents stating that they primarily use a mobile telephone when making calls to on-net mobile phones (68% primarily use a mobile telephone when making calls to off-net mobile numbers).²⁷⁴ The usage pattern was somewhat different for SME respondents, who overall reported a preference for their RFTS as the primary means of making calls to mobile phones. For example, 71% of SME customers primarily use their fixed line telephone when making calls to mobiles, versus 48% that primarily use their mobile telephone when making calls to mobiles.²⁷⁵ ComReg notes the high proportion of residential mobile phone users with inclusive minutes to mobiles on the same network (84%) compared to the proportion of users with inclusive minutes to mobiles on other networks (58%).²⁷⁶

²⁷² Slide 77 of the 2019 Residential Market Research.

²⁷³ Slide 78 of the 2019 Residential Market Research.

²⁷⁴ Slide 74 of the 2019 Residential Market Research.

²⁷⁵ Slide 52 of the 2019 SME Market Research.

²⁷⁶ Slide 56 of the 2019 Residential Market Research.

4.133 In summary, the calling patterns observed in paragraphs 4.122 to 4.132 above suggest that fixed line phones are typically used by customers to call a variety of number types, but predominantly other fixed line numbers. As such, in considering the boundary of any retail market, calling patterns of customers do not provide any obvious justification for making a clear distinction between outbound calls based on the destination number.

Conclusion on whether retail fixed voice calls made to different types of numbers are in the same retail market

- 4.134 ComReg notes that the tendency of a significant proportion of households and SMEs to use their fixed line telephone to call several types of numbers infers a degree of demand-side complementarity between these call types. In order to meet the needs of end users and to compete effectively, it is likely that SPs will need to offer a full range of outbound calling services, including, in most cases, the ability for subscribers to call local and national numbers, mobile phone numbers, international numbers, and NGNs, including PRS. This, along with the supply-side complementarity (arising from economies of scope) associated with providing various types of calls, has been reflected in RFVC offerings, in which SPs typically offer end users the ability to make calls to various types of numbers. End users appear to make the decision to contract for RFTS with a single SP based on combination of calls being made – not individual call types.
- 4.135 Households or businesses may also, in some cases, elect to use mobile or VoIP enabled devices to make certain types of calls. For example, residential respondents were more likely to use their mobile phone rather than a fixed line telephone to call a mobile phone number. Unmanaged VoIP was more commonly used for calling international numbers (relative to other call types). These are examples of where it is more cost effective for end users to make certain types of calls from their mobile phone, or an Unmanaged VoIP service, relative to the prices that would have been incurred if those calls had been made from a fixed line telephone.²⁷⁷
- 4.136 The EC's 2007 Explanatory Note²⁷⁸ suggested that local and national calls are likely to fall within one market, whereas international calls would potentially fall within a separate market because of differing supply-side substitution and demand characteristics. It also suggested, on the basis of supply-substitution, both such markets include fixed-to-fixed as well as fixed-to-mobile calls. The 2014 Explanatory Note noted that:

²⁷⁷ Although the anticipated impact of lower mobile termination rates over the period this market review may reduce the price of fixed-to-mobile calls.

²⁷⁸ COMMISSION STAFF WORKING DOCUMENT - EXPLANATORY NOTE Accompanying document to the Commission Recommendation on Relevant Product and Service Markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (Second edition) {{C(2007) 5406}} (the '2007 Explanatory Note'). See page 23.

“In general, it can be observed that the substitution from mobile telephony is much more intensive on the calls market than on the access market itself.”²⁷⁹

4.137 ComReg’s overall position is that, while the degree of competitive constraint may differ for some call types (there appears to be a stronger degree of competitive constraint for international calls and calls to mobile numbers for some segments of users, stemming from Skype/OTT and mobile phones), most end users purchase a range of call types from their RFTS SP. These often include local, national and international calls, as well as NGN/PRS calls and calls to mobile numbers. This would also appear to be evidenced from the lack of use, at the wholesale level, of Carrier Access²⁸⁰ (‘CA’) and CPS²⁸¹ (discussed in paragraph 4.29) services which allow customers to buy calling services on a call by call basis from a different SP. ComReg therefore considers that there is insufficient evidence to warrant defining separate markets for representing different types of calls made from a fixed location.

Are low-volume and high-volume RFTS users in the same relevant market?

4.138 This section considers whether it is appropriate to define narrower focal products specific to customer type (i.e. low-volume v. high-volume users). No Respondents commented on this point specifically.

4.139 ComReg acknowledges the possibility that, on the demand side, different categories of RFTS end user may exhibit different preferences, and different levels of price responsiveness. Similarly, on the supply side, provision of RFTS may vary according to end user groups, notably those in different geographic areas or types of premises. It is appropriate to consider whether separate markets corresponding to different categories of end users exist, or whether there is sufficient overlap between end users with slightly different demand profiles, such that a chain of substitution²⁸² links all categories of end user.

²⁷⁹ At p.26.

²⁸⁰ Carrier Access allows the end user to manually choose its preferred Access Seeker (RFVC provider) for onward carriage or delivery of its calls by dialling a carrier access code before dialling the called party’s number.

²⁸¹ Carrier Pre-Select is a service provided by Eircom whereby the end user’s telecommunications equipment, such as a private automatic branch exchange (‘PABX’) or similar equipment, automatically dials a carrier access code which routes the end user’s calls to the Access Seeker for onward carriage or completion.

²⁸² See paragraph 57 of the Notice on Market Definition, which notes that, in certain cases, the existence of chains of substitution might lead to the definition of a relevant market where products or areas at the extreme of the market are not directly substitutable. A chain of substitution may exist, for example, where a customer would not substitute from product A to product C to avoid a SSNIP, but would substitute to an adjacent product B. This may suggest that products A and B are in the same market, but that products A and C are in separate markets. However, if there are customers who would substitute from product B to product C to avoid a SSNIP then this may also suggest that products B and C are in the same market. Because of a chain of substitution between products A and B and products B and C, products A and C would be defined as in the same market.

- 4.140 ComReg notes that the EC did not distinguish between residential and non-residential customers in the RFVA market described in the 2007 Recommendation, or in the 2014 Explanatory Note.
- 4.141 In the 2007 Recommendation, the EC determined that it was appropriate to define a single RFVA market for residential and non-residential customers because notifications received from NRAs suggested contractual terms did not significantly and systematically differ between the two types of access. The EC also noted the scope for supply-side substitution to operate across end user groups. However, it has since accepted that the maintenance of such distinctions may be appropriate in some countries – for example Austria (2017), France (2017), the Netherlands (2017), Poland (2018) and Spain (2016) have defined residential and non-residential markets for RFVA.²⁸³ In France, ARCEP explained that the characteristics of the products in the two markets differ widely, especially in relation to tariff structures and the tendering process for businesses. In the Netherlands, ACM delineated three retail markets for fixed telephony which are reflected at the wholesale level.
- 4.142 The 2014 Explanatory Note notes, in relation to the legacy RFVA market listed in the 2007 Recommendation, that *“One single narrowband access market for residential and non-residential customers was foreseen.”*²⁸⁴
- 4.143 As recognised in the 2007 Explanatory Note, NRAs have some discretion to further segment the market for RFVA on the basis of national circumstances and in line with competition law principles, where it is found that limited demand-side and supply-side substitution between such products exists.²⁸⁵

Demand-Side Substitution

- 4.144 For the purpose of defining the focal product, it is not necessary that all low-volume users (e.g. residential users) would be likely to consider a high-volume (e.g. business) product to be a substitute for a residential product in order for residential and business products to be included in the same relevant market. It is only necessary that a sufficient number of low-volume/residential users would switch to (adjacent) business products (and/or vice versa), such as to render a SSNIP unprofitable (assuming that the hypothetical monopolist supplies only business customers or only residential customers).

²⁸³ Case AT/2017/1971: access to the public telephone network provided at fixed location for residential and non-residential users in Austria.

Case FR/2017/2038: Access to the public telephone network at a fixed location in France.

Case NL/2017/1958-1959: Retail and Wholesale Fixed Telephony Markets in the Netherlands.

Case ES/2016/1948: Access to the public telephone network at a fixed location for residential and non-residential customers in Spain.

Case PL/2018/2080: retail markets for access to the public telephone network at a fixed location for residential and non-residential customers in Poland.

²⁸⁴ At p.20.

²⁸⁵ 2007 Explanatory Note, page 22.

- 4.145 This section compares product sets that are aimed at low-volume and high-volume RFTS end users by looking at:
- (a) Product characteristics, functionality and intended use; and
 - (b) Pricing.

Functionality, intended use and product characteristics

- 4.146 As illustrated in Table 2 in Section 3, RFTS is predominantly delivered over Eircom's FNA network, with PSTN-based subscriptions accounting for more than 60% of total RFTS subscriptions. FNA is capable of providing voice access via PSTN (i.e. one voice channel) as well as over ISDN (BRA, FRA and PRA respectively – multiple voice channels).
- 4.147 The core functionality of RFTS products purchased by low-volume and high-volume end users is reasonably homogeneous across end user categories, and the same FNA (copper) infrastructure is used to offer RFTS in each case. Differences in functionality may arise in respect of the voice services offered over the RFVA connection and any associated customer support or Service Level Agreements ('**SLA(s)**'). For example, some business customers may have dedicated account managers, and large business customers may have bespoke product bundles with specific SLAs (for example, around the timing of fault repairs, etc.). Furthermore, businesses are more likely to purchase additional RFTS functionality, such as call conference facilities or call forwarding.
- 4.148 Access paths per line vary by RFTS product (PSTN v. ISDN), as noted previously in paragraph 3.39 and illustrated in Table 1 above. For example, as ISDN PRA has 30/31 channels/paths per line, it is unlikely to be demanded by low-volume end users. Thus, while the RFVA line is homogenous, the RFVC service varies in terms of voice channels per RFVA line. The last three rows are non-FNA paths, with RFTS being delivered over IP – including Managed VoB, SIP Trunking and Hosted PBX. The number of voice channels can vary based on the VoIP product design, but SIP Trunking and Hosted PBX can cater for larger volumes akin to ISDN FRA and ISDN PRA respectively:
- 4.149 The functional differences between the most basic form of ISDN (ISDN BRA) and PSTN are minor, with PSTN offering one voice channel and ISDN BRA offering two voice channels. ISDN FRA and ISDN PRA both support a much larger number of voice channels – 16 and 30 channels respectively. Accordingly, PSTN and ISDN BRA on the one hand, and ISDN FRA and PRA on the other hand, are likely to satisfy differing end user needs. It is unlikely that an end user demanding a single voice channel would switch from PSTN to ISDN FRA or ISDN PRA in response to a SSNIP of PSTN.

- 4.150 The preference for using ISDN rather than PSTN for access to voice services is typically because the subscriber requires more than one channel. Functionally, the ISDN product may be seen as a multiple of PSTN lines, with ISDN terminating equipment allowing transparent data transmission without a traditional modem. Data access via ISDN is a switched circuit service operating over a dial-up connection. ISDN access supports some supplementary services not supported by PSTN access, but these are of less relevance for the current assessment. A PBX, which is required to switch calls on the end user's side of the network termination point ('NTP'), can be used with both PSTN and ISDN access services. Supplementary services can also be used with a PBX to provide certain additional facilities.
- 4.151 As such, for ISDN PRA and ISDN FRA, while these services share overall functionality with PSTN and ISDN BRA, the larger number of channels means that demand is most likely to derive from higher-volume users than is the case for PSTN and ISDN BRA. In terms of functional interchangeability between PSTN or ISDN BRA access and ISDN FRA/PRA access respectively, it is possible to connect multiple PSTN lines to a PBX and share a single directory number. However, many PBXs are configured to use only ISDN lines, and these are often provided in conjunction with direct dialling, which allows direct dial to an individual PBX extension. Thus, for high-volume users with PBXs configured for ISDN access in place, it may not be technically possible for them to switch from using ISDN access to using multiple PSTN lines in response to a SSNIP of ISDN.
- 4.152 ComReg's position in relation to functional substitutability among FNA RFTS products (PSTN and ISDN) is that:
- (a) The ability for high-volume users with PBXs configured for ISDN FRA and PRA lines only to switch from using higher-level ISDN access to multiple PSTN lines in response to a SSNIP may be limited; and
 - (b) ISDN FRA and ISDN PRA are functionally distinct from ISDN BRA and PSTN. The significant differences in the number of channels and direct dial numbers indicate that they likely meet different end user requirements.
- 4.153 Given this distinction in the type of RFVC service provided over RFVA, the 2014 RFVA Decision delineated markets for Low-Level Voice Access ('LLVA') and High-Level Voice Access ('HLVA'), corresponding to PSTN and ISDN BRA, and ISDN FRA and ISDN PRA respectively.

Residential and Non-residential end users

- 4.154 SPs generally provide both residential and non-residential RFTS, which are broadly targeted at low and high-volume end users.

- 4.155 Business RFTS products tend to be more flexible than residential RFTS products as they can be tailored to the needs of a specific business. There can be differences in terms of additional features offered, such as greater access to enhanced support services, including reduced repair and response times for business customers. In addition, customised products are available that typically cater for corporate or high-volume and multi-office users. These products differ from off-the-shelf business products by offering features such as inter-site connections, centralised and shared functionality between sites (e.g. call divert), multiple incoming calls to the same number and a single bill for the main number and all its auxiliary lines. These differences in the additional features provided to business and residential customers could be indicative of separate markets, but only if the differences are significant enough that users at adjacent levels in the value chain (e.g. high-volume residential users and low-volume business users) would not view the products as sufficiently interchangeable in response to a SSNIP of either product.
- 4.156 The 2019 SME Market Research showed that 84% of SMEs with RFTS had a PSTN phone line, followed by 15% on ISDN (of various types) and 6% on Managed VoIP.²⁸⁶ The numbers on PSTN were evenly spread geographically and by business size (i.e. micro, small and medium). The 2019 SME Market Research also showed that 68% of businesses were on a business contract/package with standard tariffs and terms and conditions, 18% were on a bespoke business contract/package designed to suit the specific needs of the business, and 11% were on a residential contract/package.²⁸⁷

²⁸⁶ Slide 16 of the 2019 SME Market Research.

²⁸⁷ Slide 43 of the 2019 SME Market Research.

- 4.157 Many businesses require a fixed phone line as their primary point of contact for customers and may therefore be less sensitive to the price of RFTS than residential end users. This is reflected in the relatively large proportion of households that do not have RFTS (51%), compared with a smaller group of businesses without RFTS (23%). The 2019 SME Market Research also revealed that SMEs make a greater proportion of their outgoing calls using RFTS compared to households. For example, only 15% to 16% (for on-net and off-net respectively) of residential calls to mobiles were made from fixed lines, compared to 71% of calls made by SME users.²⁸⁸ In general, 52% of residential respondents made calls from their mobile more frequently than their fixed landline.²⁸⁹ This may reflect a greater reliance by businesses on a fixed line for making and receiving calls – there is a perception (83% of SMEs with RFTS) that a fixed line phone is important to the day-to-day functioning of the business, as demonstrated by the 2019 Market Research.²⁹⁰ In addition, mobile penetration rates are higher across households, relative to businesses (where employees more often only have a fixed connection). As of Q4 2020, there were more than double the number of residential mobile voice subscriptions (i.e. excluding mobile broadband and machine to machine),²⁹¹ compared to business mobile voice subscriptions.²⁹²
- 4.158 It is also worth noting that the bulk of mobile voice minutes are to other mobiles as opposed to fixed line numbers, as illustrated in Figure 28 below:

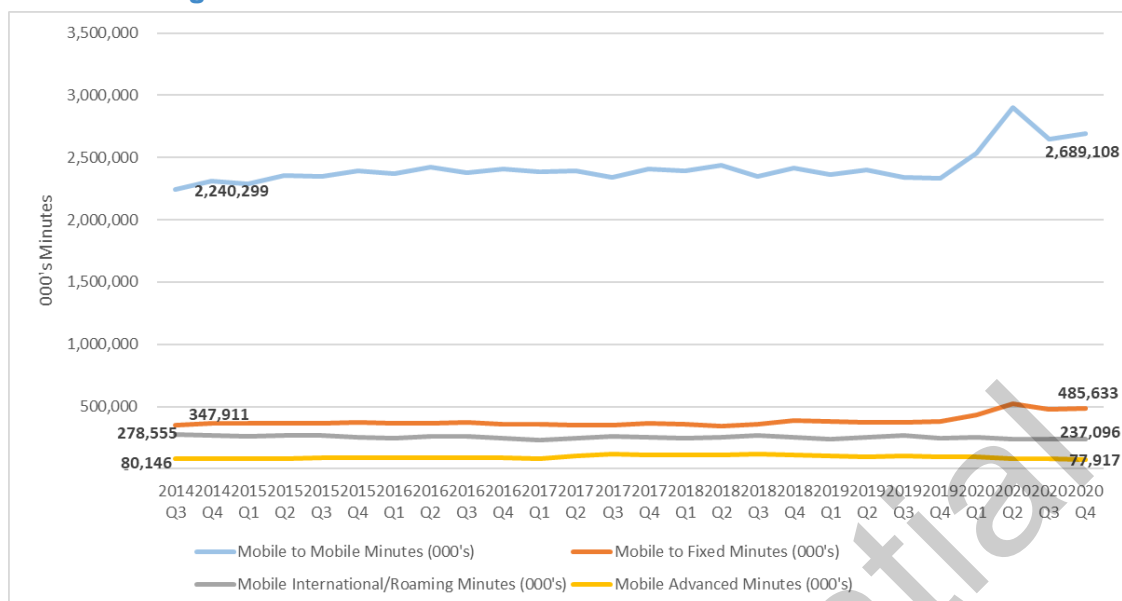
²⁸⁸ Slide 74 of the 2019 Residential Market Research and slide 52 of the 2019 SME Market Research.

²⁸⁹ Slide 65 of the 2019 Residential Market Research.

²⁹⁰ 83% of respondents indicated that a fixed landline is important in terms of the day-to-day functioning of the business – slide 63 of the 2019 SME Market Research.

²⁹¹ Machine to Machine ('M2M') refers to technologies that involve data communication between devices or systems in which, at least in principle, human intervention does not occur. These technologies may encompass either wireless or wired communications, or both. Specific examples of M2M applications include smart metering, vehicle and consignment tracking, alarm monitoring systems of various kinds, ATM machines signalling the need for cash replacement, smart grid monitoring of real time electricity demand, smart home applications such as switching on and off lights, heating, and other appliances.

²⁹² ComReg QKDR Q4 2020.

Figure 28: Mobile Voice Call Minutes – Q3 2014 to Q4 2020

- 4.159 Despite these variances, there is significant crossover between how business customers and residential customers use RFVA. The RFVA connection is a means over which voice services are provided. Other services, such as broadband access, are often supplied in addition to RFVA, and more often as part of a bundle for both customer types. The 2019 Market Research further indicated that SME and residential customers both prioritise similar factors when it comes to selecting an SP. Those were the value of the package or bundle offered, quality of broadband product as part of bundle, cost of RFTS and quality of customer service.²⁹³
- 4.160 While customised contracts may involve enhanced SLAs over and above the standard product descriptions that both residential and standard business customers are offered, according to the 2019 SME Market Research, only 18% of SMEs report customising their contracts. Furthermore, while 68% purchase a standard business contract, a further 11% of SME customers purchase a residential RFTS contract.²⁹⁴ This overlap in the products purchased is likely attributable to the predominantly SME profile of businesses in Ireland. It is probable, therefore, that a chain of substitution between retail and business customers exists, as a significant number of SMEs may be content with a residential product, depending on the nature of their business.

²⁹³ Slide 83 of the 2019 Residential Market Research and slide 61 of the 2019 SME Market Research.

²⁹⁴ Slide 43 of the 2019 SME Market Research.

4.161 Breaks in the chain of substitution might arise where there are significant differences in the number of voice channels supported by the RFVA connection to accommodate different usage needs (e.g. in terms of the number of channels supported between PSTN and ISDN BRA access on the one hand and ISDN FRA and PRA access on the other – see Table 1 above). The extent to which these respective forms of access satisfy differing customer needs and the extent to which this is reflected in the associated pricing structure will be discussed further below at paragraph 4.164.

Eircom plans to phase out ISDN BRA

4.162 In July 2019, Eircom retail informed ComReg of plans to phase out ISDN BRA by no longer offering new orders for this product.

4.163 [X [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] X] ComReg's position on phasing out ISDN BRA is outlined in paragraphs 10.90 to 10.110.

Pricing

4.164 Table 15 below outlines Eircom's retail pricing for FNA services (i.e. access for PSTN and ISDN (BRA, FRA and PRA) services). Prices for ISDN BRA access lie within a comparable price range to PSTN connections.

4.165 In terms of the pricing of Eircom's ISDN FRA and PRA products, both have a connection charge of €3,299 and a monthly charge dependent on the number of channels. For example, 16 channel ISDN FRA costs €215 per month and 30 channel ISDN PRA costs €355. The monthly charge per channel for PRA ISDN variants is around €11.83, compared with a single PSTN line rental price of €20.96. This suggests that a customer would be unlikely to substitute their higher capacity ISDN access services with individual PSTN lines, as the monthly rental cost per channel would effectively almost double:

Table 15: Retail Pricing of Eircom FNA Services excluding VAT, April 2021²⁹⁵

Product	Access channels	New Connection charge	Monthly line rental	Monthly line rental per channel
PSTN	1	€107.43	€20.96	€20.96
ISDN BRA	2	€202.47	€36.81	€18.40
ISDN FRA	16	€3,299	€215.00	€13.44
ISDN PRA	30	€3,299	€355.00	€11.83

²⁹⁵ Prices available at 'Your Telephone Line' as at 26 April 2021
<https://www.eir.ie/opencms/export/sites/default/group/pricing/phoneline/>

- 4.166 It is conceivable that a HM SP of higher-capacity ISDN services could profitably raise prices by 5-10%, as the current rental differential (where multiple access channels are needed) makes it unlikely that sufficient numbers of users would switch to using multiple PSTN lines.
- 4.167 Similarly, given the significant price differential between ISDN FRA and PRA products (i.e. higher-level access) on the one hand, and PSTN and ISDN BRA access products (i.e. lower-level access) on the other, it is possible that a HM SP of lower-level access services could impose a profitable SSNIP of these services as low-volume users (that require less than 16 channels) would be unlikely to switch in significant numbers to ISDN FRA and PRA, given that the connection and monthly fees are multiples of the corresponding lower-level access prices. There is, therefore, a clear distinction in the pricing of lower and higher-level RFVA, based on end user usage (i.e. it appears feasible to price discriminate between customers based on their volume of purchases).
- 4.168 Table 16 below uses Eircom retail prices from Table 15 to illustrate how prices would vary depending on which product is purchased to obtain between 1 and 30 voice channels. Table 16 suggests that there is a gap in the chain of substitution between lower and higher-level access. If an organisation required 8 voice channels, it would be more cost effective to buy 4 ISDN BRA products rather than 8 PSTN products or an ISDN FRA product. If an organisation required 30 voice channels, it would be cost effective to purchase an ISDN PRA product (€7,559) rather than 30 PSTN products (€10,768) or two ISDN FRA products (€11,758). Thus, the cost of the various FNA RFTS products may undermine the likelihood of substitution between them:

Table 16: Demand-side substitution analysis using Eircom retail prices – excl. VAT²⁹⁶

Product	Access channels	Annual cost for number of voice channels				
		1	2	8	16	30
PSTN	1	€358.95	€717.90	€2,871.60	€5,743.20	€10,768.50
ISDN BRA	2	€644.19	€644.19	€2,370.36	€4,740.72	€8,888.85
ISDN FRA	16	€5,879.00	€5,879.00	€5,879.00	€5,879.00	€11,758.00 ²⁹⁷
ISDN PRA	30	€7,559.00	€7,559.00	€7,559.00	€7,559.00	€7,559.00

- 4.169 While ISDN BRA might act as a substitute for two PSTN lines, a multiple of ISDN BRA products would not act as a cost-effective substitute for ISDN FRA/PRA products where 16 or 30 channels are required. It does not appear cost effective to use lower-level access products above 16 channels or to use higher-level access products below 16 channels. Thus, a distinct break in the chain of substitution appears to arise at the 16-channel level. From a demand-side perspective, therefore, ISDN FRA and PRA products fall in a separate relevant market to ISDN BRA. There would appear to be limited scope for demand-side substitution between lower and higher-level access products respectively in response to a SSNIP.
- 4.170 ComReg's position on demand-side substitutability between FNA products is that low-volume RFTS end users and high-volume RFTS end users exhibit differing demand characteristics, such that it is unlikely that low-volume users would substitute to ISDN FRA/PRA in response to a SSNIP of low-volume products (PSTN and ISDN BRA), and vice versa. Consistent with the 2014 RFVA Decision, ComReg's position is that there are two distinct markets for RFTS provided over PSTN and ISDN BRA, and over ISDN FRA and PRA, corresponding to lower-level voice access and higher-level voice access.

Pricing of retail residential v. business RFTS packages

- 4.171 SPs typically distinguish between low-volume and high-volume users in terms of usage by offering bundles of services at different price points for each set of customers. For standalone or bundled RFTS, pricing generally differs between these customer categories, thus reflecting a variety of factors, including differences in the scale of calls expected to be made by each type of customer. Business products are generally priced at a higher rate than residential products, in view of the option for additional or enhanced features. More recently, the trend is for calls packages to include a fixed number of minutes for certain types of calls (e.g. national/international).

²⁹⁶ The total cost is calculated as follows: For example, in relation to demand for 8 channels, the initial connection charge and ongoing monthly rental are calculated for each access product i.e. 8 PSTN connections = 8*PSTN connection charge + 8*12*PSTN monthly rental, similarly the total cost is calculated for 4 ISDN BRA, 1 ISDN FRA and 1 ISDN PRA.

²⁹⁷ Technically, ISDN FRA represents a variant of ISDN PRA and as such where a customer wanted to avail of 30 lines they would opt for ISDN PRA.

- 4.172 In addition, the pricing of business products can, in some circumstances, be negotiated or tailored to an individual business. This differs from residential products, which are typically priced in an off-the-shelf manner. Nevertheless, it may be more appropriate to define the relevant RFTS market in terms of product type rather than user type. For example, distinct markets for high-volume users (ISDN FRA and PRA) and low-volume users (primarily PSTN and ISDN BRA) may more usefully capture the different needs of larger and smaller users of RFTS, primarily by defining the market in terms of the services they use rather than in terms of the features they have in common.
- 4.173 Furthermore, ComReg recognises that large business customers may demand customised products with significantly higher specifications and quality levels than those currently offered by PSTN/ISDN BRA or standard broadband access connections. For instance, if business customers require dedicated capacity services for their data needs, such dedicated services might also be used to provide RFTS, such as, for example, a leased line.
- 4.174 The 2019 SME Market Research indicates that 68%²⁹⁸ of SMEs surveyed are on standard as opposed to customised contracts for their RFTS, likely driven by the predominantly SME profile of businesses in Ireland.
- 4.175 While residential and business customers may have different needs in terms of RFTS features, BEREC notes that this does not necessarily imply the existence of separate residential and business markets.²⁹⁹ It is only appropriate to define separate markets where RFTS features and pricing are sufficiently differentiated such that business customers would not switch to (adjacent) residential RFTS products in sufficient numbers to constrain a SSNIP by the HM of business services, and vice versa for residential customers.
- 4.176 Table 17 below compares the price and non-price characteristics of standard residential and business products offered by a selection of the largest RFTS SPs. The table captures basic business packages as bespoke/custom business offerings are not publicly available:

²⁹⁸ Slide 43 of the 2019 SME Market Research.

²⁹⁹ BEREC Report on relevant market definition for business services –

https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/199-berec-report-on-relevant-market-definition-for-business-services

Table 17: Pricing of Standard RFTS Residential and Business Packages, Q4 2020³⁰⁰

Residential			
SP	Product	No. of Bundles	Price Range incl. VAT p/m
Digiweb	Standalone Voice	4	€29.47 - €39.95
	Voice and Broadband Bundles	14	€34.95 - €79.95
Magnet	Voice and Broadband Bundles	6	€29.99 - €63.99
Imagine	Voice and Broadband Bundles	1	€59.99
Pure Telecom	Standalone Voice	3	€29.00 - €44.00
	Voice and Broadband	5	€35.00 - €40.00
Virgin Media	Voice and Broadband Bundles	3	€43.00 - €68.00
Vodafone	Voice and Broadband	3	€30.00 - €40.00
Eircom	Standalone Voice	2	€39.99-€49.98
	Voice and Broadband Bundles	3	€29.99 - €49.99
Sky	Voice and Broadband Bundles	1	€35
Business			
SP	Product	No. of Bundles	Price Range excl. VAT
Digiweb	Standalone Voice	4	€24.00 - €129.00
	Voice and Broadband Bundles	1	€55.00
Magnet	Standalone Voice	3	€11.95 - €28.95
	Voice and Broadband Bundles		*dependent on end user requirements ³⁰¹
Imagine	Voice and Broadband Bundles	1	€48.77 ³⁰²
Virgin Media	Voice and Broadband Bundles	4	€45.00 - €99.00
Pure Telecom	Standalone Voice	3	€38.00 - €95.00
	Voice and Broadband		*dependent on end user requirements ³⁰³
Eircom	Standalone Voice	7	€44.99 - €334.63
	Voice and Broadband Bundles	10	€74.99 - €99.99
Vodafone	Standalone Voice	3	€32.00 - €65.00
	Voice and Broadband Bundles	3	€45.00 - €60.00

³⁰⁰ Table 17 presents data and calculations based on publicly available information on the relevant SP's websites. Not all offerings are listed as the full suite of products may not be actively available and/or advertised online.

³⁰¹ <https://www.magnetnetworks.com/>

³⁰² <https://www.imagine.ie/business-broadband/>

³⁰³ <https://www.puretelecom.ie/business>

- 4.177 Table 17 shows some price variations in retail product offerings to business and residential customers. ComReg notes that not all business packages that are offered by SPs are listed in Table 17, as often large business end users seek bespoke packages, rather than 'out-of-the-box' solutions, due to the scalability and complexity of their requirements. Therefore, the above listings are most often the smaller, most basic packages, which are priced per single user and then scale thereafter. However, as noted in paragraph 4.174, many SMEs purchase standard packages for their RFTS needs.
- 4.178 The price premium that exists for business products most often relates to the additional call volumes and call types typically included with RFTS for business customers (see Annex: 6 for further detail). Some SPs provide additional calling functionality to businesses. For example, Eircom provides caller ID, three way calling, call waiting and a guaranteed 8-hour line repair time that can be purchased for an additional €23.46 per month.³⁰⁴
- 4.179 SPs tend to offer a basic entry-level product with a limited allocation of minutes included in the bundle (typically, the residential entry-level product includes a lower allocation of bundled minutes, compared with the analogous business product). More expensive products have either additional bundled minutes included, or faster broadband speeds.
- 4.180 In addition to these standard products, most SPs offer bespoke products to large businesses and corporate customers with specific telecommunications needs. These are typically products with enhanced specifications that include services, for example, RFVA may be purchased in the form of an ISDN PRA connection with a virtual private network ('VPN').³⁰⁵ Alternatively, corporate customers may purchase a leased line service or an uncontended symmetric wireless link, which would have a different set of product characteristics. ComReg recognises that larger businesses tend to purchase products that are significantly more expensive and offer more extensive functionality than that required by households and small businesses. However, the table above captures the types of products that are purchased by the majority of households and some businesses. It further indicates that there are likely to be greater similarities between the products purchased by SMEs and households, than between the SME targeted products and those products purchased by large businesses and corporate customers. Thus, there is no obvious delineation between business and residential customers, but there are potential breaks in the chain of substitution for low-volume and high-volume users (as noted in paragraph 4.168), and varying competitive conditions for high-end business connectivity and related products.

³⁰⁴ <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/Pt1.1.pdf>

³⁰⁵ Virtual Private Networks ('VPNs') consist of private networks that may be based around one or more inter-linked 'islands' connected together through secure connections. VPNs create a safe and encrypted connection over a less secure network, such as the public internet. A VPN works by using the shared public infrastructure while maintaining

- 4.181 Overall, having considered demand-side substitution between low-volume and high-volume RFTS end users, ComReg's position is that, given that RFTS platforms reflect differing demand conditions, two focal products should be defined, relating to FNA RFTS delivered over PSTN and ISDN BRA, and FNA RFTS delivered over ISDN FRA and ISDN PRA.

Supply-Side Substitution

- 4.182 Given similarities in the access infrastructure required to provide RFTS for both low-volume and high-volume RFTS end users, there may be some scope for a low-volume RFTS SP (i.e. PSTN and ISDN BRA) to switch to providing high-volume RFTS (at least for SME users, e.g. ISDN FRA) within a reasonable timeframe. However, ComReg notes that incentives to invest in FNA technology (PSTN and ISDN) may be low, given declining demand (Table 11) and this was reflected in bilateral meetings with SPs in late 2018. SPs indicated that in greenfield sites, they would be more likely to invest in NG-based voice technology (i.e. Managed VoIP).
- 4.183 Some SPs supply only business end users (e.g. BT), while some SPs such as Sky and Virgin Media largely focus on residential end users (96% of Virgin Media's customer base is residential end users).³⁰⁶ However, SPs such as Eircom, Vodafone, Pure Telecom and Digiweb serve both residential and non-residential end users. This suggests that existing RFTS SPs not currently active in both segments could find it commercially viable to broaden their offerings to serve adjacent user groups.
- 4.184 However, in the case of large corporates that demand high-quality access and data services, the level of investment required on the part of an RFTS SP to serve these customers may be prohibitive, making such entry financially unviable. An example would be where the SP was required to provide multiple ISDN PRA lines but had only limited infrastructure in place for ISDN BRA, or was required to provide high capacity data services as part of the offering but did not currently have such a network or the infrastructure to buy wholesale inputs. As noted in paragraph 4.182, there may be limited incentives to invest in ISDN technology if demand is declining, as SPs may not gain a return on their investment. This was reflected in [X ██████████ X] response to ComReg's IIR. On balance, there may be some scope for supply-side substitution for an SP that already has facilities to offer ISDN BRA and can switch to providing ISDN FRA and/or ISDN PRA easily, but the incentives may not be sufficient to encourage such supply-side substitution.

privacy through security procedures and tunnelling protocols. In effect, the protocols, by encrypting data at the sending end and decrypting it at the receiving end, send the data through a 'tunnel' that cannot be 'entered' by data that is not properly encrypted.

³⁰⁶ ComReg QKDR

Conclusion

- 4.185 Given the considerations above, ComReg's position is that, taking demand and supply-side considerations into account, low-volume RFTS end users (i.e. SMEs and residential customers) are in the same RFTS market. The underlying network used for delivery of RFTS is similar for low-volume business and residential users. Although there may be some differences in usage, there is a chain of substitution between residential and business users in relation to low-volume RFTS. As shown in Table 17, the prices of both residential and non-residential RFTS offerings broadly overlap. For example, a Virgin Media RFTS and broadband package marketed at small enterprises costs €45 per month (excluding VAT) for 100mbps broadband with calls to Irish/UK landlines and 200 minutes to Irish mobiles.³⁰⁷ Similarly, a Virgin Media RFTS and broadband package marketed at residential end users costs €43 per month (€63 after 12 months) for 250mbps broadband and unlimited minutes to landlines and mobiles in Ireland.³⁰⁸ In addition, given that some other SPs currently supply both residential and business low-volume products, there may be some scope for supply-side substitution into either market segment but, as noted previously, incentives may be low, given declining demand for FNA technology (PSTN/ISDN).
- 4.186 For higher-volume RFTS end users that purchase products such as ISDN FRA and ISDN PRA and require more voice channels, there are unlikely to be sufficient substitution possibilities with lower-volume products such as PSTN or ISDN BRA. ComReg's position is that high-volume products including ISDN FRA and ISDN BRA are in a separate market to low-volume RFTS products (PSTN and ISDN BRA).

³⁰⁷ <https://www.virginmedia.ie/business/business-broadband-phone/> Accessed 13 May 2021.

³⁰⁸ Virgin Media's network is predominantly connected to residential premises, as reflected in the number of Virgin Media residential and business subscriptions recorded in the QKDR.

- 4.187 As noted in the 2012 RFVA Consultation,³⁰⁹ it is possible for multiple (single voice channel) PSTN lines to be connected to a private branch exchange ('PBX'),³¹⁰ and share a single dial-in main number (such as to a business reception). However, PBXs are also configured to operate over ISDN lines. These lines can be provided in conjunction with direct dialling, thereby allowing callers to dial directly to an individual extension within an organisation. The terminal equipment used to support PSTN and ISDN BRA also differs from ISDN FRA and PRA in terms of its functionality and cost. Accordingly, in response to a SSNIP of ISDN FRA or ISDN PRA, high-volume retail end users making use of PBXs configured for ISDN access would, in ComReg's view, be unlikely to switch in sufficient numbers to PSTN or ISDN BRA, to render the SSNIP unprofitable.
- 4.188 Similarly, low-volume end users making use of PSTN or ISDN BRA access are, in ComReg's view, unlikely to switch in sufficient numbers to high-volume products such as ISDN FRA and ISDN PRA, such that it would make the SSNIP unprofitable, given differing functional and cost characteristics. In particular, a residential end user serviced by a PSTN connection is very unlikely to consider the pricing, functionality, and associated technology of ISDN FRA or PRA as an effective demand-side substitute for PSTN access.
- 4.189 Thus, in ascertaining the appropriate focal product as a starting point for the market definition exercise, ComReg's analysis of RFTS product characteristics offers some insight into substitutability between such products and the likelihood of them falling within the same product market. Given that there is likely a segment of the market that demands high-volume RFTS products, ComReg finds that a focal product relating to standalone FNA RFTS over PSTN or ISDN BRA may not be appropriate for this high-volume segment of the market. ComReg's position is that two focal products may be more appropriate, in particular:
- (a) A focal product for low-volume users comprising standalone FNA RFTS over PSTN and ISDN BRA; and
 - (b) A focal product for high-volume users comprising standalone FNA RFTS over ISDN FRA and ISDN PRA.

³⁰⁹ See paragraph 4.118 of the 2012 RFVA Consultation.

³¹⁰ A PBX is a technology used by large organisations that allows a single access number to provide several lines to outside callers, while providing a range of external lines to internal callers. PBX performs all the switching necessary for providing a connection between extensions and external lines.

Overall Position on RFTS Focal Products

- 4.190 ComReg's position is that standalone RFTS products provided over a copper-based FNA network constitute appropriate focal products for the definition of the Relevant RFTS Markets. As of Q4 2020, PSTN remains the most common network over which RFTS is delivered (just over 870,000 subscriptions, accounting for 79.5%% of total RFTS subscriptions (1.1m))³¹¹ and for high-volume users, there continues to be non-trivial uptake of ISDN products.³¹²
- 4.191 ComReg defines two focal RFTS products, as described below:
- (a) A focal product for low-volume users comprising standalone FNA RFTS over PSTN and ISDN BRA ('**Low-Level RFTS Focal Product(s)**');
 - (b) A focal product for high-volume users comprising standalone FNA RFTS over ISDN FRA and ISDN PRA ('**High-Level RFTS Focal Product(s)**').
- 4.192 ComReg's analysis suggests that end users with a preference for RFTS and broadband are likely to purchase these products as a bundle (paragraphs 4.85 to 4.89 and Table 12). This is because there is a high degree of supply-side complementarity in the provision of these products, and because, on the demand-side, end users typically prefer to have a single SP of fixed telecommunications services, where possible. However, some 17.1% of households continue to purchase RFTS on a standalone basis (Figure 24). This may be due to the unavailability of broadband at their location, a preference for a voice-only service or some level of inertia. While many SMEs purchase both RFTS and fixed broadband access, 31% of SMEs surveyed as part of the 2019 SME Market Research still purchase standalone RFTS.³¹³
- 4.193 Irrespective, however, of whether there is a separate market for standalone RFTS, a proportion of end users may consider bundles comprised of RFTS and broadband to be a substitute for standalone RFTS. In particular, where households and businesses purchase both RFTS and broadband, there is scope for substitution between standalone RFTS and RFTS bundled with other services. In this scenario, the bundle of RFTS and broadband could be in the market as defined with standalone RFTS as the candidate product, though this would depend on whether the bundle element constrains the HM of standalone RFTS from imposing a SSNIP. It is clear from the 2019 Market Research that product bundles that include RFTS and broadband are viewed by some end users as a form of substitute to RFTS.³¹⁴ In light of this, ComReg considers below the suitability of product bundles as potential substitutes for a standalone RFTS.

³¹¹ See Table 12.

³¹² ComReg QKDR Q4 2020.

³¹³ Slide 14 of the 2019 SME Market Research.

³¹⁴ Slide 19 of the 2019 Residential Market Research.

- 4.194 As noted in paragraph 4.76, in ComReg's view, RFVA and RFVC comprise a single offering (RFTS). As illustrated in Figure 21 above, the low number of CPS lines purchased at wholesale level indicates that very few RFVA lines are delivered separately from RFVC. This is supported by the 2019 Market Research which showed limited purchasing of RFVA and RFVC from separate SPs.³¹⁵ In addition, ComReg found that none of the largest SPs retail RFVA and RFVC separately. This suggests that end users consider RFVA and RFVC as a single product over which the purchasing decision is made.
- 4.195 As previously noted in paragraph 4.134, ComReg does not distinguish between fixed line call types in determining the appropriate focal products.

Assessment of Direct Constraints

- 4.196 ComReg considers the strength of any direct constraints on the focal RFTS products to determine whether the Relevant RFTS Markets should be broadened beyond the focal products (LL-RFTS and HL-RFTS Focal Products) to include effective substitutes. In particular, ComReg considers:
- (a) Demand-side substitution (paragraphs 4.198 to 4.404 below); and
 - (b) Supply-side substitution, including the self-supply of vertically-integrated SPs (see paragraphs 4.405 to 4.424 below).
- 4.197 ComReg's overall conclusions on the assessment of direct constraints are set out at paragraphs 4.425 to 4.428.

Demand-Side Substitution

- 4.198 Demand-side substitution measures how customers react to price increases. The measurement of demand-side substitution is formalised in the HMT. The HMT assesses whether a SSNIP above the competitive level - taken to be in the range of 5% to 10% - of a focal product supplied by a Hypothetical Monopolist ('HM') would induce a sufficient number of customers to switch to an alternative product, such that it would render the price increase unprofitable. If enough customers switch to the alternative product, rendering the price increase unprofitable, then the alternative product is also included in the relevant product market. The HMT is carried out for any given number of alternative products which, by means of their characteristics, prices and intended use, may constitute an effective substitute to the focal product. If switching to these alternative products renders the SSNIP (above the competitive level) of the focal product unprofitable, then these are also included in the relevant product market.
- 4.199 In their Submissions, no Respondents offered substantial views on ComReg's assessment of RFTS demand-side substitution arising from the HMT.

³¹⁵ Slide 35 of the 2019 Residential Market Research.

- 4.200 The threshold at which changes in retail demand may undermine the profitability of a SSNIP is calculated using the Critical Loss Test ('CLT'). The CLT estimates the percentage of customers that would have to divert away from the focal product in response to a SSNIP in order for the increase in the price of the focal product to be unprofitable. An estimate of actual loss can then be compared to the Critical Loss Value ('CLV'), and if the number of customers likely to switch exceeds the CLV, then the SSNIP can be considered unprofitable and the market is no wider than the focal product. In the alternative, if the degree of demand substitution from the focal product to another given product exceeds the CLV, then that product may be considered to belong to the same relevant market.
- 4.201 Calculating the critical loss requires detailed information regarding, *inter alia*, profitability, and the marginal cost of RFTS in a competitive scenario. The CLT, for the purposes of this Decision, is by no means determinative in and of itself, and is considered by ComReg alongside other evidence.
- 4.202 ComReg has estimated CLVs associated with SSNIP amounts of 5% and 10% for RFTS in Annex: 9 below. The CLT estimates that:
- (a) At a 5% SSNIP of RFTS, the CLV is likely to be c.12-13%; and
 - (b) At a 10% SSNIP of RFTS, the CLV is likely to be c.19-24%.
- 4.203 These percentages estimate how many end users who purchase RFTS from Eircom would have to switch away from the focal product, for that SSNIP to be unprofitable. Thus, if 16% of Eircom RFTS end users switched in response to a SSNIP of 10% of RFTS, that SSNIP would likely be profitable, as the increase in revenues arising from end users who remained with Eircom would exceed the revenue foregone from end users who switched away from Eircom.
- 4.204 It should also be noted that the CLVs have been calculated based on Eircom accounting data which does not distinguish between RFTS purchased on a standalone basis, and RFTS purchased as part of a bundle. As set out at paragraph 4.78 above, 83% of RFTS subscriptions are purchased as a part of a bundle. Accordingly, for approximately 5 in every 6 end users, a 5-10% SSNIP of RFTS would lead to a smaller overall increase in the price of their bundle, where the cost of other bundle components remained unchanged. Thus, while the CLV figures likely reflect behaviour in respect of Standalone LL-RFTS, where the full SSNIP is evident in the prices end users pay, the impact on purchasers of bundled RFTS is likely to be diluted, leading to comparatively lower levels of switching.
- 4.205 On the demand side, ComReg considers whether the following forms of voice service are effective direct constraints on the duly-defined focal products (and therefore fall to be included in the same relevant market):
- (a) Managed VoIP-based RFTS delivered over fixed NG Broadband access (paragraphs 4.206 to 4.275 below);

- (b) Mobile Service (paragraphs 4.276 to 4.388 below); and
- (c) RFTS over alternative fixed access technologies, including high quality access (paragraphs 4.389 to 4.404 below).

Is Managed VoIP-based RFTS delivered over fixed NG Broadband a demand-side substitute to the focal product?

4.206 This section considers whether Managed VoIP is an effective demand-side substitute for the focal products (LL-RFTS and HL-RFTS). In the 2014 RFVA Decision, ComReg included broadband access (over CATV, FTTx, FWA and DSL) in the relevant market definitions on the basis that an SP could actually or prospectively deliver Managed VoIP over broadband on a standalone basis or in a bundle.³¹⁶

4.207 In the 2007 Explanatory Note, the EC noted:

“From the demand-side perspective, substitutability between narrowband and broadband internet access seems limited. There are a number of technical characteristics of broadband access that imply that certain applications are not viable over dial-up access. On this technical basis and from the standpoint of broadband, therefore, narrowband would be a separate market, because the services and/or the quality features of those services (including their uplink and downlink speed) which can be offered over a narrowband connection would not be seen as viable substitutes from the point of view of an end user making use of a broadband connection.”³¹⁷

4.208 The EC went on to make the point that:

“The above analysis may well lead to different results were the starting point to be services offered on narrowband connections. In other words, asymmetric substitutability may occur whereby under certain conditions a broadband connection may be a viable substitute for a narrowband connection, since it offers additional features, whereas a narrowband connection may not be a viable substitute for a broadband connection. As broadband offers gradually become available at higher average speeds, substitutability with narrowband access further decreases.”³¹⁸

4.209 It is thus possible that substitution between FNA RFTS and Managed VoIP delivered over broadband may be asymmetric (i.e. in one direction from FNA to broadband), as FNA RFTS does not support high-speed internet and data services, whereas broadband can be used by SPs to deliver RFTS, as well as internet and data services.

³¹⁶ See paragraph 2.6 of the 2014 RFVA Decision.

³¹⁷ Page 30.

³¹⁸ Footnote 31.

- 4.210 The 2020 Explanatory Note noted that the substitutability of fixed and mobile voice services by Managed and Unmanaged VoIP depends on a number of factors such as product characteristics, quality of service, broadband penetration, pricing, and possibility of receiving domestic or international calls. RFTS solutions based on VoIP technology were expected to become increasingly important in the near future.³¹⁹ The effects from the transition to VoIP telephony would depend on various factors such as broadband penetration, availability of alternative platforms (CATV, mobile broadband, LTE), and intended use (residential or business customers).
- 4.211 Broadband penetration is high in Ireland, with 92% of households reported to have (FNA or NG based) broadband access in 2020³²⁰ and there are more than 1.46 million broadband subscriptions in the country (see Figure 14 and paragraph 3.69 in Section 3). Of these 1.46 million broadband subscriptions, 1.2 million (82%) are delivered over NG Broadband. High-speed fixed broadband connections are increasingly facilitating the delivery of Managed VoIP services that are broadly similar to RFTS offered over FNA. These include Virgin Media, which offers a range of fixed voice products bundled with broadband and/or TV over its DOCSIS 3.0/3.1 CATV network,³²¹ Imagine³²² offers fixed voice and broadband bundles over its FWA network,³²³ and Blueface offering a VoIP service that relies on the end user having an existing broadband connection with a third-party SP. Unmanaged VoIP OTT services are also offered by third-party suppliers (such as Skype, Facebook, WhatsApp, and Viber).
- 4.212 The end user experience of Managed VoIP is typically not distinguishable from the focal RFTS product. This view is consistent with SPs responses to ComReg's IIRs.³²⁴ For example, one SP [X ██████████ X] stated that:
- “In general customers are unaware of the underlying technology used for the provision of a service and are more concerned with the retail price and the functionality of the end service provided.”*

³¹⁹ Page 75 of the 2020 Explanatory Note.

³²⁰ <https://www.cso.ie/en/releasesandpublications/ep/p-iss/h/informationandsocietystatistics-households2020/householdinternetconnectivity/>

³²¹ <https://www.virginmedia.ie/about-us/press/2020/virgin-media-becomes-irelands-largest-gigabit-broadband-provider/>

³²² <https://www.imagine.ie/>

³²³ Digiweb also offers FTTP broadband, FNA broadband and satellite broadband.

³²⁴ ComReg issued Informal Information Requests to seven SPs in April 2019 with a response date of May 2019, including BT, Eircom, Pure Telecom, Virgin Media, Vodafone, Sky and SIRO.

- 4.213 As NG Broadband connections are, in principle, capable of offering similar functionality to FNA in terms of delivering RFTS, the question arises as to whether NG Broadband access may exercise a degree of competitive constraint on the price of the focal products (LL-RFTS and HL-RFTS). All NG Broadband lines, regardless of the underlying technologies, are potentially substitutable to the extent that services which are sufficiently similar or identical to FNA RFTS are supplied over these alternative access technologies and infrastructure.
- 4.214 ComReg recognises the option exists of an alternative source of supply of RFTS through Managed VoIP. Where end users purchase broadband, including as part of a bundle with other services, Managed VoIP acts as an effective substitute to the focal products. In line with the principle of technology neutrality and the EC's guidance that NRAs should assess, on a forward looking basis, the likelihood of increased substitution with broadband connections, ComReg considers whether NG Broadband-based Managed VoIP is sufficiently substitutable with the focal products (LL-RFTS and HL-RFTS) to the extent that it would likely constrain a SSNIP by a HM in the provision of the focal products.
- 4.215 In the 2018 WLA/WCA Decision, ComReg excluded narrowband internet access from the retail broadband market definition.³²⁵ ComReg concluded that narrowband (or dial-up) internet access would not be an effective demand-side substitute for broadband access, which was confirmed by factors such as actual usage patterns. Furthermore, it was not considered that supply-side constraints would be sufficiently immediate or effective for dial-up internet access to be included in the same relevant market as broadband access. ComReg's view has not changed in this regard.

Functionality, product characteristics and intended use

- 4.216 In terms of functionality, Managed VoIP offers end users considerable similarity of service compared to FNA RFTS, including:
- (a) Access to the public fixed telephone network;
 - (b) Capacity to make and receive calls from a fixed location to any other numbered telephone service;
 - (c) Geographic numbering or an allocated non-geographic number (076 number);³²⁶
 - (d) Access to emergency services numbers;
 - (e) A telephone handset that is functionally equivalent to a PSTN handset;

³²⁵ See paragraph 3.9 of the 2018 WLA/WCA Decision.

³²⁶ 076 numbers will be withdrawn by ComReg on 1 January 2022
<https://www.comreg.ie/industry/licensing/numbering/ngn-review/>

- (f) The process of making a call is similar, or the same (i.e. the user picks up the telephone, which emits a dial tone, at which point the user dials the desired telephone number to make the call); and
 - (g) The ability to purchase additional call functionality and services is similar e.g. voice mailbox.
- 4.217 The retail customer Managed VoIP experience is not distinguishable from FNA RFTS, in that the handset produces a dial tone, and voice quality is comparable to FNA RFTS.
- 4.218 With respect to the quality parameter, the quality of the underlying broadband in terms of speed, latency and jitter impacts on the quality of VoIP that can be offered to end users. This may affect the degree to which particular broadband technologies are a functional substitute for FNA. However, ComReg notes that SPs would be unlikely to launch a Managed VoIP service that falls short of customer expectations in terms of quality of service, since doing so would have the potential to undermine that SP's credibility. This point was made to ComReg during discussions with SPs in relation to Managed VoIP.³²⁷
- 4.219 ComReg distinguishes three broad sub-categories of Managed VoIP,³²⁸ which is the provision of RFTS over an IP access path on single or multiple channels:
- (a) Managed VoB) allows for the transmission of RFVC over a broadband connection. Managed VoB is generally provided to the end user over CATV or FTTx³²⁹ networks;
 - (b) Hosted PBX hosts the call platform and PBX features off-site, at the SP's location. End users connect via IP to the SP for RFVC over NG Broadband; and
 - (c) SIP Trunking provides for RFVC over IP between the telephony network and an on-premises PBX. SIP Trunks are generally multi-channel services used to provide ISDN-like features (at a minimum) to modern IP PBXs that support this interface. They function over NG Broadband.
- 4.220 The pace of growth in Managed VoIP, as discussed further below, suggests that a significant cohort of end users do not appear to view quality/functionality differences, relative to the focal products, as a barrier to take-up of Managed VoIP. Most of the growth in Managed VoIP to date has been in Managed VoB among residential RFTS end users.

³²⁷ [REDACTED].

³²⁸ ComReg's QKDR defines 'Voice over Broadband' as "IP-based services that facilitate voice calls to and/or from the PSTN over a broadband connection. With this service, the customer may either have broadband access from an ISP and acquire voice over broadband services from a separate entity, or have both broadband and voice over broadband services bundled together by the same supplier. Voice services bundled with digital TV services and delivered over digital cable TV networks should also be recorded here." The QKDR furthermore requests SPs to provide data on Managed VoB, SIP Trunking and IP connections equivalent to ISDN (i.e. Hosted PBX). Accordingly, the term 'Voice over Broadband' used in the QKDR equates to the term 'Managed VoIP' used in this Decision.

³²⁹ VDSL is the underlying technology in FTTC. Thus, exchange-based VDSL (eVDSL) is included within FTTC.

4.221 As shown below in Figure 29, as of Q4 2020, there were 523,988 Managed VoIP subscriptions.³³⁰ Only a small proportion of Managed VoIP subscriptions are SIP Trunks/Hosted PBX that provide an equivalent number of voice channels to ISDN FRA or ISDN PRA, and these are mostly provided by [X ██████████ X]. However, when measured in terms of voice channels (access paths), Managed VoIP via SIP Trunking/Hosted PBX rises to 25% (Q4 2020), as each line provides more voice channels than a Managed VoB line, which provides a single voice channel. Managed VoIP via SIP Trunking/Hosted PBX subscriptions has grown in recent quarters. The 2019 SME Market Research showed that, of SMEs with RFTS, 6% used Managed VoIP and 10% used PBXs, of which 30% were Hosted PBXs.³³¹

Figure 29: Total Managed VoIP subscriptions (Residential and Non-residential) Q3 2014 to Q4 2020

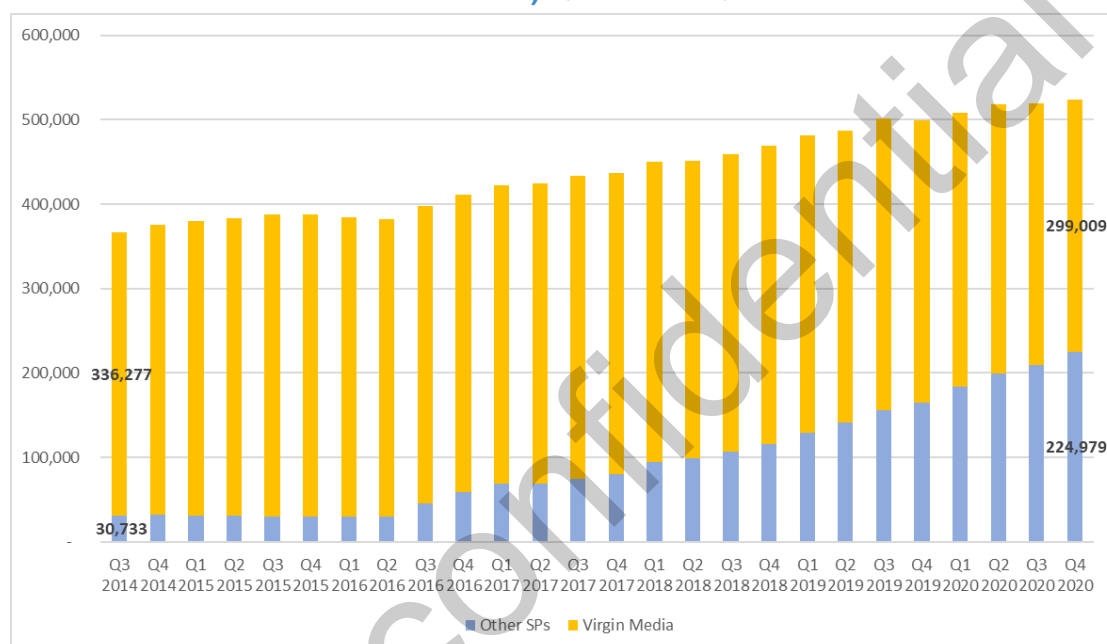


³³⁰ ComReg QKDR Q4 2020.

³³¹ Slides 16, 31 and 32 of the 2019 SME Market Research.

4.222 Figure 30 shows the significant take up of Managed VoIP since 2014. While the bulk of the total are Virgin Media subscribers on Managed VoB (historically the largest Managed VoB SP),³³² non-Virgin Media subscriptions to Managed VoIP (including Managed VoB, SIP Trunk and Hosted PBX) have increased by 435% since late 2014, and this has largely been among SPs offering FTTP broadband to residential end users. RFTS over Managed VoIP now accounts for 36% of total RFTS subscriptions, an increase of 11% since the publication of the 2014 RFVA Decision, when RFTS over Managed VoIP accounted for 25% of total RFTS subscriptions:

Figure 30: Virgin Media and other SPs' Managed VoIP subscriptions (Residential and Non-residential) Q3 2014 to Q4 2020



Managed VoB

4.223 Managed VoB is predominantly delivered over CATV, VDSL and FTTP broadband. In IIR responses, SPs indicated their unwillingness to provide Managed VoIP over DSL/FNA (copper-based) broadband, or over speeds of less than 30Mbps.³³³ ComReg's view is that much lower broadband speed profiles are capable of supporting Managed VoIP once the appropriate QoS markings are set on the VoIP traffic (by the SP's CPE)³³⁴ and adhered to by the network (as they are on Eircom's NG network). Each voice channel requires bandwidth of approximately 100kbps in the uplink and downlink direction. As a result, one of the lowest NG profiles (7 Mbps download, 1 Mbps upload) could support up to 10 VoIP channels simultaneously, thereby supporting a Managed VoB service.

³³² Most Virgin Media Managed VoIP subscribers are Managed VoB (i.e. over home broadband).

³³³ [X [REDACTED] X]

³³⁴ Customer Premises Equipment ('CPE').

- 4.224 Managed VoB can also be delivered over **FWA**, where speeds permit sufficient bandwidth and other QoS parameters such as contention enable it. FWA³³⁵ is a telecommunications service provided over a point-to-multi-point wireless connection between a radio base station (typically located on a mast/tower) and a fixed aerial or device located at the end user's household or premises. FWA is more commonly associated with the provision of certain broadband services and a number of FSPs provide broadband and RFTS over FWA networks in Ireland, the largest being Imagine.³³⁶ Purchasing RFTS over FWA also involves purchasing a broadband connection from an FWA-based SP. Therefore, for most end users, any decision to purchase RFTS from an FWA SP would entail consideration of a broad range of price/quality trade-offs and valuations beyond simply the price of calls available on each network. ComReg notes that, in the 2018 WLA/WCA Decision, FWA broadband was excluded from the defined broadband market due to limited substitutability with other types of broadband in terms of speed, pricing, availability and uptake.³³⁷
- 4.225 The 2019 Residential Market Research showed that just 3% of respondents with broadband accessed broadband via FWA.³³⁸ This was slightly higher in rural areas compared to urban and suburban areas. The 2019 SME Market Research showed that 1% of SMEs with broadband were on FWA and this was slightly higher in Connacht/Ulster.³³⁹
- 4.226 Managed VoB products offered over FWA offer similar functionality and characteristics to traditional FNA RFTS in terms of the key features described in paragraph 4.216 above. However, it should be noted that the coverage and use of RFTS provided over FWA is substantially lower than coverage over other network technologies.
- 4.227 Moreover, demand for broadband and other services provided over FWA remains quite small. Although overall FWA subscriptions have increased, they remain just 3% of total business and residential broadband subscriptions.³⁴⁰ As a platform for the potential delivery of RFTS, FWA appears to be consistently quite small, and this is likely reflected in demand for RFTS delivered over FWA.

³³⁵ Eircom uses FWA in some locations to provide an equivalent to its traditional FNA RFTS. FNA RFTS is already considered as the starting focal product for the purposes of this assessment. In these paragraphs, ComReg is assessing the degree to which VoB/VoIP services provided over FWA broadband connections are likely to be effective substitutes for the focal product (FNA RFTS).

³³⁶ <https://www.imagine.ie/broadband-questions-answers/>

³³⁷ See paragraphs 3.16 and 3.17 and paragraphs 3.79 to 3.116 of the 2018 WLA/WCA Decision.

³³⁸ Slide 16 of the 2019 Residential Market Research.

³³⁹ Slide 17 of the 2019 SME Market Research.

³⁴⁰ ComReg QKDR Q4 2020.

- 4.228 In relation to Managed VoB over DSL, it is by no means clear that DSL/ADSL-based broadband is of sufficient quality to support effective Managed VoB-based RFTS. ComReg recognises that VDSL appears to have the potential to provide a broadband service of sufficient quality to support Managed VoB. In this respect, while ComReg's position is that Managed VoB over VDSL would likely be a substitute for the FNA RFTS focal product, or a CATV network, ComReg does not consider that the same can be said with respect to Managed VoB over ADSL broadband, given uncertainty regarding the sufficiency of QoS and the lack of meaningful entry to date by SPs doing so (and, as noted above, SPs' unwillingness to use this technology to offer Managed VoB).³⁴¹
- 4.229 Currently, Managed VoB is primarily offered as part of a suite of services, typically broadband or Pay-TV. This means that Managed VoB typically suits end users that wish to also purchase broadband or Pay-TV (i.e. Managed VoB RFTS not frequently purchased as a standalone product). However, some SPs provide Managed VoIP on a standalone basis. For example, Blueface (an Irish company that is part of Comcast) provides Partially Managed VoIP services to end users that have an existing broadband connection purchased from another SP.³⁴² This includes Managed VoB and services over SIP Trunk/Hosted PBX.³⁴³ Blueface is largely positioned towards business end users and as of Q4 2020 had [X [REDACTED] X] subscriptions.

SIP Trunking and Hosted PBX

- 4.230 SIP Trunking³⁴⁴ and Hosted PBX³⁴⁵ can be used to provide a greater number of voice channels than Managed VoB and are likely to be demanded by high-volume RFTS users such as large businesses. SIP Trunking and Hosted PBX may be delivered over FTTx or leased lines.³⁴⁶ The 2014 RFVA Decision excluded SIP Trunking and Hosted PBX from the Relevant Markets on the basis that, at the time, demand for these products was low so as not to impact the market and that there was no evidence to suggest that SIP Trunking would be supplied or taken up on a sufficient scale, over the market review period. This suggested that SIP was not likely to be a sufficiently effective substitute for ISDN PRA and FRA. Table 18 gives an overview of SIP Trunking/Hosted PBX products available:

³⁴¹ Asymmetric Digital Subscriber line ('ADSL') is a means of delivering broadband over a FNA connection. Accordingly, ADSL delivers CG Broadband, but is not capable of delivering NG Broadband. In its Submission response, BT concurred that VoIP over ADSL is not appropriate to the RFTS market for reasons of bandwidth and quality.

³⁴² <https://www.blueface.com/small-business/landline/>. Blueface was acquired by Comcast in January 2020 - <https://www.blueface.com/blog/comcast-acquires-blueface/>

³⁴³ <https://www.blueface.com/enterprise/managed-sip/>

³⁴⁴ <https://www.magnetnetworks.com/business/products/sip-trunks/>

³⁴⁵ <https://www.iptelecom.ie/hosted-pbx>

³⁴⁶ Leased lines are identified as a separate wholesale market (Market 4) in the 2014 Recommendation and are currently subject to regulation by ComReg. See below paragraph 4.391.

Table 18: SIP Trunking and Hosted PBX products available in Ireland

Service Provider	Features	Connection
Eircom ³⁴⁷	DDI numbers, Caller Line Identification capabilities (CLI Presentation and CLI Restriction), call barring, call waiting, DTMF, hunt groups, call forwarding, faxing, clustered PBX, multiple number range scenarios and multisite billing. Advanced call features available either at trunk or at DDI level, including call waiting, conferencing, call forwarding or call transfer. eir SIP Voice is SIP Connect compliant and is compatible with services including Suretel and Freefone	Not listed on webpage
BT ³⁴⁸	Unlimited UK calls, Free calls between BT Cloud Voice SIPs	Broadband
Vodafone	Voice features, VoIP features, IP Connectivity, Online Reporting, Resiliency and Disaster Recovery, IP PBX certifications	Not listed on webpage
Virgin Media ³⁴⁹	Virgin Media's SIP Trunking solutions include a full suite of advanced call-handling features. Enjoy DDI (Direct Dialling Inwards), CLI (Call Line Identity), CLIP (Caller Line Identity Presentation), CLIR (Caller Line Identity Restriction) and Presentation Numbers.	Leased Line or VPN
Verizon ³⁵⁰	Increase productivity. Integrating with workforce mobility and collaboration Maintain reliability. Fast call rerouting and disaster recovery Ease manageability. Add sites, change capacity, track usage all at your fingertips Control costs. Combines voice and data, pools usage across sites, and includes U.S. calling to Verizon wireless and select Verizon enterprise VoIP customers	Ethernet LANs and legacy telephone equipment
Airspeed	Reduce costs – no need to purchase ISDN, BRI, PRI or PSTN circuits as SIP will be carried on your existing data connection If you already have secondary IP / data links, you can create SIP Trunk resilience at no additional cost Optimal bandwidth utilisation with both voice and data on the same connection AirSpeed can scale additional SIP demand as business voice capacity requirements grow In case of a network device failure or pathway block, both incoming and outgoing calls offer built in redundancy, with automatic incoming redundancy being a unique feature	Connected via existing data connection
Colt ³⁵¹	Voice services, IP Connectivity, Resiliency and Disaster Recovery, Codec, Transcoding and Security, Outbound calls: Standard Pay-As-You-Go: usage based, standard rates apply for all calls; Voice Freedom / Bundle Minutes: Monthly charge for a fixed bundle or	Not listed on webpage

³⁴⁷ https://business.eir.ie/media/82751-eircom-Business-SIP-product-sheet_D9.pdf

³⁴⁸ <https://business.bt.com/products/business-phone-systems/bt-cloudvoice-sip/>

³⁴⁹ <https://www.virginmedia.ie/business/internet-data-services/sip-trunking/>

³⁵⁰ <https://www.verizon.com/business/products/sip-trunking/>

³⁵¹ <https://www.colt.net/wp-content/uploads/2019/04/SIP-Trunking-data-sheet-EN.pdf>

	packs of minutes; All Inclusive / Unlimited: Monthly charge per channel for free national and international calls.	
GTT ³⁵²	Free office-to-office calls, Fast implementation of SIP Trunks, Global outbound calling – voice platform utilizes GTT's global IP backbone to delivery low latency calls terminated locally, DIDs — Activate new or migrate existing numbers in 55+ countries. Toll free — 120+ countries, Global SIP-based voice network, which includes industry-leading Session Border Controllers for easy scalability, Interoperable with key UC platforms and legacy infrastructure. Supports direct routing to Microsoft Teams, Diverse global communications services integrated onto one connection.	Not listed on webpage
Magnet ³⁵³	Flexibility with phone numbers, Business continuity, Line rationalisation, Save money, Resilience	Connection via broadband or ethernet
AT&T ³⁵⁴	Flexible calling plans, Branch office extensions, Virtual telephone numbers, web-based portal, integration to PBXs	Interconnect via AT&T Dedicated Internet Service (ADI) or AT&T Virtual Private Network (AVPN) for high-speed dedicated access.

- 4.231 For the purposes of this market review, and taking account of recent growth trends, Managed VoIP appears to be viewed as a suitable substitute for the focal products by a sufficient number of RFTS end users (regardless of any potential quality or functionality differences that might exist between the focal product and Managed VoIP services currently provided by SPs).
- 4.232 The main functional difference appears to be that FNA RFTS is offered by SPs on a standalone basis, whereas Managed VoIP tends typically to be marketed and sold in a bundle. For example, end users cannot purchase RFTS from Virgin Media without also purchasing either broadband or TV. This means that an end user switching to a Managed VoIP SP in response to a SSNIP of the focal products would be required to take a bundle of services (including additional functions or features that are not included with an FNA connection).
- 4.233 ComReg notes that Blueface offers a standalone Managed VoIP solution for business/non-residential end users which requires that such end users already have in place broadband access.³⁵⁵

³⁵² <https://www.gtt.net/us-en/services/unified-communications/sip-trunking/>

³⁵³ <https://www.magnetnetworks.com/business/products/sip-trunks/>

³⁵⁴ <https://www.business.att.com/learn/what-is-sip-trunking.html#>

³⁵⁵ <https://www.blueface.com/small-business/landline/>

- 4.234 While it would be possible for alternative SPs to provide standalone RFTS over broadband, to date this type of product has only been made available to businesses. Many SPs have instead focused on meeting the substantial demand from households and businesses for product bundles. As illustrated in Table 12, the proportion of end users purchasing RFTS as part of a bundle outstrips the proportion purchasing standalone RFTS by a high margin. It is likely that, for product bundles that include broadband, the anchor product in such a bundle is the broadband component. The 2019 Residential Market Research showed that, for residential end users with a bundle of services including broadband, 64% considered broadband to be the most important product in the bundle.³⁵⁶
- 4.235 ComReg's position is that RFTS delivered by means of Managed VoIP is sufficiently functionally similar to the two focal products for a sufficient segment of end users to constrain a SSNIP of the focal products. For low-volume RFTS users (e.g. residential or small business), Managed VoB is a demand-side substitute for the LL-RFTS focal product, while for higher-volume RFTS users (e.g. medium/large businesses and organisations), products such as SIP Trunking and Hosted PBX are substitutable with the HL-RFTS focal product (ISDN FRA and PRA). In the case of higher-volume RFTS users, SPs have indicated to ComReg in IIRs that, for greenfield business solutions such as new business sites or contract renewal, businesses would switch to Managed VoIP-based RFTS.³⁵⁷
- 4.236 While Managed VoIP uptake is mainly concentrated among Virgin Media subscribers (although rates of growth in Managed VoIP uptake are higher for other SPs such as Eircom and Vodafone), ComReg is of the view that some standalone FNA RFTS customers could switch to another RFTS SP that is delivered by way of Managed VoIP, as the largest RFTS SPs have Managed VoIP services in place.
- 4.237 However, such switching would only be feasible where NG Broadband is available. As noted in paragraph 4.96, ComReg considers three types of discrete end user demand for standalone FNA RFTS:
- (a) End users that have NG Broadband services available, but nevertheless choose to purchase RFTS on a standalone basis;
 - (b) Split Purchasers, end users who chose not to bundle these products; or
 - (c) End users that do not currently have NG services available.

³⁵⁶ Slide 24 of the 2019 SME Market Research.

³⁵⁷ BT, Eircom, Vodafone.

- 4.238 Furthermore, ComReg considers that substitutability between standalone RFTS delivered over FNA, and RFTS delivered as part of a broadband bundle including Managed VoIP is likely to be asymmetric or one-way. ComReg considers it unlikely that end users purchasing a broadband bundle including Managed VoIP would actively switch to standalone FNA RFTS in response to a SSNIP of the broadband bundle or otherwise.
- 4.239 The 2019 Residential Market Research asked respondents that bundled their RFTS how they would respond to a SSNIP of €2 on the RFTS component of their bundle. 74% of respondents indicated that they would not change their behaviour, while 20% said that they would “*maybe change behaviour*” and 6% said they would “*definitely change behaviour*”.³⁵⁸ Of the 26% that would change their behaviour in some way, 31% said that they would stay with their SP but downgrade to a cheaper bundle, 28% said that they would look at other SPs/alternatives, 15% would cancel their subscription with their current SP, 7% would do something else and 19% they would do nothing.³⁵⁹ Of the 31% that would downgrade, 50% said they would downgrade to a cheaper bundle that still includes RFTS, 15% would downgrade to basic RFTS, 12% would keep internet but drop RFTS, 9% would reduce out of bundle spend on calls and 6% would unpick the bundle.³⁶⁰ ComReg also notes that the 7% that would do something else, although not specified, might conceivably include options such as switching to a MTS or the use of Unmanaged VoIP (however, this is an extremely small number and represents less than 2% of the overall sample.³⁶¹ Having regard to the above, the 2019 Residential Market Research therefore suggests, firstly that a substantial cohort of end users would not change their behaviour at all in response to a €2 price increase, and secondly, where they do, the stated behaviours would largely result in them either staying with their current RFTS SP or a competitor RFTS SP or doing nothing. This suggests that switching to potential substitutes for RFTS would not be an effective substitute (or effectively constrain RFTS). Further supporting this evidence is the 2019 Residential Market Research, which outlined that 75% of end users indicated they are unlikely to switch RFTS SP in the next 12 months, while 77% indicated that they are unlikely to surrender their RFTS service in the next 12 months. This is indicative of the ‘stickiness’ of residential end users regarding their fixed telephony service.³⁶²

³⁵⁸ Slide 101 of the 2019 Residential Market Research. Caution small sample size.

³⁵⁹ Slide 102 of the 2019 Residential Market Research. Caution small sample size.

³⁶⁰ Slide 103 of the 2019 Residential Market Research. Caution small sample size.

³⁶¹ Of those decision makers who bundle their landline and pay for line rental and calls together and would, in response to a €2 price increase change their behaviour, with the change in behaviour being ‘something else’.

³⁶² Slide 86 and 87 of the 2019 Residential Market Research. Caution: small sample size.

4.240 As noted in paragraph 4.85 to 4.89, RFTS end users broadly show a preference for bundled products to avoid transaction costs and to avail of discounts offered by SPs in bundles. This suggests that, while Managed VoIP could be considered a substitute for the focal product, there may be separate markets for (a) FNA RFTS/Managed VoIP in a bundle with NG broadband (and other services); and (b) standalone FNA RFTS.

Unmanaged VoIP

- 4.241 Unmanaged VoIP services typically involve the call being made via a PC, laptop, smartphone or tablet, or a VoIP enabled telephone that emulates the functions of a traditional telephone.³⁶³
- 4.242 As noted in paragraph 3.153, Unmanaged VoIP services can be provided by third-party SPs 'over the top' of an existing broadband connection which is supplied to the end user by another SP. Examples of such services include Skype, Google Voice, Viber, WhatsApp call, Facetime, Snapchat call etc., with these being provided over an end user's existing broadband service.
- 4.243 In terms of functionality, an Unmanaged VoIP service offers end users the ability to make and receive calls between devices that have compatible hardware and software, or, in some cases, make and receive calls between a broadband device and a conventional telephone.
- 4.244 End users purchasing Unmanaged VoIP services, such as Skype, can be allocated a geographic telephone number, so that the customer can receive calls from other fixed or mobile phones.³⁶⁴
- 4.245 Unmanaged VoIP provides call origination services only (i.e. RFVC in the context of RFTS, although Unmanaged VoIP is not necessarily fixed) and relies on the end user having an RFVA connection (i.e. fixed broadband).
- 4.246 Since Unmanaged VoIP SPs rely on a third-party broadband network connection and the public internet, they are unlikely to have control over the management of the quality of the broadband network, in particular, to ensure IP traffic prioritisation to support the provision of the Unmanaged VoIP service at a quality level consistent with a 'traditional' telephone call. As a result, such services can be subject to QoS issues. This means that an Unmanaged VoIP SP is not able to guarantee the robustness of the service synonymous with the quality of service associated with FNA or Managed VoB-based RFTS.

³⁶³ For example, see the broad range of telephones available for purchase in the Skype online shop at <http://shop.skype.com>. Customers can select between a cordless Skype enabled phone or a phone that simply plugs into a computer. Skype also allows customers to use their existing home phone, with the help of an adaptor.

³⁶⁴ As explained at <https://support.skype.com/en/faq/FA331/what-is-a-skype-number>

- 4.247 Unmanaged VoIP services are typically free when calling other users of the same service (e.g. Skype to Skype calls or Viber to Viber calls can be made at no charge), but charges are applied when calling a telephone number (either to geographic, NGN or mobile numbers). For example, Skype calls to any Irish landline are charged at a 'pay as you go' rate of 3c per minute.³⁶⁵ Skype also offers call minutes packages to various types of numbers.³⁶⁶
- 4.248 ComReg's view is that Unmanaged VoIP delivered by means of a fixed broadband connection provides a distinct service proposition to the focal products in terms of functionality and product characteristics. Unmanaged VoIP services provide the RFVC component of RFTS, while the end user must provide the RFVA element (i.e. fixed or mobile broadband). In particular, Unmanaged VoIP SPs rely on a third-party broadband network connection with the end user, and therefore have no control over how voice packets are managed within the broadband network, the general traffic management or the performance of the broadband network. This restricts the ability of the Unmanaged VoIP supplier to ensure the robustness of the service. SPs, in responding to IIRs, were also of the view that Unmanaged VoIP was not substitutable with FNA RFTS for reasons of quality and, potentially, privacy.
- 4.249 Unmanaged VoIP offers only the call origination component of RFTS, relying on the end user providing the access component. As noted previously in paragraph 4.76, end users have to date shown a preference for purchasing RFVA and RFVC jointly as a single RFTS product offering.
- 4.250 Usage levels for Unmanaged VoIP services at home in the 2019 Residential Market Research on a daily basis were reported at 66%, with mobile calling at home reported at 80% on a daily basis.³⁶⁷ Usage of Unmanaged VoIP tended to be higher among respondents aged 18-34.
- 4.251 There were also some variations in the use of Unmanaged VoIP geographically, with 71% of urban users using Unmanaged VoIP services in their home, compared to 62% of rural users.³⁶⁸ In this regard, ComReg notes that, pending rollout, *inter alia*, of the NBI network in the footprint of the Intervention Area, NG broadband capable of delivering high quality Unmanaged VoIP has been more widely rolled out in areas of higher population and premises density.

³⁶⁵ Skype rates are published online at <https://www.skype.com/en/international-calls/Ireland#> as of 2 May 2021.

³⁶⁶ Ibid.

³⁶⁷ Slides 69 and 61 of the 2019 Residential Market Research.

³⁶⁸ Slide 68 of the 2019 Residential Market Research.

- 4.252 Despite occasional usage of Unmanaged VoIP by households, there appears to be a strong tendency for households and businesses alike to primarily use a fixed line telephone or mobile phone to make local, national, AND international calls.³⁶⁹
- 4.253 This lack of substitutability between RFTS calling and Unmanaged VoIP services is again highlighted in consumers' response to an indicative €4 increase in their RFTS bill. As illustrated in paragraph 4.239 and again in further detail in A 7.8 to A 7.17, a very small proportion of a very small proportion of respondents would consider using an OTT service in lieu of using their landline. This highlights again a lack of substitutability between the two products, such that substitution to OTT services arising from a SSNIP of the focal RFTS product would be unlikely to be sufficient to render that SSNIP unprofitable.
- 4.254 Residential respondents to the 2019 Residential Market Research who reported not having a fixed line telephone were asked to indicate reasons why they chose not to have a fixed line telephone. In response, 14% indicated that it was because they use Unmanaged VoIP OTT instead.³⁷⁰
- 4.255 ComReg's 2019 Mobile Customer Experience ('MCE') survey showed that 62% of smartphone users spent up to 5 minutes per day using OTT applications for Unmanaged VoIP calls on their smartphone, whereas 77% of users spent up to an hour per day on traditional mobile voice calls.³⁷¹ For smartphone users, the average number of minutes per day using OTT applications for Unmanaged VoIP calls was 8.10, compared to 30.23 minutes (all mobile users – smartphone and non-smartphone) on traditional mobile voice calls.³⁷² This suggests that Unmanaged VoIP is not even a substitute to traditional mobile calls on a smartphone. The average number of minutes using OTT applications for Unmanaged VoIP calls was lower in rural areas.³⁷³
- 4.256 The evidence discussed above suggests that Unmanaged VoIP is being used by some end users as an alternative means of making calls, predominantly for international calls and to other Unmanaged VoIP users. Residential RFTS end users are more likely than business RFTS end users to use Unmanaged VoIP services. Overall, having regard to differences in functional characteristics and patterns of use, it is ComReg's position that Unmanaged VoIP calls are not an effective substitute for FNA RFTS or Managed VoIP.

³⁶⁹ Slide 74 of the 2019 Residential Market Research.

³⁷⁰ Slide 93 of the 2019 Residential Market Research.

³⁷¹ Slide 52 of ComReg MCE survey.

³⁷² Slide 53 of ComReg MCE survey.

³⁷³ Slide 54 of ComReg MCE survey.

Respondents' Views

4.257 BT expressed concern that technology changes towards VoIP in the upstream FACO market were not flowing through as quickly as it would have expected to the RFTS market, as many Access Seekers choose to use WLV, rather than providing their own VoIP service. ComReg interprets BT's concern here to mean that Access Seekers are choosing to continue to rely on the provision of Eircom WLV to offer RFTS, rather than migrating to the delivery of Managed VoIP RFTS. BT also questioned why Eircom's supply of WLV to Access Seekers active on the RFTS market was growing when the logic of more competitive NGB/VoIP access would suggest that it should decline.

ComReg's Assessment of Respondents' Views and Position

4.258 In relation to BT's comments, ComReg notes that, for a period from Q3 2015 to Q3 2018, WLV increased, eclipsing SB-WLR. However, for nine successive quarters since Q3 2018, WLV volumes have consistently declined by a total of 17% since the Q3 2018 peak, while SB-WLR has generally been in decline for several years, with the exception of Q4 2019 which saw a small rise in SB-WLR volumes. This is represented in Figure 13 below. As both SB-WLR and WLV have declined for nine successive quarters, ComReg suggests that BT's analysis is outdated. ComReg has discussed these market trends further in Section 3.

Figure 31: Volumes of SB-WLR and WLV Access paths, Q3 2015 to Q4 2020

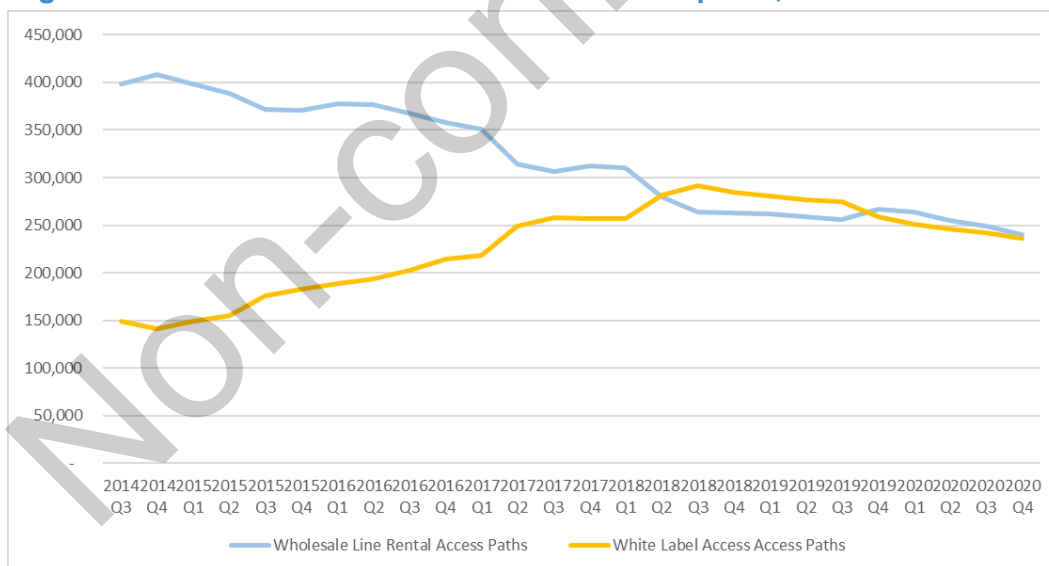
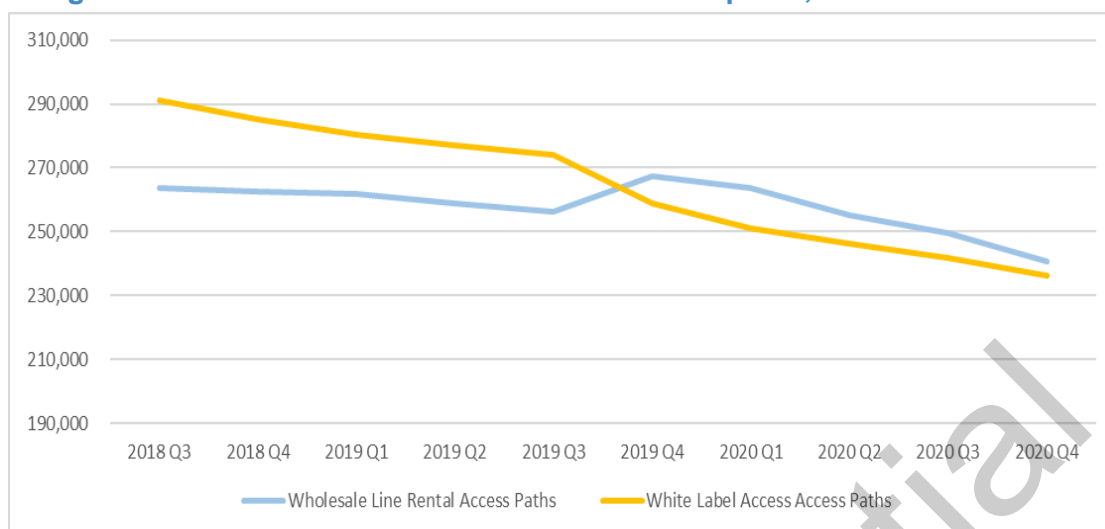


Figure 32: Volumes of SB-WLR and WLV Access paths, Q3 2018 to Q4 2020

- 4.259 BT suggested that the Irish RFTS market exhibits significant dependence on WLR and expressed the view that this has significantly stunted the growth of competition in the provision of RFTS, other than through WLR.
- 4.260 On this point, ComReg notes that most SPs largely – though not exclusively - deliver (either on a standalone or a bundled basis) RFTS over FNA, with the exception of Virgin Media, which delivers RFTS by means of Managed VoIP. The availability of NG Broadband has meant that SPs are moving away from FNA and increasingly offering Managed VoIP-based RFTS, or have the ability to do so.
- 4.261 Although it is, in principle, technically feasible to do so, SPs have detailed several reasons to ComReg for not providing Managed VoIP over CG broadband (DSL/ADSL), including quality of service (QoS) issues and issues around the complexities of migrating customers from CG FNA to Managed VoIP.³⁷⁴ ComReg understands, in particular, that QoS indicators are automatically assigned to NG Broadband traffic, but the SP must manually assign QoS indicators to CG broadband traffic. Given that SPs choose not to provide Managed VoIP over CG broadband for the reasons given above, ComReg does not believe it is appropriate to include it in the market. However, even if ComReg did so, it would not act as an effective demand-side constraint, as no SP currently offers such a service, to the best of ComReg's knowledge. As evidenced by Figure 31 both SB-WLR and WLV are in decline, and while Virgin Media remains the largest provider of Managed VoB, usage has increased among Eircom and Vodafone and other SPs (Figure 30).

³⁷⁴ May 2019 IIRs.

4.262 ComReg also notes that, in October 2020, Eircom launched a new Voice over IP Interconnection via a Wholesale Ethernet Interconnection Link ('**VIX via WEIL**') product which, in ComReg's view, is likely to be capable of facilitating the delivery of wholesale VoIP services at a low cost. Access Seekers may accordingly migrate to service delivered over wholesale NG Broadband, such as VIX via WEIL, rather than switching, for instance, from SB-WLR to WLV. A more detailed discussion of VIX via WEIL is set out at paragraphs 10.303 to 10.306 below.

Pricing

4.263 Pricing often influences the extent to which end users are likely to consider Managed VoIP to be substitutable with the focal product. ComReg's research indicates that standalone RFTS is generally only available over FNA. However, in the previous section ComReg identified that, in terms of functionality, Managed VoIP can act as a substitute for the two focal products, given a suitable broadband connection. Below, ComReg takes into account the EC's guidance which considers that, to be a full demand-side substitute, prices would need to be in a comparable range to justify end users switching away from FNA RFTS. Table 19 to Table 23 below outline the price ranges for a sample of residential Managed VoB product offerings (all of which are bundled with broadband):³⁷⁵

Table 19: Digiweb - Sample of Residential Managed VoB offerings

Product	Features	Price incl. VAT p/m
Superfast Home	100mbps download speed, 20 mbps upload speed, Unlimited downloads, Off-peak calls to mobiles and landlines in Ireland & UK	€42.95 (€24.95 for first four months)
Superfast Unlimited	100 mbps download speed, 20 mbps upload speed, Unlimited Downloads, Unlimited calls to mobiles and landlines in Ireland & UK	€44.95
SIRO Gigabit Broadband	1,000 mbps download speed, 100 mbps upload speed, Off-peak calls to mobiles and landlines in Ireland & UK	€59.95 (€24.95 for first four months)
SIRO Broadband 500	500 Mbps download speed, 70 mbps upload speed, Off-peak calls to landlines Ireland & UK, Talk Off-peak calls to mobiles in Ireland & UK, Unlimited Downloads	€54.95 (€29.95 for first four months)

Table 20: Virgin Media - Sample of Residential Managed VoB offerings

Product	Features	Price incl. VAT p/m
1Gb + Home Phone	Virgin Media TV Anywhere Sports Pass, 1Gb download speed, Unlimited calls to Irish landlines, mobiles and 400 minutes to 22 countries	€68 (€88 after 12 months)
500Mb + Home Phone	5000 Mb download speed, Unlimited calls to Irish landlines, mobiles and 400 minutes to 22 countries	€54 (€74 after 12 months)
250Mb + Home Phone	250 Mb download speed, Free Virgin Media TV Anywhere Sports Pass	€43 (€63 after 12 months)

³⁷⁵ Information retrieved from individual SP's websites in May 2021.

Table 21: Magnet - Sample of Residential Managed VoB offerings

Product	Features	Price Range incl. VAT p/m
Magnet Choice 30	30mb broadband, Off-peak local and national calls	€39.99
Magnet Choice 60	60mb broadband, Off-peak local and national calls, 100 minutes international calls	€52.99
Magnet Choice 100	100mb broadband, Off-peak local and national calls, 100 minutes international calls, 30 minutes mobile calls	€62.99

Table 22: Eircom - Sample of Residential Managed VoB offerings

Product	Features	Price incl. VAT p/m
Broadband and Landline	150 Mb download speed, unlimited downloads, Unlimited Off-Peak local & national calls, FREE eir sport pack with Virgin Media Sport	€29.99
Broadband and Landline	500 Mb download speed, unlimited downloads, Unlimited Off-Peak local & national calls, FREE eir sport pack with Virgin Media Sport	€39.99
Broadband and Landline	1 Gb download speed, unlimited downloads, Unlimited Off-Peak local & national calls, FREE eir sport pack with Virgin Media Sport	€49.99

Table 23: Vodafone - Sample of Residential Managed VoB offerings

Product	Features	Price incl. VAT p/m
Simply Broadband & Talk	Unlimited calls to Irish landlines, Gigabox Modem included,	€30.00 (€55 after 12 months)
Fibre 1000 & Talk	Unlimited calls to Irish landlines, Gigabox Modem included	€40.00 (€75 after 12 months)

4.264 The tables above show that most SPs bundle Managed VoB with broadband and other products, as compared with the focal products which are discrete and standalone products with a reduced set of functions (i.e. cannot be used to access broadband-based services, such as internet access). In line with its functional capacity, standalone FNA RFTS is priced lower than Managed VoIP-based substitutes, while prices for FNA RFTS bundles (with broadband) are priced similarly to Managed VoIP bundles with broadband (see Table 17).

- 4.265 The extent to which Managed VoIP is substitutable with the focal product necessarily depends on whether the additional features available on Managed VoIP, but not on the focal product, are valued sufficiently by end users requiring RFTS to justify purchasing the wider bundle containing broadband and Managed VoIP. For example, Managed VoIP may offer enhanced voice features compared to the focal product such as additional minutes (Table 19 to Table 23 above show that some packages have very high numbers of minutes to national/international numbers), call forwarding or conference calling features that are not available on FNA RFTS. The wider bundle of services including broadband may open up new opportunities to the end user that they did not avail of when purchasing standalone FNA RFTS. In addition, some FTTx broadband bundles offer WiFi calling, where end users can use their smartphone to call over a WiFi connection. This can assist in overcoming issues around mobile network coverage in the indoor environment.
- 4.266 ComReg's position is that a sufficient proportion of households and businesses is likely to place value on broadband internet access and TV, which encourages the purchase of bundles that include broadband, TV and RFTS. ComReg Q4 2020 QKDR data show that 83% of RFTS subscriptions are bundled with one or more of broadband, TV, or mobile telephony (Table 12). The 2019 Market Research showed that 73% of households, and almost 75% of SMEs purchase fixed broadband internet access.³⁷⁶ Of residential respondents with a bundle, 92% had a bundle comprising broadband.³⁷⁷
- 4.267 For those customers that purchase the LL-RFTS focal product and do not have demand for broadband (i.e. customer type (a) in paragraph 4.237), it may not be the case that they would switch to Managed VoIP in response to a SSNIP of the focal product, because Managed VoIP is largely sold in a bundle with broadband. In some cases, there is no cost between standalone RFTS and a basic bundle of broadband and RFTS via Managed VoB. For example, Eircom's basic RFTS package is €39.99 (12-month contract),³⁷⁸ while the cheapest Eircom RFTS and broadband package with Managed VoIP is €22.99 for 12 months and then €59.99 thereafter (12 month contract).³⁷⁹ Where available, Pure Telecom offers line rental and unlimited Irish landline calls for €29 a month.³⁸⁰
- 4.268 End users that purchase the HL-RFTS focal product (i.e. ISDN FRA and ISDN PRA) may possibly, in response to a SSNIP, they would switch to Managed VoIP that offers equivalent voice channels to ISDN FRA and ISDN PRA.

³⁷⁶ Slide 14 of the 2019 Residential Market Research and slide 13 of the 2019 SME Market Research.

³⁷⁷ Slide 22 of the 2019 Residential Market Research.

³⁷⁸ <https://www.eir.ie/phone/> Prices were retrieved 28 April 2021.

³⁷⁹ <https://www.eir.ie/broadband/> Prices were retrieved 28 April 2021.

³⁸⁰ <https://www.puretelecom.ie/landline-service> Prices were retrieved 2 April 2021.

- 4.269 For Split Purchasers (i.e. customer type (b) in paragraph 4.237), a household or business that purchases the focal product(s) may consider switching to Managed VoIP if the value placed on the bundled broadband and/or TV service by the end user is greater than the difference between the post-SSNIP standalone focal product price and the price of the alternative bundled product.
- 4.270 For customers that purchase the focal product but do not have broadband access at their home (or broadband access sufficient to support Managed VoIP) (i.e. customer type (c) in paragraph 4.237), there is a possibility that when broadband does become available and, consequently, retail bundles comprising Managed VoIP, they may be willing to switch in response to a SSNIP of the focal product or otherwise. However, ComReg cannot make a definitive conclusion in this regard. The 2019 Residential Market Research showed that 27% of respondents without broadband availability would switch to a bundle of broadband and RFTS if NG Broadband became available.³⁸¹ A further 16% of respondents said that they would purchase broadband if it became available and keep their RFTS with their current SP.
- 4.271 For business end users that have an active NG Broadband connection, ComReg considers that such businesses could, in principle, switch their FNA RFTS to standalone Managed VoIP offered by SPs such as Blueface. In response to a SSNIP of standalone FNA RFTS, businesses could switch to Blueface's partially-managed VoIP solution where they are already purchasing a broadband or high capacity access connection. If they are not already purchasing broadband, such businesses may choose to terminate their standalone FNA RFTS in response to a SSNIP of same and to purchase a bundle of broadband and Managed VoIP.
- 4.272 Overall, the pricing of Managed VoIP products (which are typically included in a bundle with broadband) is not significantly higher than the pricing of standalone RFTS offerings (lowest priced standalone RFTS offering is €29³⁸² v. €29.99³⁸³ for basic NG Broadband and Managed VoIP bundle). This suggests that there may be some scope for some standalone RFTS end users to substitute to Managed VoIP in a bundle with broadband.

³⁸¹ Slide 19 of the 2019 Residential Market Research.

³⁸² <https://www.puretelecom.ie/landline-service> Prices were retrieved 28 April 2021.

³⁸³ <https://www.eir.ie/broadband/> Accessed on 30 April 2021.

Conclusion in relation to substitutability of Managed VoB

- 4.273 Overall, ComReg's position is that Managed VoB delivered over NG Broadband is substitutable with the LL-RFTS focal product. While Managed VoB is predominantly sold in a bundle comprising broadband and/or other services, ComReg considers that where standalone FNA RFTS users value a bundle of services, they are likely to switch to Managed VoIP in a bundle with broadband. ComReg's QKDR for Q4 2020 shows that 83% of RFTS subscriptions are sold in a bundle with at least one of broadband, TV, and mobile telephony (Table 12). This suggests that RFTS end users value a wider bundle of services. In addition, the number of standalone RFTS subscriptions has continued to fall over time (Figure 24), again indicating a willingness to switch to bundles of services. While FNA RFTS subscriptions have fallen somewhat since the 2014 RFVA Decision (see Figure 12), Managed VoIP subscriptions have increased and, for new FTTP broadband subscriptions, many end users are migrating to Managed VoIP for their RFTS.
- 4.274 For higher-volume RFTS users, ComReg considers Managed VoIP over SIP Trunking/Hosted PBX to be substitutable with the HL-RFTS focal product as it can offer voice channels equivalent to ISDN FRA and ISDN PRA. However, such high-volume users will need to invest in suitable equipment on-site and SPs have indicated to ComReg that in greenfield sites, businesses would invest in SIP Trunking/Hosted PBX. ComReg considers SIP Trunking/Hosted PBX delivered over NG Broadband to be substitutable with the HL-RFTS focal product, as opposed to SIP Trunking/Hosted PBX over leased line, which bears a significantly higher cost differential. This is considered below at paragraphs 4.389 to 4.404.
- 4.275 ComReg does not consider Unmanaged VoIP calls to constitute an effective direct constraint on the focal products (LL- RFTS or HL-RFTS).

Is mobile telephony a demand-side substitute to the focal product?

- 4.276 In the 2014 RFVA Decision, ComReg concluded that RFVA and mobile telephony were not in the same product market and could be considered complements rather than substitutes.³⁸⁴
- 4.277 Mobile penetration has remained stable in recent years and ComReg's MCE survey indicates that 98% of all adults 18+ in Ireland have a mobile phone. Since the publication of the 2014 RFVA Decision, there has been an expansion in the volume of data usage on smartphones, as well as a rise in mobile voice traffic with a commensurate fall in fixed voice traffic (Figure 7). In the specific context of discussing constraints on RFVA, the 2014 Explanatory Note held that mobile telephony is therefore potentially a growing constraint on RFTS:

“Although mobile networks can, to a large extent, replicate the offers from fixed networks, providing end customers with offers which are

³⁸⁴ Paragraph 4.155, page 95 of the 2014 RFVA Decision.

similar to fixed networks, access via the mobile network is presently not considered in general by NRAs as substitutable with access to the public network at a fixed location. While the percentage of mobile-only households is continually increasing in the Union, a majority of customers still takes both fixed and mobile subscriptions. Further, the coverage and perceived quality of calls on the mobile networks still differ geographically and over time, also affected by the number of simultaneous users in the network. These elements would seem to indicate a greater degree of complementarity than of substitutability between these products in most Member States at the present time.”³⁸⁵

- 4.278 For the majority of NRAs, fixed and mobile access and services are deemed to be in separate retail markets. Only a small number of NRAs (5 of 30) have defined the relevant RFVA markets³⁸⁶ as including both fixed and mobile access: Austria (2017), Bulgaria (2016), Czech Republic (2016), Finland (2010) and Latvia (2015).³⁸⁷
- 4.279 Below, ComReg assesses whether mobile telephony is in the same market as the focal product, i.e. whether Fixed Mobile Substitution ('FMS') is occurring, or whether RFTS and mobile telephony are separate markets.
- 4.280 The following analysis focuses on the potential driving forces of FMS from an end user perspective and assesses whether there is scope on the demand side to justify the inclusion of mobile services in either a low-volume or high-volume Relevant RFTS Market in the short to medium term.
- 4.281 Eircom was the only Respondent to comment on this topic and disagreed with ComReg's views.
- 4.282 In its Submission, Eircom argues that mobile telephony is an effective demand-side substitute to the focal product, and that ComReg's preliminary findings relied on insufficient evidence and incorrectly interpreted a number of issues. In particular, Eircom considered that ComReg had:
- (a) failed to consider the limitations of the SSNIP test, particularly in the context of a declining market, detailed in paragraph 4.303 to 4.314;

³⁸⁵ At p.21.

³⁸⁶ Austria defines separate RFVC and RFVA markets; Bulgaria defines separate RFVC and RFVA markets; Czech Republic defines an RFTS market (no distinction between RFVC and RFVA); Finland defines separate RFVC and RFVA markets; Latvia defines an RFTS market (no distinction between RFVC and RFVA).

³⁸⁷ Case AT/2017/1971: access to the public telephone network provided at fixed location for residential and non-residential users in Austria.

Case BG/2016/1919: the market for access to the public telephone network at a fixed location for residential and non-residential customers in Bulgaria.

Case CZ/2016/1845: Access to the public telephone network at a fixed location in the Czech Republic.

Cases FI/2010/1131 and 1132: Market for access at a fixed location and markets for local call services in Finland.

Case LV/2017/2015: access to the public telephone network at a fixed location for residential and non-residential customers in Latvia.

- (b) misinterpreted evidence of the retention of RFTS subscriptions as indicative of levels of substitutability, detailed in paragraph 4.315 to 4.318; and
- (c) failed to adequately justify that the characteristics of MTS are proof of complementarity rather than substitutability, detailed in paragraph 4.318 to 4.341.

4.283 Eircom's arguments are addressed at the appropriate points in the text below.

Ireland's population is rural and dispersed

4.284 ComReg notes that the population density and distribution characteristics of Ireland differ from EU member state norms, and that this has implications for both the commercial incentive to provide (mobile or fixed) network coverage throughout the State, and also quality of service, where network coverage is available. For example, as set out at Figure 37, Figure 38, and Figure 39, substantial areas of the State are characterised by 4G coverage which is measured as 'fringe' or 'fair'.

4.285 As of 2019, Ireland had the 7th lowest population density in the EU, with 72 persons per square kilometre, compared to an EU average of 109 persons per square kilometre.³⁸⁸ The average population density in urban areas is 2,008 persons per square kilometre, compared to 27 persons per square kilometre in rural areas. Just 1.7% of the landmass of the State is classified as 'Settlement', with 96.8% of the landmass occupied by farmland, forestry, or wetland. 37% of the population lives in rural areas, as defined by the Central Statistics Office ('CSO').³⁸⁹ Of the total housing stock in rural areas, 71.8% consists of 'one-off' housing;³⁹⁰ that is, housing that is not clustered in a hamlet, village, or other rural aggregation. In that regard, 'ribbon development', whereby one-off housing extends along the length of the road network, is a characteristic feature of the rural landscape in Ireland. Ireland is also characterised by road network density at twice the EU average.³⁹¹

³⁸⁸ Eurostat population density dataset, <https://ec.europa.eu/eurostat/databrowser/view/tps00003/default/table?lang=en>

³⁸⁹ <https://www.cso.ie/en/releasesandpublications/ep/p-cp2tc/cp2pdm/>

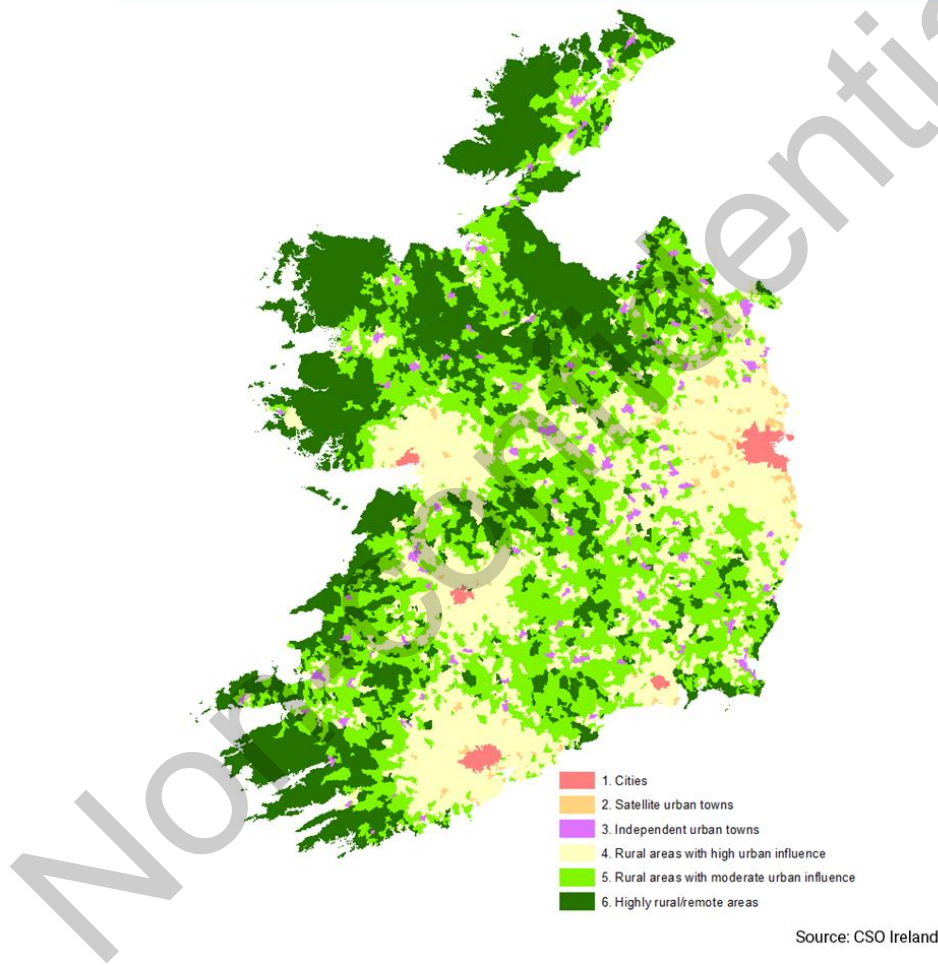
³⁹⁰ <http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?Maintable=E1063&Planguage=0>

³⁹¹ "Improving connectivity in Ireland - Challenges, solutions and actions". Information Notice ComReg 18/103, available online at https://www.comreg.ie/media/dlm_uploads/2018/11/ComReg-18103.pdf

4.286 For all of these reasons, population and premises coverage in Ireland is unusually rural, and within rural areas, is dispersed among one-off houses, rather than clustered. These settlement patterns increase the complexity and the cost of rolling out (mobile or fixed) telecommunications networks, compared to the EU norm of higher population density, higher urban residence, and lower incidence of one-off housing. Figure 33 below visualises population density in the State, with just five agglomerations having city-level population densities (Dublin, Cork, Limerick, Galway, and Waterford).

Figure 33: Population distribution, 2016

Map 1.1: Population distribution by six-way urban/rural classification using Census 2016 results



Fixed and mobile ownership and usage

- 4.287 Ownership of mobile phones has outstripped that of fixed landlines. On the residential side, of the 1.9 million households in Ireland,³⁹² 70.1% have a fixed landline,³⁹³ indicating that a little less than a third of households may rely solely on a mobile phone for voice services.
- 4.288 ComReg's 2019 MCE survey showed that there is almost universal ownership of mobile phones (98%) among all adults 18+ in Ireland,³⁹⁴ similar to the 2019 Residential Market Research (96%), the latter showing a 50-50 split between pre-pay and bill-pay mobiles, which accords with ComReg's QKDR.³⁹⁵ Total landline ownership, based on the MCE sample of 2,800 adults, is estimated at 52%, with ownership slightly higher in less densely populated areas.³⁹⁶
- 4.289 The Eurobarometer 2018 report on E-communications and Digital Single Market estimates Ireland's household fixed line telephone access at 55%.³⁹⁷ This has dropped sizeably from 2012 when it was estimated at 64%.³⁹⁸ The household penetration rate for fixed line telephony in Ireland is high compared with countries such as, Finland (12%), Austria (30%), Slovakia (12%), Lithuania (23%), Latvia (20%) and Poland (18%).

³⁹² The CSO estimate of number of households in Ireland is 1,888,400 as at Q4 2020.

³⁹³ Calculation using ComReg's QKDR data. CSO estimate of number of households in Ireland is 1,888,400 as at Q4 2020; total residential RFTS subscriptions were 1,323,511 as at Q4 2020.

³⁹⁴ Slide 11 of ComReg MCE survey.

³⁹⁵ Slides 14 and 53 of the 2019 Residential Market Research and ComReg QKDR.

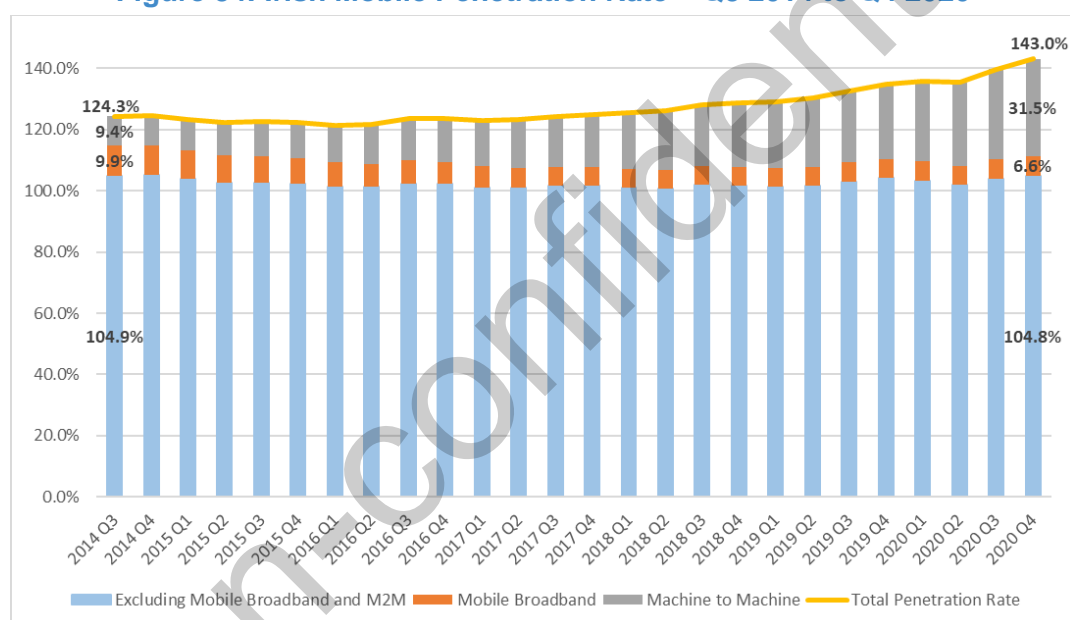
³⁹⁶ Slide 21 of ComReg MCE survey.

³⁹⁷ Eurobarometer edition 462: E-Communications and Digital Single Market (July 2018) at p.31.

³⁹⁸ E-communications Household Survey 2012: http://ec.europa.eu/public_opinion/archives/ebs/ebs_381_en.pdf

4.290 Mobile penetration in Ireland is estimated at 97% based on the CSO's Household Budget Surveys.³⁹⁹ ComReg's QKDR for Q4 2020⁴⁰⁰ shows that mobile penetration is estimated at 105% (excluding mobile broadband or M2M⁴⁰¹ subscriptions). Figure 34 charts mobile penetration since Q3 2014 and shows that at the end of Q4 2019, mobile penetration, based on a population of 4,980,000 (using the CSO 2020 estimate), was 105% excluding mobile broadband and M2M. Mobile penetration is recognised as the standard metric internationally to measure the adoption of mobile services, and is calculated based on the number of active SIM cards relative to population.⁴⁰² As of Q4 2020, there were more than double the number of residential mobile voice subscriptions (i.e. excluding mobile broadband and M2M) compared to business mobile voice subscriptions.⁴⁰³ This mirrors LL-RFTS and HL-RFTS as there are considerably more PSTN/ISDN BRA access paths than ISDN FRA and ISDN PRA access paths (Table 1 above):

Figure 34: Irish Mobile Penetration Rate – Q3 2014 to Q4 2020



³⁹⁹ Household Budget Survey 2015-2016: <https://www.cso.ie/en/releasesandpublications/ep/p-hbs/hbs20152016/hfa/>

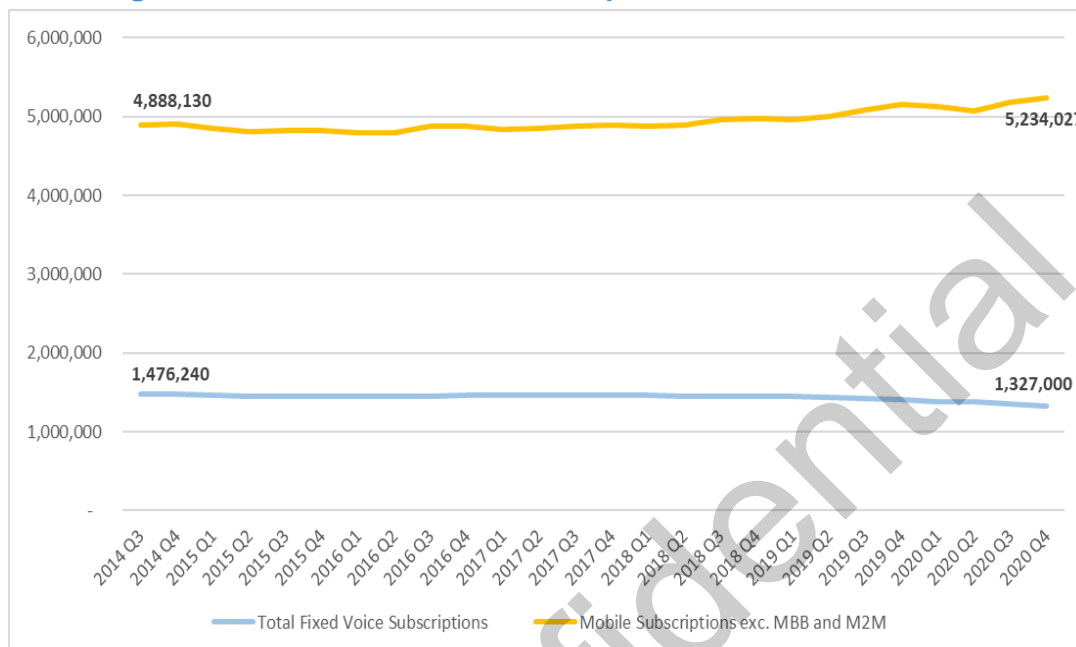
⁴⁰⁰ See page 55 and Figure 4.1.3. Calculated based on the number of active SIM cards relative to the population.

⁴⁰¹ Machine to Machine.

⁴⁰² As noted on page 54 of the QKDR for Q4 2020, given that some mobile users may have used more than one active SIM card during the period, there is likely to be some over-estimation of actual individual mobile penetration using this metric. ComReg's calculation of mobile subscriptions includes active SIMs bundled with mobile broadband data cards and USB modems for internet access via laptops/PCs, SIMs that enable the flow of data between machines, as well as SIM cards used in mobile phones for voice and data services.

- 4.291 While there has been relatively low to medium growth in mobile subscriptions between Q3 2014 and Q4 2020 (7%), the number of RFTS subscriptions has not decreased in the manner that would be expected if customers were actively substituting from RFTS to a mobile subscription, as shown in Figure 35 below:

Figure 35: Fixed and Mobile Subscriptions – Q3 2014 to Q4 2020



- 4.292 The 2019 Residential Market Research showed that mobile phones are not the sole or primary means of access to telecommunication services. While mobile phone ownership is near universal (96%),⁴⁰⁴ 49% of households retain RFTS.⁴⁰⁵ SMEs also show high levels of fixed line ownership at 77%, with 40% of SMEs having more than one RFTS connection.⁴⁰⁶ The MCE survey showed that 52% of a sample of 2,800 adults had a mobile and a fixed telephone.⁴⁰⁷
- 4.293 The MCE showed that of those that had no fixed landline, almost 2 in 5 (37%) of respondents previously had a home phone/landline but cancelled it, with little variation across samples.⁴⁰⁸ The main reasons given for cancellation were use of mobile phone (73%), cost of RFTS (15%), line rental cost (13%) and no need for RFTS (12%).⁴⁰⁹ The survey showed that, of this group, the 50+ age group are most likely to have previously had a home/landline phone but cancelled it, while the under 35s show the highest incidence of never having had a landline.⁴¹⁰

⁴⁰⁴ Slide 14 of the 2019 Residential Market Research.

⁴⁰⁵ Slide 7 of the 2019 Residential Market Research.

⁴⁰⁶ Slides 8 and 9 of the 2019 SME Market Research.

⁴⁰⁷ Slide 27 of ComReg MCE survey.

⁴⁰⁸ Slide 24 of ComReg MCE survey.

⁴⁰⁹ Slide 25 of ComReg MCE survey.

⁴¹⁰ Slide 26 of ComReg MCE survey.

- 4.294 The MCE also showed that almost 3 in 10 of those who no longer have a mobile phone owned one previously. The main reason given for no longer having a mobile phone was that they did not need it as they use their landline instead. While this is based on a small sample of the total (2,800 adults), it suggests some level of substitution from mobile voice to fixed voice.⁴¹¹
- 4.295 Although FNA RFTS subscriptions have been falling continuously (see Figure 12 above), end users may not be substituting away from RFTS, and towards mobile telephony to a sufficient extent so as to constrain a SSNIP of the focal products. For a significant number (46%)⁴¹² of households it is preferable to combine fixed and mobile services for voice telephony. The 2019 MCE Survey also showed that 53% of respondents had both a fixed and mobile phone. While 95% of businesses provide (some or all of) their employees with a fixed landline, 74% of businesses provide (some or all of) their employees with a mobile phone.⁴¹³ This suggests to ComReg that mobile telephony may be complementary (and not a substitute) to the focal products (LL-RFTS and HL-RFTS). ComReg notes that just 23% of SMEs surveyed are mobile only.⁴¹⁴
- 4.296 As noted in paragraph 4.101, the significant number of standalone RFTS users would not switch to mobile voice in response to a SSNIP of standalone RFTS. Similarly, as noted in paragraph 4.239, a significant number of bundled RFTS users would not switch to mobile voice in response to a SSNIP of a bundled RFTS.
- 4.297 In the MCE survey, the corresponding figure for mobile only was 46%.⁴¹⁵ For those that previously had a landline and cancelled it (37%), the reasons are outlined in paragraph 4.293 above. For those that never had a landline (63%), the most popular reasons were *'use mobile phone'* (80%), *'have never had one'* (17%) and *'don't need one'* (9%).⁴¹⁶

⁴¹¹ Slide 20 of ComReg MCE survey.

⁴¹² This is comparable to the 2018 Eurobarometer E-communications and Digital Single Market report which finds that the proportion of Irish households combining fixed and mobile services reached 54%.

⁴¹³ Slide 33 of the 2019 SME Market Research.

⁴¹⁴ Slide 15 of the 2019 SME Market Research.

⁴¹⁵ Slide 23 of ComReg MCE survey.

⁴¹⁶ Slide 26 of ComReg MCE survey.

- 4.298 From the 2019 Residential Market Research, the number of households choosing mobile services only was indicated to be 49%. The 2019 Residential Market Research also asked households the reasons for not having a landline – the alternative of using a mobile phone was most often selected as the reason (36%), followed by *“we wouldn’t use the phone enough”* (30%).⁴¹⁷ Other significant drivers not to have a fixed line also include *“the line rental charge is too high”* (19%), *“the cost of calls is too high”* (21%) and *“no phone installed when I moved into my home (19%)”*.
- 4.299 FMS is most evident among a subset of predominantly residential customers –the 2019 Residential Market Research showed that mobile-only households are more prevalent among younger cohorts in urban areas⁴¹⁸ and among low income cohorts.⁴¹⁹ Nevertheless, other customer types, in particular, those aged 55+ and home owners remain attached to RFTS for making calls in the home.⁴²⁰ The MCE survey similarly showed that ages 50+ were more likely to have a fixed landline compared to those aged 25-34 and 35-49.⁴²¹
- 4.300 Demand for RFTS appears to be driven by price and non-price factors. Among households, the main non-price reasons for keeping a fixed phone at home include *“the use of a phone in cases of an emergency”* (23%), *“I have always had one and don’t see a reason not to have one now”* (17%), *“purchased a bundle which requires a fixed landline”* (15%), and *“the quality of the fixed landline during a phone call is better than a mobile phone”* (10%).⁴²²

⁴¹⁷ Slide 93 of the 2019 Residential Market Research.

⁴¹⁸ Slide 89 of the 2019 Residential Market Research.

⁴¹⁹ ComReg calculation using data from 2019 Residential Market Research. The CSO report *“Household Budget Survey 2015 – 2016”* furthermore shows that households who owned their house outright had the highest spending (including on phone/internet services) compared to households that rented their house either from a local authority or private owner. This finding might be explained by the fact that these households are more likely to change their houses and therefore they are more reluctant to subscribe to bill-payments because of the time-consuming activities associated with informing SPs when moving out to a new location.

⁴²⁰ Slide 65 of the 2019 Residential Market Research.

⁴²¹ Slide 24 of ComReg MCE survey.

⁴²² Slide 85 of the 2019 Residential Market Research.

- 4.301 The MCE showed that the lower price of making calls with the home landline and needing the landline for broadband were considered the two main reasons for having both a home landline and mobile phone. Having home phone for better call quality versus mobile was highest among more rural (low population density) areas.⁴²³ Some of the other reasons included having the home phone for a house alarm, use of home phone for calling other landlines and mobile for calling other mobile numbers, and the inclusion of a landline with the internet package.⁴²⁴ For those aged 65+, the security of having a landline was a key reason (26%).⁴²⁵
- 4.302 SMEs appear reluctant to engage in FMS because they assign high importance to fixed network characteristics, such as access to the internet and a single business contact phone number.⁴²⁶ There is a general perception among SMEs that RFTS is important to the day-to-day functioning of a business. This is reflected in the insignificant numbers of SMEs cancelling RFTS over the last three years (see Figure 11 which shows stagnant numbers of ISDN connections). For SMEs, mobile service coverage was not reported as a key driver for retention of a RFTS in the 2019 SME Market Research.⁴²⁷

Respondents' Views – Misinterpretation of the SSNIP test

- 4.303 Eircom considered that the 2019 Market Research gave clear evidence of the substitutability between RFTS and MTS, and that, accordingly, the preliminary conclusions that ComReg had reached in the 2020 Consultation – particularly its interpretation of the SSNIP test - were inconsistent with the results of that market research.
- 4.304 Eircom suggested that ComReg's SSNIP analysis was open to question because a SSNIP may fail to capture the impact of (predominantly asymmetric) longer-term substitution trends which are characteristic of telecommunications markets. The starting point for ComReg's SSNIP is the current RFTS subscriber base. Eircom noted that this subscriber base is in decline, as the most elastic customers are continuously leaving the market. Eircom therefore asserted that ComReg's SSNIP fails to capture those end users who have already substituted away from RFVA and RFVC which, in Eircom's view, constitute the real competitive constraint faced by it.
- 4.305 Eircom asserted that ComReg's SSNIP assessment was based on the views of an 'ever-diminishing' sample of customers who purchase RFTS, a cohort of whom pay for, but do not use, RFTS and, as such, have already substituted away from the RFVC element, but not the RFVA element.

⁴²³ Slide 29 of ComReg MCE survey.

⁴²⁴ Ibid.

⁴²⁵ Ibid.

⁴²⁶ Slide 63 of the 2019 SME Market Research.

⁴²⁷ Slide 63 of the 2019 SME Market Research.

- 4.306 Eircom therefore argued that ComReg's SSNIP analysis over-relied on a very narrow subset of infra-marginal end users who would not change their behaviour following a SSNIP (with it noting that such users constitute a minority with only 4% of the entire Irish population having access to a fixed line only).
- 4.307 Eircom considered that ComReg therefore erred in using this cohort of end users as the basis for determining the actual parameters of a market, which led inevitably to a finding of inelastic demand and potentially insufficient switching behaviour.
- 4.308 Eircom also noted the results of the 2019 Residential Market Research, where, in response to a price increase of €4 per month on the total cost of the RFTS bill (a 10% SSNIP), 31% of those respondents who purchased standalone RFTS and pay for line rental and calls together indicated that they would either definitely (20%) or possibly (11%) change their behaviour. Of this group of respondents, 32% indicated that they would cancel their subscription. Eircom assumes this means they would switch supplier or move to mobile. Eircom considered that this provided clear evidence of FMS.
- 4.309 CE expressed concern that ComReg did not perform a critical loss analysis in the RFTS market to conclude that mobile is not an effective substitute.

ComReg's Assessment of Respondents' Views and Position

- 4.310 Firstly, ComReg disagrees with Eircom's assertion that only 4% of the State's population does not have a mobile phone. ComReg suggests that Eircom seems to have conflated ComReg's 2019 Market Research Respondents with the entire Irish population. Although ComReg's Market Research did show 96% of respondents had a mobile phone, only household decision makers for telecommunications were interviewed. As such, this is representative of households, rather than individuals.⁴²⁸
- 4.311 Eircom takes issue with aspects of the SSNIP test. Eircom believes that it fails to capture longer-term, predominantly asymmetric, substitution trends which are characteristic of telecommunications markets. In this respect, Eircom argues that, over time, substitution occurs in one direction only, away from RFTS towards mobile telephony and OTT, and not in the opposite direction.

⁴²⁸ Slide 4, Market Research.

- 4.312 However, ComReg notes that the substitution timeline in the context of a SSNIP test used for market definition purposes is usually a year, as the constraint must be sufficiently immediate and effective.⁴²⁹ As a matter of definition, therefore, the SSNIP test is not designed to account for longer-term market trends. ComReg notes that the subsequent competition assessment allows for consideration of a longer timeline than under market definition. While Eircom has suggested that the application of the SSNIP test to telecommunications markets may be complicated in the context, *inter alia*, of asymmetric substitution, ComReg notes that the OECD and BEREC have both considered the implications of asymmetric substitution in the context of FMS in particular, and neither have concluded that the SSNIP test is an unsuitable tool in these circumstances.⁴³⁰ Consistent with BEREC guidance, ComReg notes that it is particularly important to identify the correct focal product where asymmetric substitution may be at issue, given that Product B may be a substitute for Focal Product A, but Product A may not be a substitute for Focal Product B. ComReg is satisfied that it has given due consideration to this requirement at its focal product assessment above.
- 4.313 Eircom states that, by only including end users who have maintained their RFTS subscription, ComReg is excluding the more elastic customers from the market. However, the SSNIP methodology requires a focus on a candidate focal product (in this case, RFTS), by measuring the response of purchasers of that focal product to a SSNIP. If ComReg were to include consumers who do not purchase the focal product in its analysis, by definition, it would not then be appropriately conducting a SSNIP test.
- 4.314 Eircom noted that ComReg's market research split customers into subsets based on whether they actively used RFTS or not. Eircom believes ComReg's approach was to discount the call originating behaviour of end users if they stated upfront that they do not make many calls on RFTS. This split was informed by meetings with SPs⁴³¹ in which it was suggested to ComReg that both FNA RFTS subscribers and Managed VoIP RFTS subscribers often retain RFTS but go prolonged periods of time without making any calls (although can receive calls too). In response to a May 2019 IIR, Eircom informed ComReg that a significant portion of its RFTS customer base did not originate calls on RFTS for months at a time.

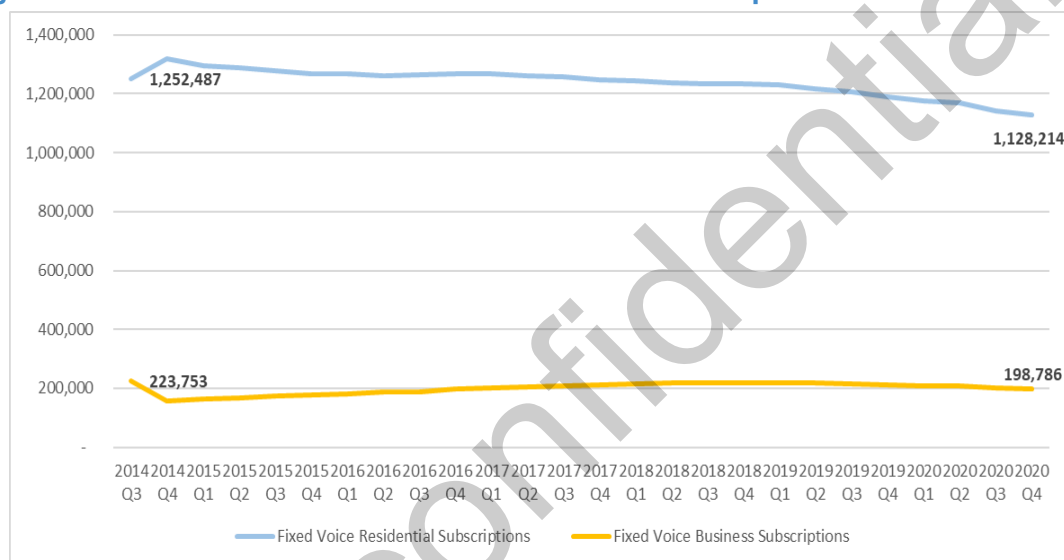
⁴²⁹ Paragraph 13, 1997 Notice on Market Definition.

⁴³⁰ OECD Competition Committee, 2014. "Defining the Relevant Market in Telecommunications - Review of Selected OECD Countries and Colombia" and "BEREC Report on Impact of Fixed-mobile Substitution in Market Definition".

⁴³¹ Informal exploratory meetings took place between in Autumn/Winter 2018 between ComReg and various stakeholders (BT, Eircom, Sky, Virgin Media, Vodafone).

4.315 While ComReg has considered Eircom's view that the results of a 10% SSNIP on the total cost of RFTS indicate clear substitutability between RFTS and mobile, ComReg notes that this assertion is based on a very small number of respondents. 68% of 171 respondents would not change their behaviour in response to a €4 increase.⁴³² Eircom also notes in its Submission that this small number of respondents may choose to use their mobile exclusively or, they may change their landline provider. ComReg also notes that these respondents have not confirmed that they would exclusively use their mobile instead of a fixed line. Accordingly, ComReg considers on the basis of the small sample size and survey responses that there is insufficient evidence to substantiate Eircom's claim that the SSNIP test indicates clear FMS.

Figure 36: Residential and Business Fixed Voice subscriptions Q3 2014 to Q4 2020



4.316 As outlined in paragraph 4.23, ComReg is cognisant of the fact that the SSNIP test is but one part of its assessment of the relevant product market. ComReg's market definition exercise consists of numerous other analytical steps including, *inter alia*, assessing product characteristics, pricing, functionality, consumer perceptions and intended or actual use.

⁴³² Slide 98.

4.317 ComReg notes CE's suggestion that ComReg was remiss not to undertake a critical loss analysis ('CLA') on the RFTS Market. However, ComReg considers that CLA is most appropriately used when demand elasticities cannot be accurately estimated.⁴³³ ComReg understands the benefits of CLA, and as such uses it to analyse wholesale markets in which demand elasticities are not sufficiently approximated. As ComReg had a rich data set from which to estimate elasticities in the retail market, ComReg felt that the pricing constraints posed by mobile telephony were better ascertained using a SSNIP test rather than critical loss analysis.

Respondents' Views – Retention of RFTS

4.318 Eircom disagreed with ComReg's finding that the retention of RFTS subscriptions is indicative of complementarity between fixed and mobile services and asserted that it ignored actual consumer behaviour and usage patterns. Eircom also suggested that ComReg's error was foreseen by the European Commission in its 2014 Explanatory Note,⁴³⁴ which stated that:

“with fixed domestic voice calls often being provided in the bundle at little or no additional charge, may mean that the above-mentioned number of customers who retain both fixed and mobile subscriptions overstates the degree of complementarity (as opposed to substitutability) of the respective voice services on those platforms.”

4.319 The 2014 Explanatory Note further identified that “mobile-fixed substitution can already be more clearly established in some markets, notably where fixed penetration has decreased substantially in favour of mobile, and mobile network coverage is close to 100%”.⁴³⁵ In this regard, Eircom stated that 4G mobile network coverage in Ireland currently stands at 98%.

4.320 Eircom also considered that RFTS usage (minutes), rather than subscription volumes, should be considered when examining consumer preferences, and noted that the decline in RFTS traffic from 2014 to 2019 had been accompanied by an increase in mobile voice traffic. Eircom suggested that it had observed convergence in pricing levels for fixed and mobile services, technological advances in mobile services and the availability of number portability, and that it was clear that FMS was the main driver of increasing mobile traffic and declining RFTS traffic.

⁴³³ Pittman R. (2018) Three Economist's Tools for Antitrust Analysis: A Non-technical Introduction. In: Begović B., Popović D. (eds) Competition Authorities in South Eastern Europe. Contributions to Economics. Springer, Cham. https://doi.org/10.1007/978-3-319-76644-7_9

⁴³⁴ At p.21.

⁴³⁵ At p.22.

- 4.321 Eircom queried why ComReg had dismissed the displacement of RFTS traffic and end user preference for mobile voice services on the basis that customers are retaining RFTS, and suggested that retention of RFTS was largely driven by the purchase of bundled services, rather than by a level of complementarity between RFTS and mobile voice services. Eircom suggested that the sale of RFTS as part of a bundle did not necessarily infer that the RFTS component was important to end users or drove demand for bundles, but rather that the bundling of RFTS with broadband was “*an inheritance of the historical configuration of the fixed line market*”, as set out in the 2014 Explanatory Note.
- 4.322 Eircom also suggested that ComReg should separately reassess the effect of FMS in each of the LL-RFTS and HL-RFTS markets, rather than conducting an overall assessment of FMS in the general RFTS market.
- 4.323 ComReg also considered that, if mobile telephony were a substitute to RFTS, it would expect to see a reduction in RFTS bundled with broadband. Eircom indicated that, while bundled RFTS subscriptions increased by 4% between Q1 2016 and Q4 2020, this does not necessarily infer that end users are not substituting away from RFTS usage.
- 4.324 Finally, Eircom noted that ComReg’s data did not consider the underlying technology over which RFTS is provided, and it was likely that the increase in bundled RFTS was at least partially driven by the increase in Managed VoIP. Given that ComReg had identified FNA-based RFTS as the focal product, Eircom did not consider that simply referencing the increase in overall bundled RFTS was meaningful in terms of the analysis.

ComReg’s Assessment of Respondents’ Views and Position

- 4.325 Eircom stated that 4G coverage in Ireland currently stands at 98%. In this respect, ComReg points to the Coverage Map available on its website,⁴³⁶ which shows clear variations in 4G coverage nationwide. ComReg has provided anonymised screenshots of the three major mobile operator’s 4G coverage below. As is evidenced by the screenshots, there is a significant variation of the availability and quality of 4G coverage across the country.
- 4.326 By ComReg’s definition, coverage levels deemed to be ‘fair’ or below may experience call dropouts. This may make it difficult to conduct a phone call using this medium in certain areas of the country. As such, ComReg is of the opinion that voice calling over 4G does not, in and of itself, increase the propensity for fixed-mobile substitutability.

⁴³⁶ <https://coveragemap.comreg.ie/map>

Figure 37: 4G coverage of Operator A

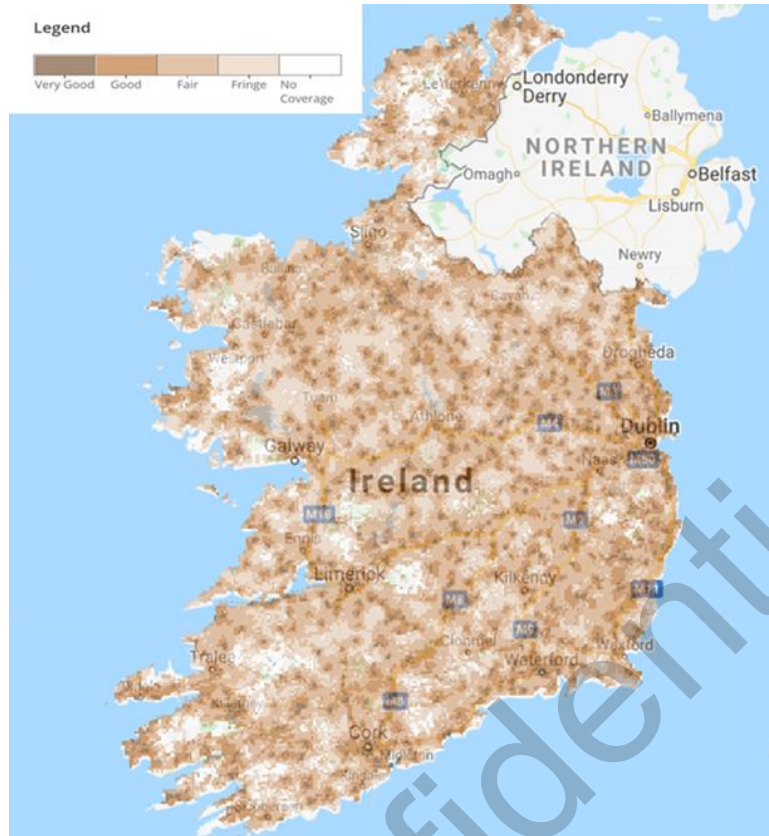


Figure 38: 4G coverage of Operator B



Figure 39: 4G coverage of Operator C



- 4.327 Eircom pointed to data from ComReg's Market Research to suggest substitutability between mobile and fixed telephony.
- 4.328 Eircom quoted the 2014 Explanatory Note as indicating that the inclusion of fixed domestic voice calls in a bundle may mean that the number of customers that retain both fixed and mobile subscriptions overstates the degree of complementarity between them.
- 4.329 However, in the same document, the EC further noted that:

“access via the mobile network is presently not considered in general by NRAs as substitutable with access to the public network at a fixed location. While the percentage of mobile-only households is continually increasing in the Union, a majority of customers still takes both fixed and mobile subscriptions. Further, the coverage and perceived quality of calls on the mobile networks still differ geographically and over time, also affected by the number of simultaneous users in the network. These elements would seem to indicate a greater degree of complementarity than of substitutability between these products in most Member States at the present time.”⁴³⁷

⁴³⁷ At p.21.

- 4.330 As such, ComReg considers that the subsection presented by Eircom is not representative of the full 2014 Explanatory Note, and a full reading of it illustrates that the European Commission, does in fact recognise the limitations of FMS. ComReg notes that the 2020 Explanatory Note provides no authorities on this matter, as it does not allude to any retail voice telephony markets.
- 4.331 From looking at other NRAs' positions on fixed and mobile substitution, ComReg notes that just 5 of 27⁴³⁸ NRAs define the relevant retail telephony market as including both fixed and mobile voice. As such, 84% of NRAs continue to assign fixed and mobile to separate markets. Of the 16% that do consider mobile and fixed to be in the same market, they are geographically skewed towards Eastern Europe.⁴³⁹ For many Eastern European countries, the proliferation of the mobile network was a result of a more limited legacy RFTS network, such that RFTS penetration was never particularly high in the first instance. In contrast, countries such as the UK, France and Germany which developed ubiquitous FNA networks prior to the growth of mobile telephony continue to find that there is no substitutability between the two markets.
- 4.332 Eircom also commented on recent trends in the revenues generated by fixed and mobile voice calls. In relation to the assumption of price convergence between fixed and mobile services, ComReg's assessment suggests that this is not the case. While there may be some comparability between prices of standalone RFTS and mobile plans in the residential space, it is not the case for Bundled LL-RFTS or for business users, particularly with respect to HL-RFTS. Table 17 (which updates Table 18 in the 2020 Consultation) shows that Bundled LL-RFTS and HL-RFTS packages are priced considerably higher than mobile plans.
- 4.333 ComReg notes that, in the HL-RFTS market, business end users generally do not consider mobile to be a substitute for a RFTS, and this was evidenced in the SME Market Research.⁴⁴⁰ ComReg also notes marketing of virtual RFTS to business customers⁴⁴¹ in which a fixed number can be answered on a mobile. This is suggestive of a distinct RFTS demand among business end users.

⁴³⁸ ComReg has included Austria, Belgium, Bulgaria, Croatia, Cyprus, The Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the UK in this analysis.

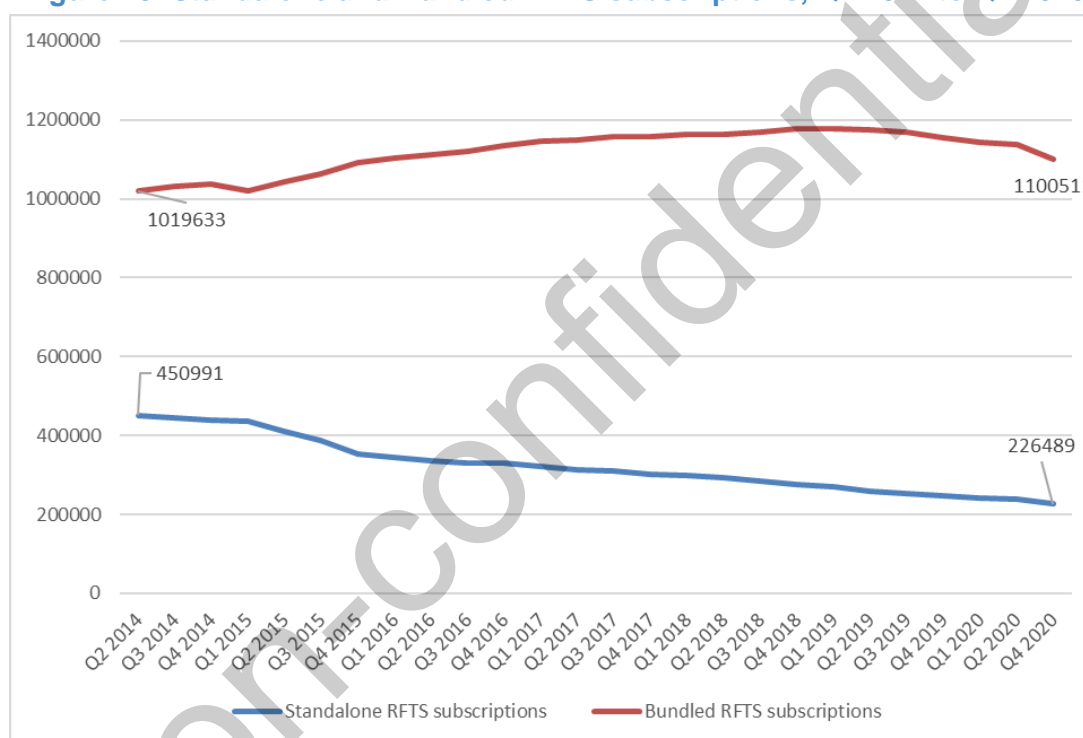
⁴³⁹ Austria, Bulgaria, the Czech Republic, Finland and Latvia include mobile in the market definition.

⁴⁴⁰ See for example slide 63 of the 2019 SME Market Research.

⁴⁴¹ <https://business.eir.ie/mobile-office/>.

4.334 Eircom suggested that the retention of RFTS, rather than being driven by a level of complementarity between fixed and mobile voice services, is, in fact, largely driven by the purchase of bundled services.⁴⁴² ComReg asked respondents to the 2019 Market Research surveys what the most important product in their bundle was, with broadband being the main driver.⁴⁴³ While RFTS subscription numbers remain high, they have dropped slightly from Q2 2019 to Q2 2020. This trend is reflected in standalone RFTS subscriptions, and indeed total RFTS subscriptions, which continue to decline, as illustrated in Figure 40 below. However, it is important to remember that end users are still choosing to purchase RFTS as a part of their bundle, with 5% of Survey Respondents who purchase a bundle, considering it to be the most important part of the bundle.⁴⁴⁴

Figure 40: Standalone and Bundled RFTS subscriptions, Q2 2014 to Q4 2020



⁴⁴² Paragraph 11 of Eircom's response to the 2020 Consultation.

⁴⁴³ Slide 24 of the 2019 Residential Market Research.

⁴⁴⁴ Slide 24 of the 2019 Residential Market Research.

- 4.335 Again, ComReg points to low SAB numbers (paragraph 4.68 above), which suggests that end users continue to place value on RFTS when purchasing a bundle. ComReg also notes that, despite Eircom's perception that end users place little value on RFTS,⁴⁴⁵ SPs continue to market 'dual play' broadband and RFTS bundles. Eircom itself also continues to finance, maintain and market parallel mobile and RFTS networks. As such, ComReg considers SPs may see a value adding opportunity in offering a bundle of broadband and at least RFTS, with little constraint from mobile telephony. Slide 85 of the 2019 Residential Market Research presented various reasons given by end users for continuing to keep RFTS, including use of RFTS in cases of emergency, call quality and end user inertia.
- 4.336 ComReg also highlights Eircom's response to the 2014 FACO Consultation⁴⁴⁶ and the 2013 RFVA Consultation⁴⁴⁷ in which, respectively, Eircom argued that separate product markets exist for the supply of standalone RFTS and RFTS within a wider (broadband) bundle. ComReg agreed with this position in the subsequent 2015 FACO Decision⁴⁴⁸ and continues to take the view that a distinct demand for RFTS continues to exist, both on a standalone and bundled basis, albeit declining, particularly for standalone RFTS (see Figure 24).
- 4.337 Eircom highlighted how the 2019 Residential Market Research shows mixed usage of RFTS and mobile as the primary means of making calls. ComReg considers that this mixed usage is indicative of consumer perceptions of a difference between mobile and fixed calling. ComReg points to its QKDR data, which, as illustrated in Figure 32 of the 2020 Consultation, showed consistent (but declining) fixed to fixed calling and fixed to mobile calling patterns. This suggests that, although end users use both fixed and mobile to make calls, they perceive the two differently. This is reiterated in ComReg's 2019 Market Research which showed that consumers perceive the cost of mobile and fixed costs differently. For example, 55% of people who pay for calls per minute believe it is more expensive to make an international call of a mobile. 46% of the same cohort also believe it is more expensive to make a call to a landline from a mobile.⁴⁴⁹

⁴⁴⁵ The two flagship FTTP broadband packages on the eir website are bundles with RFTS: <https://www.eir.ie/broadband/>.

⁴⁴⁶ Market Review: Fixed access & call origination and Transit Non-confidential submissions received from Respondents, ComReg Document 14/99, <https://www.comreg.ie/media/2018/01/ComReg1499.pdf>

⁴⁴⁷ Market Review: Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non Residential Customers Submissions to Consultation 12/117, ComReg Document 12/117s <https://www.comreg.ie/media/2018/01/ComReg12117s.pdf>

⁴⁴⁸ ComReg 15/82, Market Review Wholesale Fixed Voice Call Origination and Transit Markets, ComReg D05/15.

⁴⁴⁹ Slide 50 of 2019 Market Research.

- 4.338 ComReg also notes, in relation to functionality, that RFTS offers various calling features not available on mobile such as, for example, abbreviated dialling.⁴⁵⁰ ComReg also highlights Eircom's proposals in relation to the Eircom MSAN project which aims to extend the lifetime of the legacy PSTN network. This suggests that Eircom has a strategic interest in maintaining RFTS to its customer base.
- 4.339 In relation to Eircom's observations on SAB, ComReg has presented the relevant figures for SAB as a proportion of total fixed broadband in paragraph 4.69 above. ComReg considers that SAB constitutes a consistently small proportion of overall fixed broadband volumes. Again, ComReg considers that the choice to purchase broadband in a bundle with voice shows the continuing importance consumers places on both RFTS and broadband.
- 4.340 Eircom commented on ComReg's presentation of RFTS subscriptions including at paragraph 4.76 (Figure 23) of the 2020 Consultation,⁴⁵¹ which noted that 17.6% of RFTS subscriptions were on a standalone basis, as at Q4 2019. Eircom queried why ComReg presented these statistics from Q1 2016 and not Q4 2014 (the date of the 2014 RFVA Decision). ComReg used these figures as they are contemporaneous with the 2015 FACO Decision timeline. ComReg considered it appropriate to present the trends from Q1 2016 for standalone RFTS subscriptions as they reflect the market at its then current level of regulation. As noted in paragraph 4.77, bundles including an RFTS component amounted to 83% of total RFTS subscriptions, as at Q4 2020.
- 4.341 Eircom noted that ComReg's data do not consider the underlying technology over which RFTS is provided and suggested that it is likely that the increase in bundled RFTS is, at least partially, driven by the increase in Managed VoIP. As ComReg has identified Managed VoIP as a demand-side substitute to the focal products in both the LL-RFTS and HL-RFTS markets, any growth in RFTS is also driven by growth in Managed VoIP.

Complementarity between fixed and mobile voice

- 4.342 In certain circumstances, a mobile phone may be more convenient and provides the opportunity to make and receive calls while on the move. Nevertheless, there are a number of reasons why end users may not currently regard mobile services as a good substitute for RFTS and, hence, choose to retain their fixed line.

⁴⁵⁰ <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/Pt6.1.pdf>

⁴⁵¹ This information has also been reproduced in Figure 17 of this document.

- 4.343 While there has been a change in usage patterns from fixed to mobile (Figure 7), both residential and business end users have noted issues with voice call quality over mobile when selecting their preferred method of making calls. This was noted in the MCE survey where indoor mobile coverage issues tended to be more prevalent in rural samples.⁴⁵² A similar trend was observed in the 2019 Residential Market Research among rural respondents and some standalone RFTS users.⁴⁵³
- 4.344 End users appear to use mobile and RFTS in a complementary manner. The 2019 Residential Market Research showed that there is a clear preference for fixed to fixed and mobile to mobile communication. In terms of specified call types, 66% of households indicated that their preference was to use RFTS for calling local/national fixed numbers.⁴⁵⁴ Fixed line phones are also preferred for other call types e.g. directory enquires, 1800 and call save. On the other hand, 74% of households indicated a preference for using a mobile phone to call on-net mobile numbers, while 68% indicated a preference for using a mobile phone for calling off-net mobile numbers.⁴⁵⁵ These calling patterns suggest that households view access to fixed and mobile networks as complements rather than as substitutes, in that call preferences do not entirely traverse voice platforms. Moreover, the 2019 SME Market Research shows that RFTS is preferred by SMEs for all categories of calls.⁴⁵⁶ In the case of calls to mobiles, the majority stated that their employees would use fixed line phones. It is clear that end users predominantly use their RFTS for some voice calls, rather than using a mobile to make all of their outgoing calls and using the fixed line for receiving calls.
- 4.345 This distribution of calls made from fixed and mobile phones is also generally borne out in data presented in ComReg's QKDR, as illustrated below in Figure 41 and Figure 42:

⁴⁵² Slides 29 and 73 to 79 of ComReg MCE survey.

⁴⁵³ Slide 85 of the 2019 Residential Market Research.

⁴⁵⁴ Slide 75 of the 2019 Residential Market Research.

⁴⁵⁵ Ibid.

⁴⁵⁶ Slide 52 of the 2019 SME Market Research.

Figure 41: Monthly Fixed Call Minutes per Residential Subscriber, Q3 2014 – Q4 2020

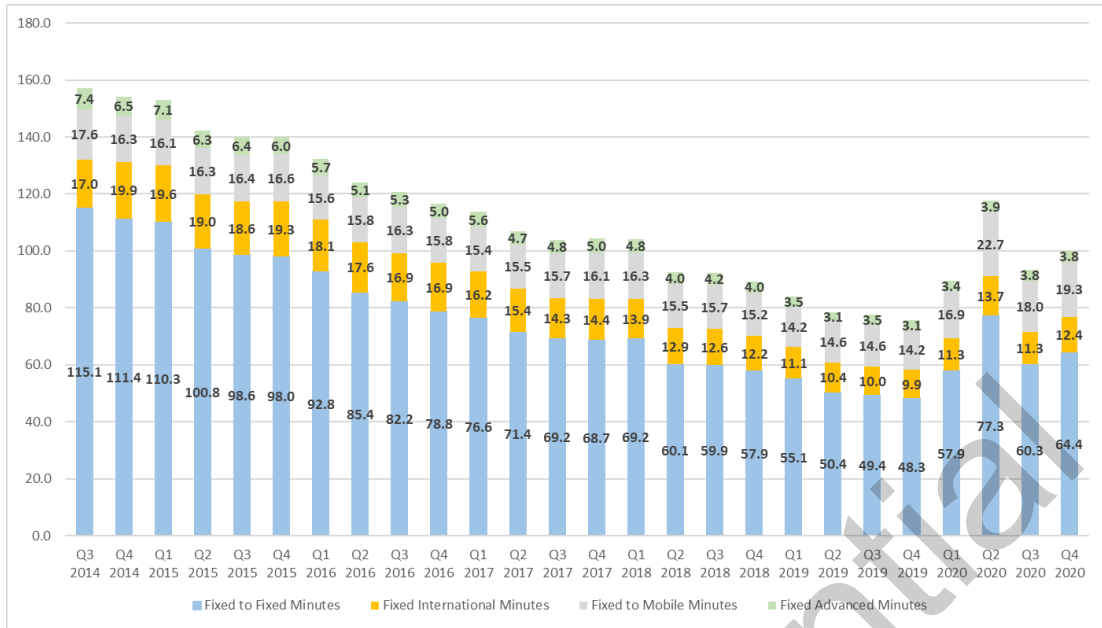
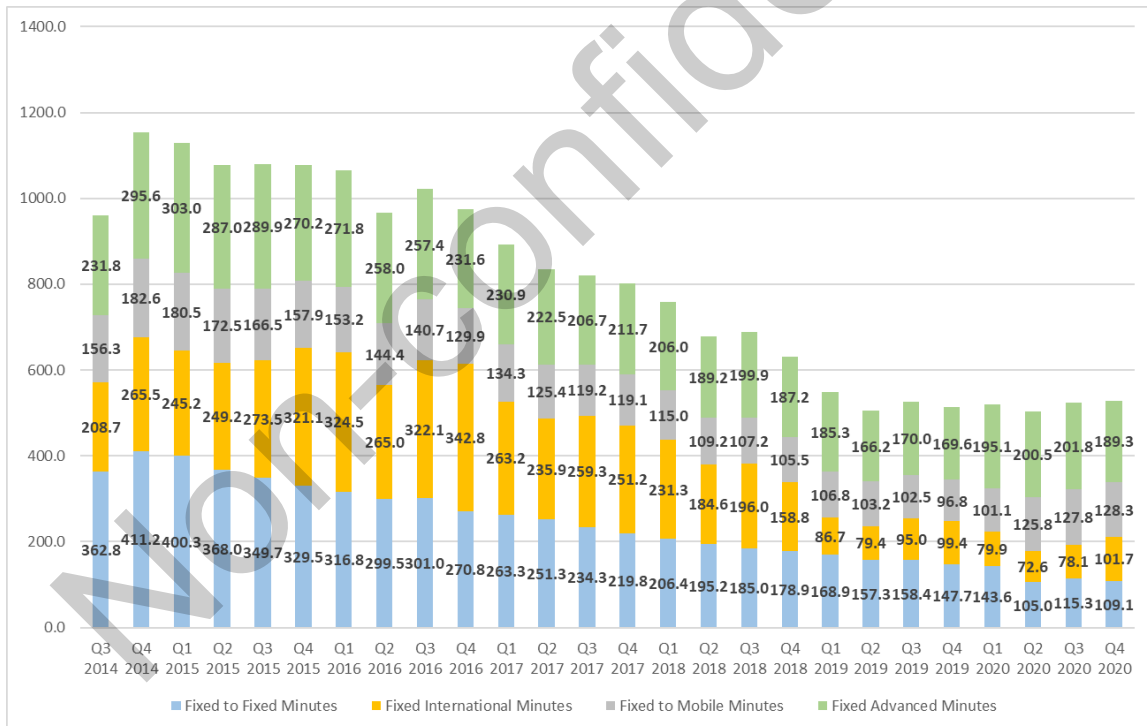


Figure 42: Monthly Fixed Call Minutes per Business Subscriber, Q3 2014 – Q4 2020



- 4.346 While FNA RFTS subscriptions have declined since the 2014 RFVA Decision and the 2015 FACO Decision (see Figure 12), Managed VoIP subscriptions have increased and, for new FTTP broadband subscriptions, many end users are migrating to Managed VoIP RFTS. If such users considered mobile telephony to be a good substitute for RFTS, they may not avail of Managed VoIP offerings in a bundle with broadband and may instead purchase standalone broadband. The 2019 Residential Market Research indicates that mobile services (including mobile voice and broadband) are the services most often purchased out of package (i.e. purchased separately from fixed RFTS bundles).⁴⁵⁷
- 4.347 ComReg has no material evidence of mobile broadband being used to deliver Managed VoIP.⁴⁵⁸ As discussed in paragraphs 4.223 and 4.230, Managed VoIP has, to date, been delivered over fixed NG Broadband only.

Coverage of mobile networks compared with fixed networks

- 4.348 FNA RFTS is available nationally over Eircom's FNA network, while Managed VoIP is now more widely available than at the time of the 2014 RFVA Decision.⁴⁵⁹ ComReg's mobile coverage map shows recent enhancements in mobile coverage;⁴⁶⁰ however, some areas continue to experience mobile coverage issues (including in the home). SPs have sought to ameliorate indoor coverage issues by offering WiFi calling (considered below in paragraph 4.351). ComReg's 2019 MCE survey showed that, as with the 2017 MCE, users experience service problems in urban and rural locations, but more difficulties are apparent in rural areas. When survey respondents were questioned regarding their user experience over the month prior to the survey, it was found that those who were located in rural areas were more likely to have experienced a service issue (relating to calls, texts and/or data), when compared to respondents in urban locations.⁴⁶¹

⁴⁵⁷ Slide 22 of the 2019 Residential Market Research.

⁴⁵⁸ The use of Unmanaged VoIP applications is discussed below in paragraphs 4.241 onwards.

⁴⁵⁹ See paragraphs 5.472 to 5.573, which discuss NG Broadband coverage capable of delivering Managed VoIP.

⁴⁶⁰ www.comreg.ie/coveragemap.

⁴⁶¹ Slide 74 of ComReg MCE survey.

- 4.349 Difficulties include loss of signal in specific rooms and in the entire home - the level of daily experiences of loss of voice/text signal throughout entire home and in specific rooms remains high at 48% and 59% respectively.⁴⁶² Loss of signal (or no/poor signal/coverage) throughout the home for voice call and texts was highest in rural samples.⁴⁶³ The survey also showed that dropped calls in a specific part of the house appeared to be more of an issue in 2019 (13% v. 10% compared to the 2017 MCE for all of the time), although quality of reception on a call (15% v. 9%) and the inability to connect a call remain significant issues.⁴⁶⁴
- 4.350 ComReg notes, in relation to mobile coverage, that the 2019 Market Research showed that the prevalence of mobile broadband was low compared with fixed broadband – 11% of the sample of residential respondents indicated that they had mobile broadband, compared with 73% with fixed broadband.⁴⁶⁵
- 4.351 WiFi calling,⁴⁶⁶ such as the eir WiFi calling product launched in May 2017,⁴⁶⁷ allows users to use their smartphone instead of their fixed landline to make calls over WiFi. ComReg does not consider that WiFi calling enhances the case for FMS in Ireland. WiFi calling makes use of mobile numbers (rather than any other identifiers) for the purposes of call routing, and acts as a complement to, rather than a substitute for, traditional mobile connectivity, particularly in circumstances where mobile coverage is poor. Moreover, recent moves by Eircom to introduce mobile WiFi calling suggest it is positioning WiFi calling as a complement to, rather than a substitute to, traditional mobile technology:

“eir WiFi Call is a service which allows you to make and receive calls and SMS over any WiFi connection. This should allow customers to make and receive calls and SMS in poor or no mobile coverage areas.”⁴⁶⁸

⁴⁶² Slide 77 of ComReg MCE survey.

⁴⁶³ Slide 78 of ComReg MCE survey.

⁴⁶⁴ Slide 88 of ComReg MCE survey.

⁴⁶⁵ Slide 14 of the 2019 Residential Market Research.

⁴⁶⁶ <https://www.eir.ie/wificalling/> and <https://n.vodafone.ie/network/wi-fi-calling.html>

⁴⁶⁷ <https://www.eir.ie/opencms/export/.content/pdf/terms/EirWiFiCallTermsandconditions.pdf>

⁴⁶⁸ <https://www.eir.ie/opencms/export/sites/default/.content/pdf/terms/EirWiFiCallTermsandconditions.pdf>

- 4.352 In this way, WiFi calling is presented by Eircom as augmenting an existing mobile telephony technology, particularly in areas with poor coverage, and not as a viable demand-side substitute to RFTS, particularly given that access to WiFi calling will only be available in localised areas where WiFi access is available. In sharp contrast to traditional mobile coverage, WiFi calling does not afford ongoing coverage while a calling or called party is moving, and coverage by means of WiFi will cease once the user exits the (relatively small) footprint of the WiFi network to which they are connected (given it uses WiFi on the fixed broadband connection). In view of the above, ComReg considers the scope for demand-side substitution from RFTS to WiFi calling is limited, undermining the case for FMS.
- 4.353 As noted in paragraph 4.350, the 2019 Residential Market Research furthermore shows that only about one in ten households use mobile broadband. The survey further indicates that households that purchase mobile broadband do so as a complement to, rather than a substitute for, fixed line broadband. For example, of the 11% of households that use mobile broadband (from a computer), 27% also have fixed broadband.
- 4.354 The 2019 MCE survey showed that mobile users spend more time per day, on average, using social media as well as other internet-based apps, than making/receiving traditional voice calls, and this has increased significantly since the 2017 MCE.⁴⁶⁹
- 4.355 ComReg has considered demand-side substitution from the focal products to Unmanaged VoIP in paragraphs 4.241 to 4.256 above. ComReg does not consider Unmanaged VoIP to constitute a substitute for RFTS over FNA or Managed VoIP for reasons of voice call quality and the fact that SPs generally do not support Unmanaged VoIP (it is freely available to access via online applications such as Skype, WhatsApp, Viber, Facetime etc.). As ComReg does not consider mobile telephony to be a substitute for the focal products, it also does not consider Unmanaged VoIP over mobile to be substitutable with RFTS.
- 4.356 In response to ComReg's IIRs, four of five respondent SPs noted that they did not consider mobile telephony to be a substitute for RFTS, citing issues such as mobile network coverage.⁴⁷⁰ In addition, one SP noted that mobile telephony is more likely to be a complement to RFTS as it facilitates OTT services.⁴⁷¹ ComReg also notes, as discussed in paragraphs 3.16 to 3.23, that a number of SPs offer both RFTS and mobile telephony, including Vodafone, Eircom ('**eir mobile**'), and Virgin Media ('**Virgin Mobile**').

⁴⁶⁹ Slide 52 of ComReg MCE survey.

⁴⁷⁰ BT, Virgin Media, Vodafone, Pure Telecom.

⁴⁷¹ Virgin Media.

- 4.357 The decisions by Vodafone to operate two separate access networks in parallel, and in Eircom's case to separately invest in a ubiquitous mobile network, indicate that a mobile network delivers a different service proposition to a fixed telephony network. It also appears that mobile telephony satisfies a distinct customer need (otherwise diversification would lead to an unnecessary increase in costs associated with operating two networks, potential cannibalisation of existing sales, and ultimately lead to a fall in profitability). This also suggests a complementary relationship between RFTS and MTS, rather than an effective degree of substitutability.
- 4.358 Additionally, the recent emergence of RFTS and mobile being offered in bundles suggests that end users place a distinct complementary value on these services, rather than considering them to be substitutes. Most SPs in the market offer quad play bundles of RFTS, fixed broadband, TV and MTS.⁴⁷²
- 4.359 Overall, the unwillingness of both residential and business end users to switch away from RFTS is evident in their reasons for retaining a fixed line. As noted in paragraph 4.300, households mainly retain with RFTS because:⁴⁷³
- (a) Use of a phone in cases of emergency (23%);
 - (b) The quality of the landline during a call is better than a mobile phone (10%);
 - (c) I always had one and don't see a reason not to have one now (17%); and
 - (d) Purchase a bundle which requires a fixed landline (15%).
- 4.360 In addition to other factors, such as the perception that a fixed line phone is important for the day-to-day functioning of a business, 22% of SMEs reported that RFTS is important for *"having a single contact phone number for the business."*⁴⁷⁴

Respondents' Views – Mobile broadband

- 4.361 Eircom took issue with ComReg's assessment that Managed VoIP delivered over mobile broadband is not an effective substitute for RFTS, and that mobile broadband is generally not considered a substitute for fixed broadband.
- 4.362 Eircom suggested that ComReg's reasoning was unclear, and that ComReg appeared to have conflated the issues of fixed mobile **broadband** substitution and fixed mobile **voice** substitution. Eircom considered that, while there is a lack of evidence that Managed VoIP is delivered over mobile broadband, this would only be relevant to ComReg's assessment of the substitutability between FNA RFTS and Managed VoB based on the underlying technology delivering the service.

⁴⁷² See Annex 3 of this Decision for an outline of RFTS packages offered by SPs.

⁴⁷³ Slide 85 of the 2019 Residential Market Research.

⁴⁷⁴ Slide 63 of the 2019 SME Market Research.

- 4.363 Eircom also considered that whether mobile broadband is a substitute for fixed broadband is not relevant to the assessment of substitutability between RFTS and mobile telephony.

ComReg's Assessment of Respondents' Views and Position

- 4.364 As surmised in paragraph 4.343, ComReg has insufficient evidence that Managed VoIP delivered over mobile telephony and mobile broadband is likely to be an effective constraint on the focal RFTS product. ComReg notes that Eircom has not provided any evidence to support its contention that Managed VoIP is being delivered over mobile broadband, or any compelling reasoning for including it in the relevant product market definition, despite it not currently being delivered. ComReg also considers that the correct fixed telephony to mobile parallel is, instead, RFTS over FNA and/or Managed VoIP over broadband to mobile telephony over 2G/3G/4G and/or Managed VoIP over mobile broadband.

Respondents' Views – WiFi calling

- 4.365 Eircom criticised ComReg's preliminary finding that WiFi calling does not enhance the case for FMS on the grounds that it acts as a complement to, rather than a substitute for, traditional mobile connectivity.
- 4.366 Eircom argued that ComReg's reasoning in respect of WiFi calling applied with equally validity to calls made over a fixed network, and added that WiFi Calling or 'Home Zone' as termed by the European Commission was also identified in the 3CT undertaken by it in the 2014 Explanatory Note.
- 4.367 Eircom also suggested that the question is not whether WiFi calling is itself a substitute for either RFTS or MTS. Rather, from the perspective of the consumer, WiFi calling is equivalent to a standard fixed call and the underlying technology is irrelevant. The question therefore is whether WiFi calling augments the existing mobile service to a point where indoor coverage issues are addressed, thus improving the overall substitutability of MTS and RFTS for those specific consumers that experience such coverage issues.
- 4.368 Eircom contended that this was, in fact, the case, and that MTS would be further augmented by ComReg's Multi-band spectrum award, which would require licensees to deploy and maintain VoLTE and Native WiFi Technology⁴⁷⁵ on their network to improve voice and text services coverage and quality.

⁴⁷⁵ Native WiFi technology allows calls to be made on a device utilising a Wi-Fi connection rather than through the mobile network directly.

ComReg's Assessment of Respondents' Views and Position

- 4.369 Eircom notes the European Commission's reference to 'Home Zone' in the 2014 Explanatory Note. However, it is ComReg's understanding that Home Zone facilitates calls delivered over a mobile network at a fixed location.⁴⁷⁶ As such, ComReg notes there are some variances between Home Zone and Eircom's WiFi Calling offering. For example, Home Zone calling uses a fixed line number, while WiFi calling makes use of the end user's mobile number. The EC also specifies that Home Zone calling does not allow the user to switch between mobile network cells, another key difference between the products. ComReg furthermore notes that the EC, in its 2020 Explanatory Note, does not refer to a home zone product, or to WiFi calling and that, accordingly, the authority referred to in the 2014 Explanatory Note no longer appears to be present in the 2020 Explanatory Note.
- 4.370 Eircom noted that ComReg's preliminary position on WiFi calling was that it acts as a complement to, rather than as a substitute for, RFTS. Eircom disputed this view, stating that WiFi calling bears characteristics similar to RFTS, and therefore facilitates FMS.
- 4.371 In the 2020 Consultation, ComReg presented various findings from primary research (including the 2019 Market Research) which indicated that mobile coverage and quality can be an issue for some consumers, especially indoors.⁴⁷⁷ ComReg does not, however, agree that WiFi calling provides evidence of substitutability between MTS and RFTS. ComReg made the point in the 2019 FVCT/MVCT Decision⁴⁷⁸ that WiFi calling falls within the Relevant MVCT market, so long as the WiFi call attracts an MTR when terminated. WiFi calling makes use of mobile numbers for the purposes of call routing, and acts as a complement to, rather than a substitute for, traditional mobile connectivity. ComReg also notes that WiFi calling is a feature available only to consumers with fixed broadband. Without fixed broadband, WiFi calling over mobile will not be possible. Thus, even if MTS and RFTS were substitutes, then WiFi calling substitutability would only hold for end users with good quality fixed broadband. This is a significant requirement for any substitutability between RFTS and MTS to occur, and, as such, WiFi calling does not improve overall substitutability between MTS and RFTS.

⁴⁷⁶ At p.29.

⁴⁷⁷ See paragraphs 4.269 and 4.270.

⁴⁷⁸ ComReg document 19/47, Fixed Voice Call and Mobile Voice Call Termination – Response to Consultation and Decision, Decision Number D10/19.

- 4.372 As an additional point on coverage issues, in Section 8 below, ComReg looks at the Relevant RFTS Markets absent upstream regulation and considers whether there is scope to designate sub-geographic RFTS markets. ComReg notes that EAs designated to the Regional FACO Market (where FACO regulation is to be maintained) are those which exhibit lower levels of wholesale NG Broadband coverage (i.e. less than 80% of premises in the EA). ComReg's view is that this likely correlates with reduced quality of mobile coverage (based on economies of density), such that an absence of high-speed fixed broadband may exacerbate the mobile coverage issue in terms of the ability to avail of WiFi calling features.
- 4.373 As part of its work in the area of mobile coverage nationally, ComReg has undertaken a number of connectivity studies⁴⁷⁹ that look at both indoor and outdoor mobile coverage. While many users are satisfied with the connectivity available to them, there are gaps in the provision of connectivity. These predominantly occur in three scenarios: indoors, in rural areas and when travelling. The gaps in mobile connectivity are exacerbated by gaps in fixed network connectivity. When good quality fixed network broadband is available, it can be used to improve indoor mobile voice connectivity via Native WiFi calling. However, this is limited in areas with poorer fixed broadband. Figure 43 and Figure 44 below give an overview of some of the issues in providing ubiquitous mobile coverage.
- 4.374 Recent ComReg research shows that the modern materials used to retain heat in buildings are also, to a varying but significant extent, keeping mobile radio signals out.⁴⁸⁰ Thus, if an area has subpar mobile coverage outside, this is exacerbated in their homes, limiting the possibility of MTS further.
- 4.375 ComReg notes also that mobile call quality will depend, amongst other things, on handset quality and the varying performance of the mobile handsets currently being used by consumers. ComReg's research into the performance of mobile handsets for voice⁴⁸¹ and data⁴⁸² services shows a notable difference in quality, depending on the service used. Importantly, mobile handsets are not equal in their ability to effectively operate with weak signals.

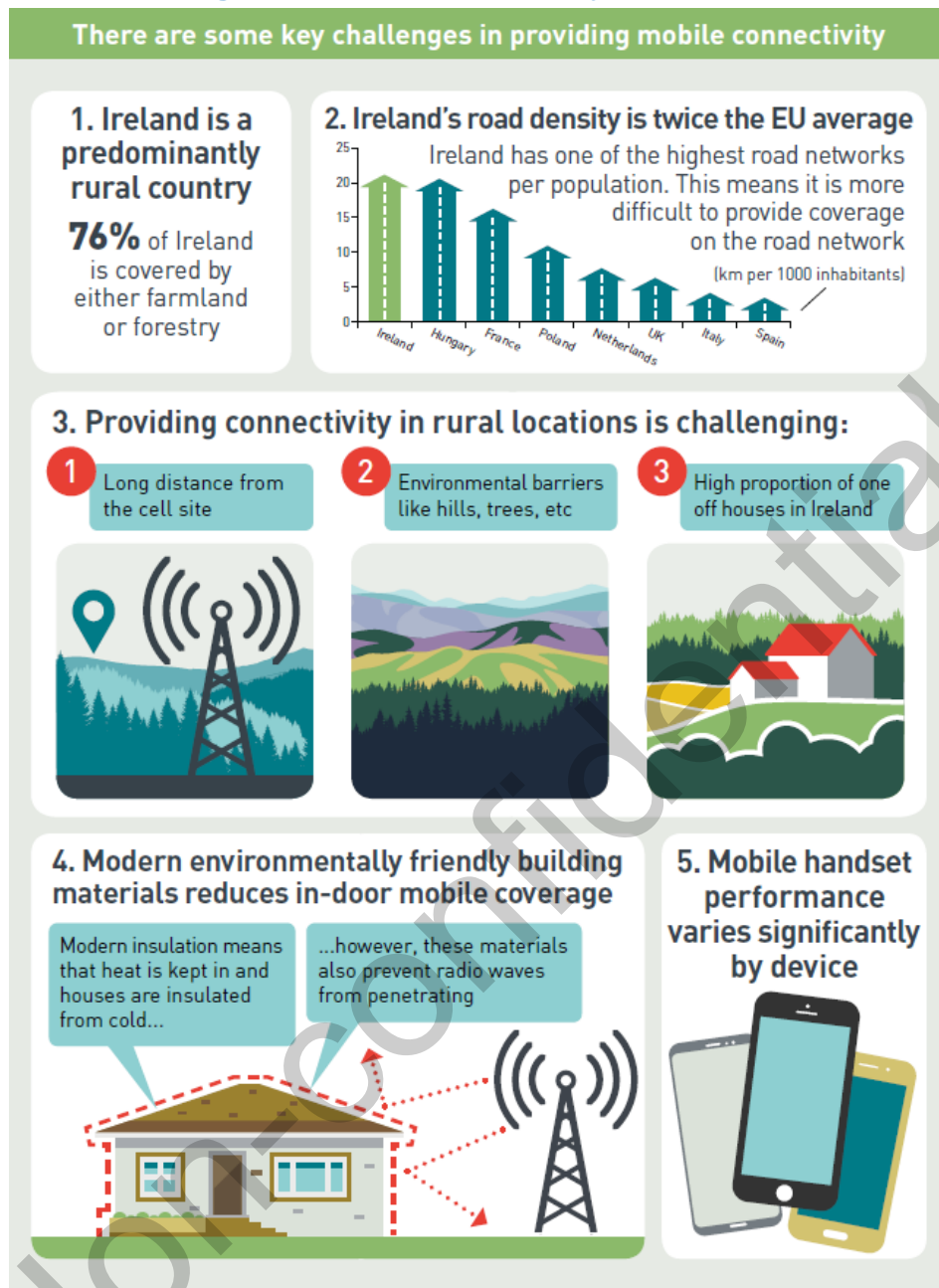
⁴⁷⁹ ComReg document 19/101, Mobile Consumer Experience 2019, ComReg document 17/100a.

⁴⁸⁰ ComReg document 18/73, The Effect of Building Materials on Indoor Mobile Performance, August 2018.

⁴⁸¹ ComReg document 18/05, Mobile Handset Performance (Voice), February 2018.

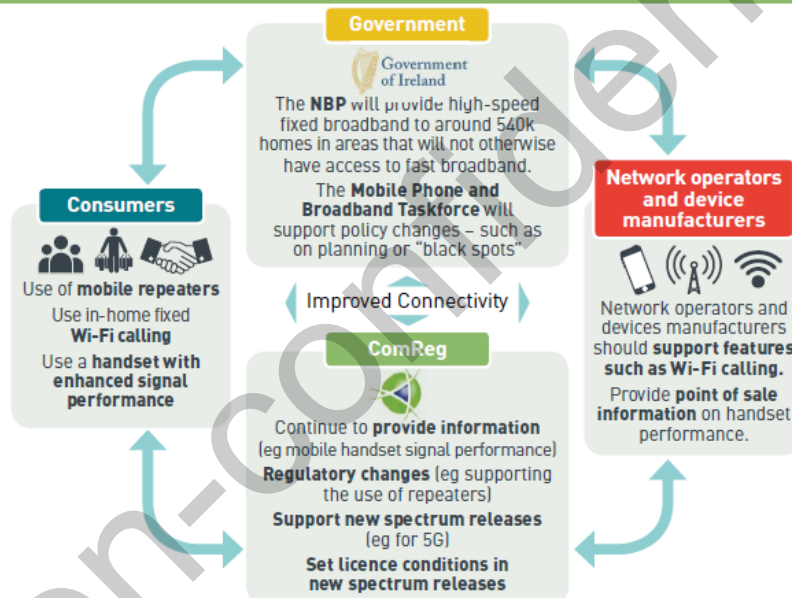
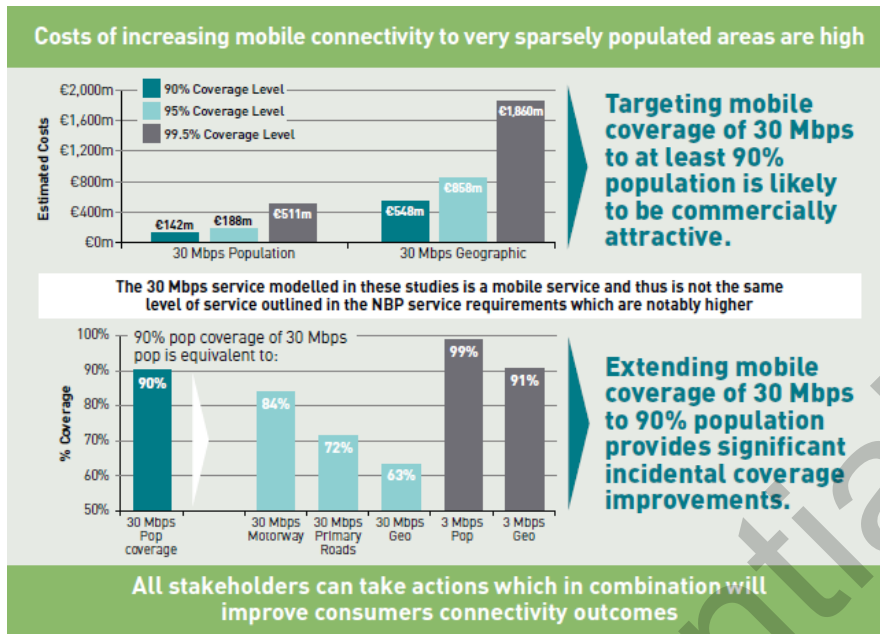
⁴⁸² ComReg document 18/82, Mobile Handset Performance (Data), September 2018.

Figure 43: Mobile connectivity in Ireland⁴⁸³



⁴⁸³ "Meeting Consumers' Connectivity Needs" – ComReg Document 18/103a.

Figure 44: Mobile connectivity in Ireland⁴⁸⁴



4.376 For premises that do not yet have a fixed broadband connection, and where there are still difficulties in obtaining indoor mobile connectivity, the use of a mobile phone repeater may offer a viable solution. These act to strengthen the mobile signals that are received indoors. In 2018, ComReg authorised the use of specific mobile phone repeaters in Ireland,⁴⁸⁵ meaning that consumers can now purchase and install such repeaters themselves, regardless of their SP. This suggests that the additional cost barrier created by the need to purchase a repeater limits the substitutability of mobile for RFTS for some consumers.⁴⁸⁶

⁴⁸⁴ “Meeting Consumers’ Connectivity Needs” – ComReg Document 18/103a.

⁴⁸⁵ Wireless Telegraph Act 1926 (Section 3) (Exemption of Mobile Phone Repeater) Order 2018, S.I. 238 of 2018.

⁴⁸⁶ <https://www.novatel.ie/mobile-phone-signal-booster-kits-for-homes> offer repeaters varying in cost from €420 to €1,474.

- 4.377 In the 2020 MBSA Decision,⁴⁸⁷ ComReg noted that, due to the many challenges in providing mobile reception indoors from outdoor base stations, indoor coverage could be better achieved by other means – in particular, by operators enabling Native WiFi on their networks and/or by the installation of mobile phone repeaters by consumers in the home. ComReg proposed a Native WiFi obligation on any rights of use obtained via the award process where, if a mobile voice service is provided to a licensee’s customers (which would include any provided to third party customers by a licensee, for example in the case of MVNO arrangements), then it must also provide Native WiFi within two years of licence commencement.
- 4.378 As such, ComReg considers that mobile voice telephony, even when bolstered by Native WiFi calling, is not a substitute for RFTS for numerous reasons, including, but not limited to;
- (a) end users’ perceptions of the cost of the service,
 - (b) issues with mobile coverage in certain parts of the State, particularly indoors and,
 - (c) the costs associated with purchasing a mobile package and a fixed broadband package in order to avail of Native WiFi calling.

Pricing

- 4.379 Tariff structures for RFTS and mobile services differ. An LL-RFTS PSTN end user must pay a monthly line rental charge of €25.78 (inclusive of VAT) if they subscribe to Eircom.⁴⁸⁸ Other SPs charge line rental rates in a broadly similar range.⁴⁸⁹ Beyond this, the variable cost (i.e. the cost of the actual call) is relatively low and many SPs offer inclusive minutes. As such, the marginal cost will be lower for end users who make a higher volume of calls. This is because the fixed cost (i.e. the line rental) is spread over a larger number of fixed voice call minutes. Most SPs offer RFVA and RFVC in a single product offering, as noted in paragraph 4.38. Table 7 above also compares prices of RFTS products.

⁴⁸⁷ “Multi Band Spectrum Award - Response to Consultation and Decision” (Decision D11/20), at p.15.

⁴⁸⁸ <https://www.eir.ie/opencms/export/sites/default/content/pdf/pricing/Pt1.1.pdf>

⁴⁸⁹ Digiweb charges €25.78 - <https://digiweb.ie/product/talk-unlimited-phone/>

Sky charges €30 - <https://www.sky.com/ireland/broadband-talk/talk-compare/>

Pure Telecom charges €25.50 per month - <https://www.puretelecom.ie/landline-service>

- 4.380 In comparison, for pre-paid mobile services, the price for access and call costs is bundled. Thus, if an end user makes a very low number of calls, a pre-paid mobile low call volume bundle may be cheaper than fixed line rental. For lower usage customers (both pre-pay and post-pay) there may be a price advantage in using a mobile, compared to paying for a fixed line connection, and these end users may more readily switch away from fixed lines, particularly in response to a SSNIP of RFTS.
- 4.381 Table 24 below compares pre-pay and post-pay SIM only packages offered by MSPs. For each MSP, ComReg gives the price range of their pre-pay and bill-pay packages, e.g. for Vodafone, four pre-pay packages are available, ranging from €20 to €30. For Vodafone bill-pay packages, which include minutes, texts and data allowances, the prices range from €25 to €35.⁴⁹⁰ Table 7 above lists both the costs of standalone RFTS and bundled RFTS and broadband packages. The figures presented in both tables suggest that a bill-pay mobile plan may be the same price or possibly cheaper than both standalone and bundled RFTS plans.

Table 24: Sample of Mobile Voice Packages (price range by SP)

SP		Pre-Pay Packages	Price Range incl. VAT	Bill-Pay Packages	Price Range incl. VAT
Three	Residential	3	€15 - €30	3	€20 - €30
	Business			3	€12.50 ⁴⁹¹ - €40
Vodafone	Residential	4	€20 - €30	2	€25 - €35 ⁴⁹²
	Business			3	€40 - €80
Tesco	Residential	1	€15	2	€10 - €20
Lycamobile	Residential	12	€7.50 - €20		
eir Mobile	Residential	4	€10 - €20	3	€39.99 - €69.99
48	Residential	1	€10.99		
Virgin Media	Residential			2	€10 - €15
GoMo	Residential			1	€12.99

⁴⁹⁰ Note that this does not include plans tailored around acquiring certain types of handsets.

⁴⁹¹ This increases to €25 after the first six months.

⁴⁹² This increases to €35 and €45 respectively after the first six months.

- 4.382 It should be noted that out-of-package mobile charges for calling other fixed or mobile numbers are typically higher than the analogous call type on fixed networks, particularly for calls to fixed numbers. For example, for Vodafone, eir Mobile and Virgin Mobile, out of bundle mobile calls range from 25c to 45c per minute (plus any connection fee) for calls to landlines/mobiles, while the corresponding cost for out of bundle landline calls to landlines/mobiles ranges from 3c to 29c per minute (plus any connection fee).⁴⁹³
- 4.383 In terms of the relative costs of fixed and mobile services, the 2019 Residential Market Research indicates that there is a general perception among households with RFTS that mobile phones are more expensive for most call types than RFTS.⁴⁹⁴ That is, most households believe that RFTS charges are lower than calls from mobile phones. The exception is for fixed calls to mobiles (both on-net and off-net), where RFTS is thought to be more expensive. This trend is reflected in terms of paying for calls per minute and paying for inclusive minutes.⁴⁹⁵
- 4.384 According to the 2019 SME Research, 68% of end users reported having an unlimited number of minutes as part of their RFTS plan.⁴⁹⁶ Of those end users who do not have unlimited minutes, 87% answered that they are unsure or don't know the cost of making a call from their business' fixed landline.⁴⁹⁷ This absence of knowledge regarding pricing structure suggests that there is a lack of price sensitivity for SMEs when it comes to their RFTS service, meaning that SMEs are less likely to switch provider in reaction to a small price increase.

⁴⁹³ Vodafone landline: <https://n.vodafone.ie/shop/broadband/charges.html>

Eircom landline: <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/Part2.1.pdf>

Virgin Media landline: https://www.virginmedia.ie/pdf/terms/VM_CRM_21715_Charges-Website_JANUARY20v2.pdf

Vodafone mobile: <https://n.vodafone.ie/shop/pay-as-you-go-plans/charges.html>

eir Mobile: <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/pt12.2.pdf>

Virgin Mobile: <https://www.virginmedia.ie/pdf/Mobile/Dec18/Mobile-Standard-Rates-Online-version-of-19-12-2018.pdf>

Prices were retrieved from SP websites on 13 May 2021.

⁴⁹⁴ Slide 49 of the 2019 Residential Market Research.

⁴⁹⁵ Slides 50 and 51 of the 2019 Residential Market Research.

⁴⁹⁶ Slide 45 of the 2019 SME Market Research.

⁴⁹⁷ Slide 46 of the 2019 SME Market Research.

- 4.385 For these reasons, MTS is not considered by ComReg to be a sufficiently effective demand-side substitute for RFTS. The market research evidence does not indicate that RFTS and MTS are sufficiently close substitutes to render a SSNIP of RFTS unprofitable (i.e. insufficient numbers of end users would switch to mobile in response to a SSNIP). The responses to a SSNIP of standalone RFTS and of RFTS bundled with other services are outlined in paragraphs 4.101 and 4.239. ComReg also notes that in November 2019, Eircom increased retail line rental rates for ISDN FRA and ISDN PRA, with no change to PSTN and ISDN BRA line rental due to the price cap imposed by ComReg on these products under the 2014 RFVA Decision. Specifically, ISDN FRA line rental was increased from €180 to €215 per month (excluding VAT), a 19% increase; while ISDN PRA was increased by 19% from €299 to €355 per month (excluding VAT).⁴⁹⁸
- 4.386 Overall, the available data on price trends and partial substitution of access to the mobile network for access to the fixed network indicates that mobile access and services are not an effective substitute for RFTS, such that they justify inclusion in the same relevant market. As noted in the 2014 Explanatory Note,

“Fixed-mobile substitution sufficient to identify a single access market is not foreseen on a Union level for the forthcoming period covered by this Recommendation, but it is likely that more NRAs will indeed be able to conclude that such substitution exists in their national markets. Even where perfect substitution is not found, mobile may exert pressure on fixed to the extent that fixed operators are constrained in their price setting, which then should be duly taken into account in the three criteria assessment or SMP analysis, as well as (alternatively) in the assessment of the appropriate remedies.”⁴⁹⁹

Conclusion

- 4.387 Overall, ComReg’s position is that mobile telephony does not pose an effective demand-side constraint on the focal products for the following reasons (outlined in paragraphs 4.287 to 4.386 above):
- (a) Despite the high number of mobile subscriptions, end users continue to retain RFTS, suggesting that fixed and mobile telephony are considered by end users to be complements rather than substitutes;
 - (b) Businesses also continue to retain and rely on RFTS, and ComReg’s 2019 SME Market Research showed that SMEs predominantly use RFTS to make calls to all number types;⁵⁰⁰

⁴⁹⁸ <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/Part1.2.pdf> Accessed 26 April 2021.

⁴⁹⁹ At p.22. The 2020 Explanatory Note does not allude to the RFVA Market, and is therefore silent on the FMS possibilities on this market.

⁵⁰⁰ Slide 52 of the 2019 SME Market Research.

- (c) Uptake of RFTS over Managed VoIP as end users purchase bundles of NG Broadband – if mobile telephony were a substitute to RFTS, growth in standalone broadband subscriptions and a reduction in RFTS bundles with broadband would be observed;
- (d) No evidence that Managed VoIP is delivered over mobile broadband. Additionally, mobile broadband is generally not considered a substitute for fixed broadband;
- (e) Coverage issues relating to mobile telephony, particularly indoors, as evidenced by SPs offering WiFi calling; and
- (f) General view among SPs (in response to IIRs) that mobile telephony is a complement, rather than a substitute to RFTS.

4.388 Although there is evidence of some substitutability of RFTS for mobile (particularly mobile-only households (46%), of which only 39% previously had RFTS)⁵⁰¹ the evidence suggests that end users consider RFTS and mobile telephony to be broadly complementary, whether used in the home or in the office. End users have a strong preference for purchasing both mobile telephony and RFTS, with a mix of RFTS and mobile telephony being used to meet different needs. Mobile telephony may, in some usage cases, represent a substitute for RFTS. However, overall price differences between fixed and mobile calls, and variations in end user usage, preferences and perceptions regarding mobile telephone calls versus RFTS calls, indicate that mobile telephony does not pose a sufficiently strong demand-side constraint on the focal products to warrant inclusion in the Relevant RFTS Markets.

Are alternative fixed access technologies such as leased lines demand-side substitutes to the focal product?

4.389 This section considers whether high quality access lines such as leased line services constitute a demand-side substitute to the high-level focal product (RFTS over ISDN FRA and PRA). As outlined in paragraph 4.189, there are two distinct markets for LL-RFTS delivered over PSTN and ISDN BRA, and HL-RFTS delivered over ISDN FRA and PRA, based on low-volume and high-volume RFTS users.

4.390 At Section 4.1.5. of the 2020 Explanatory Note, the EC notes that dedicated connections such as leased lines can be used to provide fixed access where multiple connections are needed (large businesses with multiple sites), but leased lines are generally not a substitute to FNA due to different characteristics, such as pricing and services delivered, except for a very limited group of customers.

⁵⁰¹ Slide 89 of the 2019 SME Market Research.

FNA RFTS products

- 4.391 Leased lines (also known as ‘**Wholesale High Quality Access**’, or ‘**WHQA**’) provide symmetric data transmission for telephony and IP services and are used by large organisations that require both data connectivity and a large number of voice channels (such as banks with multiple branches).⁵⁰²
- 4.392 It is unlikely that a RFTS end user would substitute a full leased line (plus a SIP Trunk) in response to a SSNIP of RFTS. In addition to the significant cost differential between the two solutions, a leased line product only provides an access component, therefore a SIP Trunking or Hosted PBX package would be required in order to access RFTS. An analysis of leased lines in the FACO market is set out below at paragraphs 5.169 to 5.176.
- 4.393 For LL-RFTS users, the cost of leased lines (Table 25 below) suggests that switching to a leased line would not be a viable substitution possibility for end users that demand PSTN and ISDN BRA services.
- 4.394 For HL-RFTS users such as large organisations, a full leased line solution is used to provide a full spectrum of connectivity beyond RFTS alone, comprising multiple services such as voice, data, e-mail, instant messaging and disaster recovery, such that substitution from ISDN FRA or PRA may only arise if the organisation is expanding or in a greenfield scenario.⁵⁰³ Unless the requirements of the end user change due to expansion (or other factors), the extra costs associated with the acquisition of a leased line solution and the extra investment required to upgrade IT systems and equipment to support the new infrastructure is likely to result in an unwillingness to switch.

⁵⁰² See ‘Wholesale High Quality Access at a Fixed Location – Decision’ D03/20, ComReg Document 20/06, 24 January 2020, (the ‘**2020 WHQA Decision**’).

⁵⁰³ The 2019 SME Market Research showed that, of SMEs that intend to upgrade telecommunications (20%), 5% said it would be due to planned expansion and 14% said it will depend on cost considerations (Slide 64).

- 4.395 As Table 25 below suggests, leased lines are more expensive than ISDN FRA and PRA, at lower numbers of voice channels. Over three years, an ISDN PRA would cost the end user €16,079, while an 10Mb/s Ethernet leased line with 30 voice channels would cost €27,660. Given that leased lines are typically used to deliver multiple services, rather than RFTS alone, ComReg considers that higher numbers of voice channels (more than 30) are likely to be more representative of average leased line usage. A 2Mb/s digital leased line will provide 30 voice channels, while an Ethernet leased line can provide multiples of this depending on bandwidth. Market research undertaken by ComReg in 2016 as part of the 2018 WLA/WCA Decision showed that, of those business end users with leased lines, 41% used them for Managed VoIP services, but higher proportions reported using them for email and internet, data services, connectivity between premises and disaster recovery.⁵⁰⁴ The market research also gives an overview of the types of leased lines used by business end users.
- 4.396 This suggests that, in response to a SSNIP of ISDN FRA or PRA, an insufficient number of end users would be prepared to substitute to SIP Trunking or Hosted PBX delivered over leased lines, given that the overall monthly cost per channel would increase by 150%, when comparing the delivery of an equivalent number of voice channels over ISDN FRA, and 72% in the case of ISDN PRA.
- 4.397 Given these differences, the ability of a HM SP of HL-RFTS to profitably implement a SSNIP is unlikely to be constrained by high-volume users whose needs are satisfied by the 16 or 30 voice channels available over ISDN FRA or PRA switching in significant numbers to SIP Trunking or Hosted PBX delivered over leased lines.
- 4.398 Therefore, there appears to be an observable distinction between HL-RFTS and leased line pricing, to a sufficient extent that does not justify the inclusion of a leased line solution in the same product market as HL-RFTS or, for that matter, LL-RFTS. The gap between LL-RFTS and leased line solutions is greater than the gap between HL-RFTS and leased line solutions in terms of pricing and usage characteristics. Cost and usage characteristics of leased lines substantially differ from PSTN, ISDN BRA, ISDN FRA and PRA, and from WLA/WCA broadband:

⁵⁰⁴ See slide 207 of Market Analysis Consumer Research survey – ComReg Document 16/96a - <https://www.comreg.ie/publication/comreg-market-analysis-research-consumer-survey/>

Table 25: Leased Line⁵⁰⁵ and ISDN FRA and PRA Costs⁵⁰⁶

Product	Number of voice channels	New Connection charge	Monthly rental		Total cost over 3 years	
			Total	Per channel	Total	Per channel
ISDN FRA	16	€3,299	€215	€13.44	€11,039	€689.94
ISDN PRA	30	€3,299	€355	€11.83	€16,079	€535.97
Ethernet, 100Mbit/s	16				€27,660	€1,728.25
	30				€27,660	€922
	75				€27,660	€368.80
	100				€27,660	€276.60

4.399 ComReg has also assessed leased line pricing based on figures set out in Service Schedule 014 of open eir's Network Price List Effective List Rates, effective as of December 2020.⁵⁰⁷ These figure also suggest that there is a non-trivial cost difference between leased lines and ISDN FRA or ISDN PRA, and that this cost difference increases with the number of channels, based on an illustrative example of NGA Ethernet requiring same region handoff, 1.5km radial distance on average from the exchange, and delivering 10Mbit/s.

Table 26: Leased Line costs

	Regulated Zone B WHQA Market	Unregulated WHQA Market
Connection fee	€1,000	€1,000
WSEA Physical	€3,640 p.a.	€3,640 p.a.
Logical charge for 10Mbit/s	€1,310 p.a.	€3,808 p.a.
Total over 3 years	€15,850	€23,344

4.400 Compared to the total costs for ISDN FRA and ISDN PRA set out at Table 25, the total costs set out at Table 26 suggest that leased lines are unlikely to be an effective demand-side substitute for the focal products (LL-RFTS and HL-RFTS). For an end user already purchasing a leased line, it is unlikely that they would switch to multiple ISDNs for their voice service, especially as the leased line may be utilised for data connectivity purposes.

⁵⁰⁵ The Ethernet pricing data in this table are taken from Annex 5 to the 2020 WHQA Decision, a report prepared by Oxera in September 2019 on behalf of ComReg entitled "Assessing whether there is a bandwidth break at 1Gbps in MI WHQA Services".

⁵⁰⁶ <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/Part1.2.pdf>

⁵⁰⁷ open eir Network Price List Effective Rates (formerly the open eir RIO Network Price List), v.50 dated 21 December 2020. Available online at https://www.openeir.ie/wp-content/uploads/2020/12/Network-Price-List-Effective-Rates-V5_0-unmarked-21122020.pdf.

NG RFTS products (Managed VoB)

- 4.401 SIP Trunking and Hosted PBX are two of the three means of delivering Managed VoIP (the other being Managed VoB), and can be delivered over WLA, WCA or WHQA, where the SPs originating a voice call have the appropriate CPE, operational support systems ('OSS') and other necessary infrastructure. In the case of HL-RFTS, leased lines can be used to provide RFVA, while a SIP Trunking or Hosted PBX package provides the RFVC component of RFTS.
- 4.402 ComReg considers that HL-RFTS (including Managed VoIP delivered as Hosted PBX or SIP Trunking over WLA or WCA) is likely to be dimensioned to the needs of large organisations. ComReg considers that there may be some likelihood of an organisation switching to Managed VoIP delivered via leased lines if it had sufficient pre-existing demand to justify the higher cost of a leased line. This may be at contract renewal for FNA RFTS products, or upon business expansion. Organisations that purchase ISDN FRA and/or ISDN PRA may be more likely to switch to Managed VoIP (SIP Trunk or Hosted PBX) delivered via WLA/WCA broadband inputs rather than to SIP Trunk or Hosted PBX delivered over a leased line, given the higher cost of the latter.
- 4.403 The 2019 SME Market Research showed low overall numbers of SMEs using leased lines as their means of accessing broadband, although the proportion was higher for medium-sized enterprises.⁵⁰⁸
- 4.404 ComReg's position is that alternative fixed access technologies such as leased lines are not an effective demand-side constraint to the focal product for LL-RFTS users. For HL-RFTS users such as large organisations purchasing multiple ISDN FRA and PRA products, there is a higher likelihood of these users switching to SIP Trunk or Hosted PBX delivered over broadband (WLA/WCA inputs) than over a leased line. For very large organisations, there may be a greater likelihood that they could switch to SIP Trunk or Hosted PBX via leased line so as to constrain a HM SP of ISDN FRA and PRA. However, this is likely to be on a case-by-case basis and not of general application.

Supply-Side Substitution

- 4.405 ComReg must also consider whether any alternative products represent an effective supply-side substitute to the focal products. Supply-side substitution measures how potential (rather than actual) competitors react to price increases. The HMT assesses whether a SSNIP of a focal product supplied by a HM would cause sufficient new entry into the relevant market by potential competitors, such that it would render the price increase unprofitable.

⁵⁰⁸ Slide 17 of the 2019 SME Market Research.

- 4.406 The Notice on Market Definition makes clear that the impact of supply-side substitution must be equivalent to the impact of demand-side substitution, in terms of effectiveness and immediacy.⁵⁰⁹

*“Supply-side substitutability may also be taken into account when defining markets in those situations in which its effects are **equivalent to those of demand substitution in terms of effectiveness and immediacy**. This means that suppliers are able to switch production to the relevant products and market them in the short term without incurring significant additional costs or risks in response to small and permanent changes in relative prices. When these conditions are met, the additional production that is put on the market will have a disciplinary effect on the competitive behaviour of the companies involved. **Such an impact in terms of effectiveness and immediacy is equivalent to the demand substitution effect.**”*

- 4.407 In particular, ComReg considers whether an SP would be likely, in response to a HM's SSNIP of RFTS above the competitive level, to switch into production of RFTS in the immediate to short term (typically within one year), without incurring significant costs, and start supplying services of equivalent characteristics to the focal product. ComReg must also consider whether supply-side substitution would likely render the HM's price increase unprofitable through any consequential demand-side substitution.
- 4.408 Aside from the demand-side substitution possibilities identified at paragraph 4.205 above, constraints on the focal products may also arise from potential competitors who, by means of supply-side substitution, offer merchant market FACO at the wholesale level to Access Seekers, and/or self-supply FACO as an input to the provision of their own RFTS. This could include FACO supplied by vertically-integrated SPs (not supplying merchant market services), or suppliers of broadband or high-capacity business data services (e.g. leased lines) supplying FACO by means of wholesale Managed VoIP (i.e. Managed VoB, Hosted PBX, or SIP Trunking).
- 4.409 In carrying out this assessment, ComReg has considered SPs' responses to the IIRs, particularly views and evidence provided by SPs that indicate the strength of any direct constraint arising from supply-side substitution (including from vertically-integrated SPs).
- 4.410 ComReg considers below the potential for RFTS supply-side substitution by SPs (including self-supply where relevant) over mobile telephony.

⁵⁰⁹ See paragraph 20. ComReg emphasis added.

Supply-side substitution over mobile services

- 4.411 ComReg considers the potential for supply-side substitution arising from vertically-integrated mobile network operators ('**MNOs**') that provide mobile telephony. Excluding mobile virtual network operators ('**MVNOs**') which do not own their own networks, three MNOs provide mobile telephony, namely Vodafone, Eircom, and Three Ireland.
- 4.412 In the 2014 RFVA Decision, ComReg was of the view that a Mobile Service Provider (a '**MSP**') would be unlikely to switch sufficiently promptly, or on a sufficient scale, to the supply of RFTS, so as to constrain a SSNIP of RFTS. In the following analysis, ComReg considers the potential for supply-side substitution which would involve an MSP responding to a price increase in RFTS by switching into production of RFTS, or by supplying a product which is sufficiently substitutable on the demand side, in a prompt and effective manner without incurring significant additional costs, risks or time delays, as set out at paragraph 4.406 above.
- 4.413 Some SPs are already active on the markets for both RFTS and mobile telephony. Vodafone provides RFTS under its 'Vodafone at Home' brand. Eircom has both fixed and mobile operations and, Three, while predominantly an MNO, is also active in the provision of retail bundle offers to business users, that is, one bill inclusive of broadband, an allocation of mobile minutes and fixed voice minutes to certain fixed call numbers.⁵¹⁰ Virgin Media offers quad play retail bundles comprising fixed voice, broadband, TV and mobile voice, the latter being provided over Three's network.⁵¹¹ However, it should be noted that Vodafone uses upstream FACO inputs to provide RFTS, as set out in paragraph 5.367.
- 4.414 MSPs provide RFTS in a number of different ways:
- (a) Through the use of Eircom wholesale products provided over fixed network infrastructure;
 - (b) Through the use of SIRO wholesale products provided over fixed network infrastructure;
 - (c) Through the use of wholesale products provided by BT; and
 - (d) By offering retail voice services at a fixed location with fixed number allocations using mobile network infrastructure (converged fixed-mobile products).

⁵¹⁰ See <https://www.three.ie/business/>.

⁵¹¹ <https://www.virginmedia.ie/customer-support/support-by-products/mobile/mobile-network-and-data/virginmedia-and-three-network/>.

- 4.415 Vodafone supply of RFTS is still heavily reliant on wholesale FACO inputs provided over Eircom's network (although Vodafone RFTS subscriptions delivered over Managed VoIP are growing both due to migration from FNA RFTS and from new FTTx broadband end users over SIRO's wholesale network). Three is also reliant on Eircom wholesale inputs (WLV) for the provision of its business bundle offer, which includes broadband and RFTS.
- 4.416 With respect to (d) above, Vodafone offers One Net Business, with the key functionality associated with the One Net Business product being that incoming calls to business landline numbers can be received on employees' mobiles.⁵¹² The One Net Business product is marketed by Vodafone as an integrated fixed and mobile voice communications solution.⁵¹³ The initial scale of Vodafone's One Net Business product suggests that it is not likely to pose a sufficiently effective demand-side constraint on a HM RFTS SP over the timeframe of this market review. In addition, ComReg considers that this product is marketed as a product to meet the flexibility needs of businesses, rather than as a substitute to LL-RFTS and HL-RFTS.
- 4.417 Eircom offers a Fixed Cellular Solution ('FCS') product which involves a fixed voice service being delivered over a mobile network.⁵¹⁴ ComReg notes that this product is only offered in areas where it is deemed commercially unviable by Eircom, as the USP, to install a full RFTS line. Provision of FCS falls under Eircom's USO obligations⁵¹⁵ and it is generally provided in circumstances where it is not feasible to install an RFTS line from the exchange to the end user's premises. As this product is not marketed to end users publicly, ComReg discounts this converged fixed-mobile offering from the analysis.

⁵¹² <https://onenet.vodafone.com/latest/ie/en/content/topics/learn-about-one-net/one-net-service-overview>.

⁵¹³ <https://n.vodafone.ie/business/products-and-solutions/unified-communications/one-net-business.html>.

BT also has a similar product called BT One Voice Anywhere for business users - <https://www.btireland.com/products-and-services/communication/voice>.

⁵¹⁴ As distinct from eir mobile.

⁵¹⁵ Although the Universal Service Provider ('USP') is entitled, in principle, under the USO to replace existing copper lines with fixed cellular service ('FCS'), this will only be possible where existing copper lines do not meet the designated USO minimum data rate of 28.8 kbit/s. More than 94% of installed telephone lines meet this minimum data rate. Accordingly, in 19 out of every 20 cases, the USO requirement to maintain a minimum data rate of 28.8 kbit/s prevents the USP from replacing existing copper connections with FCS, which is not capable of supporting the minimum data rate. Therefore, even where an FNA RFTS end user does not use the internet, the minimum data rate protections in the USO are likely, in most instances, to ensure that the copper line is not replaced with an FCS alternative. See paragraph 329 (page 74) of the 2016 USO Decision. As of May 2021, the 2016 USO Decision remains in effect. On May 27 2021, ComReg issued a Consultation and draft Decision in respect of an updated USO requirement, "Universal Service Requirements - Provision of access at a fixed location (AFL USO). Consultation and draft Decision". Reference: ComReg 21/51. Available online at [Universal Service Requirements Provision of access at a fixed location \(AFL USO\) | Commission for Communications Regulation \(comreg.ie\)](https://www.comreg.ie/Universal-Service-Requirements-Provision-of-access-at-a-fixed-location-AFL-USO)

- 4.418 Despite the developments described above, ComReg's position is that the evidence available indicates that mobile telephony is not an effective supply-side substitute to the focal products (LL-RFTS and HL-RFTS). The costs and time involved in making new RFTS products available (such as OSS/BSS, backhaul infrastructure etc.) using mobile network inputs, as well as the need for sufficient customer substitution to such mobile-based products, would need to be sufficiently swift and pervasive so as to effectively constrain a SSNIP of existing LL-RFTS and HL-RFTS products. This implies that the distinguishing factors between fixed and mobile retail voice services do not justify, from a supply perspective, the inclusion of mobile voice in the Relevant RFTS Markets. Furthermore, the time, cost and risks involved in investing in comparable access products for use at a fixed location using mobile network inputs renders such supply substitution not sufficiently immediate (e.g. within one year) or effective for such mobile-based RFTS to be considered part of the Relevant RFTS Market.
- 4.419 ComReg is also of the view that commercial incentives for MSPs to offer RFTS via supply-side substitution may decline as RFTS penetration has fallen in recent years to 63% among residential RFTS users (see paragraph 4.287).
- 4.420 While some SPs are active on both the fixed and mobile markets, such entry has been predominantly through acquisition (Eircom's purchase of Meteor, later rebranded as 'eir mobile'), or based on resale of fixed wholesale inputs (for example, Vodafone purchasing wholesale inputs on Eircom's network) or through MVNO arrangements (e.g. Virgin Media). ComReg's view is that MVNOs which do not own their own mobile network are unlikely to supply-side substitute to provide RFTS using the mobile network, as there may be limited commercial incentives to enter the Relevant RFTS Markets.
- 4.421 Furthermore, where an RFTS SP is also active on the retail mobile telephony market, it may offer favourable pricing terms for calls originated on its fixed network, and destined for subscribers on its own mobile network.⁵¹⁶ The latter development does not imply FMS, as the end user still maintains separate services for RFTS and mobile voice. Rather, the entry of MSPs into the Relevant RFTS Market reflects a recognition on the part of MSPs that end users place a distinct value on mobile voice telephony, possibly as a complement to RFTS.
- 4.422 Having considered relevant demand-side factors including functionality, price and end user usage, as well as relevant supply-side factors, ComReg's position is that mobile services are not a sufficiently effective substitute for the focal products.

⁵¹⁶ Such as eir mobile, Vodafone and Virgin Media.

- 4.423 While the direction of change is towards some substitutability with particular customers moving away from RFTS and related services to mobile services, in general, the evidence suggests that end users consider access through mobile networks and RFTS to be broadly complementary for use at home or in the office. End users have a strong preference for purchasing both mobile telephony and RFTS with a mix of RFTS and mobile services being used to meet different needs. In addition, the degree of FMS is not sufficiently strong, such that the impact is an effective and immediate constraint on suppliers of the focal products over the lifetime of this review.
- 4.424 ComReg will monitor any increasing availability and provision of voice access for use at a fixed location using mobile network inputs over the timeframe of the current market review. Based on the market evidence to date, ComReg's position is that delivery of RFTS over a mobile network through supply-side substitution is unlikely to occur over the timeframe of the current review.

Overall Conclusions on Relevant RFTS Product Market

- 4.425 ComReg thanks Respondents for their detailed and thoughtful responses. Upon consideration of the information and argumentation provided by Respondents ComReg feels it is appropriate to maintain its position as set out in the 2020 Consultation, which is as follows.
- 4.426 ComReg's position is that there are two distinct focal products for RFTS, pertaining to low-volume and high-volume RFTS users:
- (a) Low-Level RFTS ('**LL-RFTS**') including RFTS delivered over PSTN and ISDN BRA; and
 - (b) High-Level RFTS ('**HL-RFTS**') including RFTS delivered over ISDN FRA and ISDN PRA.
- 4.427 In light of the high incidence of RFTS being provided as part of a bundle with NG Broadband (particularly for Managed VoIP, a demand-side substitute for the focal products) and a considerable but declining number of standalone RFTS users, consistent with the 2014 RFVA Decision, ComReg considers it appropriate to further delineate Standalone and Bundled LL-RFTS Markets.
- 4.428 ComReg's overall position is that there are three distinct Relevant RFTS Product Markets (the '**Relevant RFTS Product Markets**')
- (a) **Market 1a:** Standalone Low-Level RFTS ('**Standalone LL-RFTS**') including RFTS over PSTN and ISDN BRA and Managed VoB delivered over NG Broadband on a standalone basis;
 - (b) **Market 1b:** Bundled Low-Level RFTS ('**Bundled LL-RFTS**') including RFTS over PSTN and ISDN BRA and Managed VoB delivered over (and with) NG Broadband on a bundled basis together with any of broadband, television or mobile services; and

- (c) **Market 1c:** High-Level RFTS ('**HL-RFTS**') including RFTS over ISDN FRA and PRA and Managed VoIP delivered over NG Broadband, including Hosted PBX or SIP Trunking forms of Managed VoIP, on a standalone basis or on a bundled basis together with any of broadband, television or mobile services.

4.3 Geographic Assessment of Relevant RFTS Markets

4.429 In this section, ComReg considers the geographic scope of the Relevant RFTS Product Markets, as outlined above in paragraph 4.428. ComReg's approach follows the approach adopted by the EC in the 2014 Recommendation.

4.430 The Notice on Market Definition states that the relevant geographic market is:

"... an area in which the Undertakings concerned are involved in the supply and demand of the relevant products or services, in which area the conditions of competition are similar or sufficiently homogeneous and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are appreciably different."⁵¹⁷

4.431 The EC further notes in its SMP Guidelines that:

"According to established case-law, the relevant geographic market comprises an area in which the Undertakings concerned are involved in the supply and demand of the relevant products or services, in which area the conditions of competition are similar or sufficiently homogeneous and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are appreciably different. The definition of the geographic market does not require the conditions of competition between traders or providers of services to be perfectly homogeneous. It is sufficient that they are similar or sufficiently homogeneous, and accordingly, only those areas in which the conditions of competition are 'heterogeneous' may not be considered to constitute a uniform market. In general, the process of defining the geographic boundaries of markets involves identifying any geographic areas where a distinct break in competitive conditions can be observed. This approach places weight on the underlying structural and behavioural factors that are relevant in determining the competitiveness of a market."⁵¹⁸

4.432 In the 2014 RFVA Decision, ComReg considered that the Relevant RFVA Markets were national in scope. ComReg concluded that RFVA delivered predominantly over Eircom's network was national in scope. In addition, Eircom RFVA was provided on the same terms, conditions and prices across Ireland, regardless of location.

⁵¹⁷ Notice on Market Definition, paragraph 8.

⁵¹⁸ SMP Guidelines, paragraph 56.

- 4.433 Four of the five Respondents to the 2020 Consultation commented on ComReg's geographic assessment of the RFTS market. ALTO, Vodafone, BT and Eircom all broadly agreed with ComReg's preliminary findings that it was appropriate to determine that the scope of the Relevant RFTS Markets is national. BT and ALTO noted that their agreement with ComReg's preliminary findings was conditional on the assumption that upstream wholesale supply necessary for the provision of RFTS was not disrupted or restricted.
- 4.434 Vodafone expressed concern about the prevalence of ISDN BRAs in the footprint of the Urban LL-FACO Market, and the potential impacts of deregulation. These issues are addressed in Sections 5 and 11 of this Decision.
- 4.435 ComReg assumes the presence of upstream FACO regulation and WLA/WCA regulation (where relevant). Where FACO regulation is not in place in some geographic areas, WLA/WCA regulation is assumed, such that Access Seekers can continue to provide RFTS in the form of Managed VoIP (see paragraphs 5.475 to 5.482 in Section 5). ComReg notes that the Urban WCA Market is not subject to regulation (see Appendix 10 and Appendix 11 of the 2018 WLA/WCA Decision) but that WCA and WLV/White Label VoIP is available from BT in these areas on a commercial basis.
- 4.436 In assessing geographic variances in competitive conditions, ComReg takes utmost account of the Notice on Market Definition and the BEREC Common Position on Geographic Aspects of Market Analysis.⁵¹⁹ Having regard to the above, ComReg assesses the geographic scope of the Relevant RFTS Markets according to the following criteria:
- (a) Geographic differences in entry conditions over time (paragraphs 4.438 to 4.458);
 - (b) Variation in the number and size of potential competitors (paragraphs 4.459 to 4.466);
 - (c) Distribution of market shares (paragraphs 4.467 to 4.471);
 - (d) Evidence of differentiated pricing strategies or marketing (paragraphs 4.472 to 4.478); and
 - (e) Geographical differences in product functionality and demand characteristics (paragraphs 4.479 to 4.485).

⁵¹⁹ BEREC "[Common Position on Geographic Aspects of Market Analysis](#)", BoR (14) 73, 05.06.2014.

- 4.437 ComReg applies the Modified Greenfield Approach ('MGA') in assessing the RFTS geographic market. This assumes a hypothetical scenario in which there is no *ex ante* SMP regulation in any of the candidate Relevant RFTS Markets but that regulation is present in upstream markets including FACO, but also, where appropriate, WLA and WCA. This allows for instances where an SP is present in the Relevant RFTS Market on the basis of upstream FACO, WLA or WCA inputs.

Geographic differences in entry conditions

- 4.438 Eircom supplies RFTS nationally over its FNA network to both its own retail arm and to Access Seekers through upstream wholesale access. 64% of RFTS subscriptions are provided using Eircom's FNA network.
- 4.439 RFTS competition is, to some degree, dependent on upstream FACO regulation⁵²⁰ (access to SB-WLR and WLV, which relies on an SB-WLR input), although SPs such as Virgin Media and Vodafone offer RFTS independently over Managed VoB.⁵²¹ Coverage of Eircom's FACO products is national and this means that any SP can avail of national coverage and enter a given geographic area relatively quickly and provide RFTS, assuming the SP has already invested in interconnection and CPE/billing etc. For SPs reliant on WLV (such as Pure Telecom), coverage is national as they simply resell Eircom's voice product using WLV. Accordingly, there is more limited scope for pricing constraints from these reseller SPs to materially constrain Eircom's commercial behaviour in specific regional/local areas.
- 4.440 Since the 2014 RFVA Decision, coverage of SPs dependent on Eircom wholesale inputs that could be used in the supply of Managed VoIP has grown significantly, based on uptake of Eircom WLA/WCA products and investment in backhaul and DSLAM infrastructure to provide NG Broadband. There has also been considerable investment and expansion of NG Broadband networks by SIRO and Virgin Media. Coverage on a national basis has not been achieved by alternative networks as it is more viable to roll out in densely populated areas, given the high cost of serving rural users. As noted in paragraphs 3.122 to 3.124, NBI seeks to provide NG Broadband to those areas that SPs have deemed commercially unviable to serve. Table 27 below gives a snapshot of NG Broadband (VDSL and FTTP) coverage by Exchange Area. The data underpinning the calculation are outlined at paragraphs A 11.13 to A 11.43:

⁵²⁰ This is assessed later in Sections 5, 7 and 8.

⁵²¹ Although as shown in paragraph 5.368, Vodafone continue to buy high volumes of WLV.

Table 27: NG Broadband coverage by Exchange Area for largest RFTS SPs, Q4 2020
 [REDACTED]

SP	Eircom EAs where SP is present
BT/Sky	██████
Digiweb	██████
Eircom	██████
Pure Telecom	██████
Virgin Media	██████
Vodafone	██████

- 4.441 Table 27 shows the level of EA presence of each SP in terms of wholesale NG Broadband which is capable of supporting Managed VoIP. For each SP, ComReg looks at that SP's presence (via WLA and/or WCA) at the EA. However, an SP may not have full NGA Broadband coverage at an EA enabling it to pass 100% of premises at that EA. SP coverage will depend firstly on the level of NGA Broadband coverage at that EA and, secondly, in the case of Access Seekers, on the level of backhaul investment which the Access Seeker has incurred to be capable of serving premises passed by wholesale NG Broadband in practice. In the case of Eircom, for example, ComReg data indicate that it has a level of NG Broadband presence at 98% of EAs, but it has reported 86% NG broadband coverage nationally.⁵²² Accordingly, percentage premises coverage cannot be assumed to be equivalent to percentage Exchange Area coverage.
- 4.442 Geographic variation in competitive conditions is also a function of availability of NG Broadband. Where NG Broadband is available, end users may purchase RFTS in a bundle with broadband, and 83% of RFTS subscriptions are bundled with broadband (and in some cases TV and mobile telephony). The 2019 Residential Market Research has shown that, for end users that purchase standalone RFTS, 5% do not have access to NG Broadband.⁵²³ For the overall sample of RFTS users without fixed broadband, it was 3%. This may suggest that geographic variation in competitive conditions is to some (albeit small) extent driven by availability of NG Broadband.
- 4.443 In more populous areas, Access Seekers such as BT (for Sky retail end users) and Vodafone avail of Eircom WLA, having invested in backhaul facilities in order to supply their customers with FTTx broadband, which is, in many cases, bundled with RFTS. In these areas, Eircom is more likely to be constrained in its pricing behaviour, as its RFTS customers have more switching options available to them.

⁵²² https://www.eir.ie/pressroom/eir-announces-second-quarter-FY21-results-to-31-December-2020/#_ftn1

⁵²³ Slide 18 of the 2019 Residential Market Research.

- 4.444 In the remaining non-NG areas, investment in backhaul facilities at exchanges by Access Seekers is less prevalent, as these areas have lower population density and only have FNA broadband available. Eircom is less likely to be constrained in its pricing behaviour in these areas as there are fewer SPs present. It is in these areas such as these, which overlap with the Intervention Area ('IA') that NBI will roll out its FTTP network. As discussed in paragraphs 3.122 to 3.124, NBI aims to bring NG Broadband to those premises in the IA currently unserved by NG Broadband, and this will likely enable the provision of associated WLA products in these areas. These products in turn will enable the provision of RFTS via Managed VoIP. In the IA, standalone RFTS customers (i.e. Market 1a) will have greater switching opportunities compared to the status quo as NG Broadband is made available, e.g. to bundles of RFTS and broadband. However, as noted in paragraph 4.95, even where NG Broadband becomes available, some standalone RFTS users may continue to purchase standalone RFTS as they place little to no value on broadband bundled with RFTS.
- 4.445 Given that NBI is targeting the provision of NG Broadband services to unserved areas of the State, its coverage in the IA is not likely to significantly overlap existing NG network coverage. Over a seven-year period, NBI will deliver NG Broadband to 544,000 premises.⁵²⁴
- 4.446 It is unlikely that upstream WLA/WCA inputs will play a significant role in providing standalone RFTS on a forward-looking basis, as the provision of (retail and wholesale) broadband services remains a key driver for purchasing WLA/WCA inputs. However, these WLA/WCA inputs can nonetheless be used to provide standalone Managed VoIP-based RFTS. As illustrated in Table 12, 83% of RFTS subscriptions are bundled with broadband. It is likely that, over time, the number of standalone RFTS end users will continue to decline (Figure 24), potentially driven by migration to bundles of RFTS with NG Broadband (and/or other services), as outlined in paragraph 4.96.
- 4.447 Access Seekers make use of WLA/WCA inputs to provide Managed VoIP, but typically in a bundle with broadband. ComReg is not aware of SPs/Access Seekers using WLA/WCA inputs to provide Managed VoIP on a standalone basis, although there is nothing technically precluding them from doing so.
- 4.448 Given the level of investment that would be required to replicate a network capable of offering RFTS, such as Eircom's ubiquitous network (with large elements of the associated costs having been sunk), some barriers to entry continue to exist, particularly insofar as NG Broadband is not available nationally, undermining the ability to supply Managed VoIP.⁵²⁵

⁵²⁴ <https://nbi.ie/about/what-were-delivering/>. As noted in footnote 146, the NBP rollout is based on Delivery Points in the Eircode database.

⁵²⁵ See paragraphs 7.11 to 7.163 which consider the presence of barriers to entry as part of the 3CT.

- 4.449 However, given that there are several networks over which RFTS can be provided (i.e. over FTTx or CATV broadband), albeit with mixed levels of coverage, ComReg considers that, on balance, barriers to entry to supplying RFTS have been lowered since the 2014 RFVA Decision. These barriers to entry are discussed in Section 5 and 7 of this Decision in the context of the market definition, SMP assessment and 3CT in the Relevant FACO Markets.
- 4.450 ComReg considers that Eircom is likely to face differing degrees of constraint in the Relevant RFTS Product Markets from the rollout of broadband networks by SIRO, Eircom FTTx, and - on a forward-looking basis - NBI, in areas where those networks are rolled out. A direct constraint arises from the fact that wholesale broadband inputs offered over these networks are, or could be, used by Access Seekers to provide bundles of broadband and Managed VoIP.
- 4.451 Overall, having regard to the above, there are likely to be some differences in geographic entry conditions in the Relevant RFTS Markets, depending on the availability of NG Broadband to support provision of Managed VoIP by Access Seekers to end users. ComReg assesses geographic entry conditions in the context of the Relevant FACO Markets in Section 5.

Respondents' Views

- 4.452 ALTO and BT both generally agreed with the proposed RFTS geographic market assessment, provided that upstream wholesale supply is not disrupted. However, they both expressed concern that wholesale supply of FACO by Eircom could be disrupted or obstructed for up to 20% of premises in EAs which pass the 80% NG Broadband coverage criterion and as such are in the footprint of the Urban FACO Markets which ComReg proposes to deregulate. BT and ALTO both suggested that there appeared to be little, if any, analysis in the 2020 Consultation of the potential impact of having up to 20% of premises in EAs in footprint of the Urban FACO Markets unserved by wholesale NG Broadband. BT considered that this *"looks like deregulation at the cost of the end customer"*, with the risk that these end users could be stranded.
- 4.453 Noting that the RFTS 3CT would, in BT's view, pass in those areas in the footprint of the Urban FACO Markets where up to 20% premises are not passed by wholesale NG Broadband, BT suggested that ComReg needs to consider the Minister's policy objective in the Communications Act 2002 (as amended) at section 12(1)(a)(iii) to promote the interests of users within the Community, which ComReg interprets as meaning in this instance that it should consider the welfare of the 20% customer group.
- 4.454 BT was also concerned as to how a margin squeeze would be managed in the footprint of the Urban FACO Markets, and whether a bundle of RFTS and broadband would trigger a WLA MST. BT asserted that such an MST was critically required, in order to protect competition.

ComReg's Assessment of Respondents' Views and Position

- 4.455 ComReg assesses the Modified RFTS Markets in the absence of upstream FACO regulation in Section 8 of this Decision.
- 4.456 In relation to BT and ALTO's concern that up to 20% of premises in a given EA could be left unregulated and without NG Broadband to support Managed VoIP, ComReg makes two points here:
- (a) Continuing rollout of NG Broadband will mean that those premises (a maximum of 20% in a given EA) will likely, over time, be eventually passed by a wholesale NG Broadband network; and
 - (b) ComReg's analysis finds that the median wholesale NG Broadband coverage at EA level in the Urban FACO Markets is 91.8%, which exceeds 80%, with only 26 EAs passing based on exactly 80% wholesale NG Broadband.
- 4.457 ComReg presents an analysis of premises in the Urban FACO Market in Annex: 11, which shows that only 14 of 407 EAs (based on Q4 2020 data) had exactly 80% wholesale NG Broadband coverage (i.e. between 80% and 81%), implying that exactly 20% of premises at those EAs were not passed by wholesale NG Broadband. Thus, it is not the case that, in all 407 EAs in the Urban FACO Market, 20% of premises are without NG Broadband. The other 393 EAs had wholesale NG Broadband coverage ranging from 81% to, in some cases, 100%. ComReg notes that many of these EAs fall within the footprint of the NBI future roll-out, as well as ongoing commercial rollout.
- 4.458 ComReg notes BT's reference to the Minister's policy objective of the Communications Act 2002 to consider the welfare of end users. ComReg believes that end users will not face material damage to their welfare as although some end users may have fewer options, competitive conditions are not likely to vary enough within the footprint of the Urban FACO Market to allow for price discrimination. ComReg also notes the role of the USO, as discussed in paragraphs 6.201 to 6.205 in protecting consumer welfare.

Variation in the number and size of potential competitors

- 4.459 Together, five SPs account for 94% of the RFTS market in Ireland as of Q4 2020,⁵²⁶ measured by subscriptions – Eircom, Virgin Media, Vodafone, Sky and Pure Telecom. The bulk of these SPs' RFTS subscriptions are bundled with broadband and/or TV and mobile services.

⁵²⁶ ComReg QKDR Q4 2020, Figure 2.2.3, page 19.

- 4.460 Of these five SPs, only Eircom operates a network which has national coverage in terms of RFTS – a ubiquitous FNA network that extends to almost every premises in the State.⁵²⁷
- 4.461 Virgin Media has network coverage of approximately 39% of premises (946,500) as at Q4 2020 with its independent CATV network. Vodafone and Sky's (BT) coverage in terms of being able to provide NG Broadband amounts to [X ██████████ X] of EAs, as indicated in Table 27 above. Pure Telecom's coverage is close to national [X ██████████ ██████████ X] for its RFTS subscribers.
- 4.462 At the wholesale level, two SPs operate FTTP networks – Eircom and SIRO.⁵²⁸ As of Q4 2020, Eircom's FTTP network extends to approximately 749,000 premises and SIRO's network extends to 360,000 premises.⁵²⁹ Both Eircom and SIRO intend to roll out to further premises, whilst in urban centres where Eircom has FTTC, it plans to upgrade the connected premises to full FTTP, as part of its 'Ireland's Fibre Network' programme.⁵³⁰ Access Seekers such as Vodafone, BT, Sky and a host of smaller SPs purchase WLA and WCA from Eircom and SIRO over which a Managed VoIP service can be delivered. For new customers availing of FTTP with Vodafone, typically RFTS is delivered over Managed VoB.⁵³¹
- 4.463 These parallel infrastructures (FNA and FTTP), emerging in certain geographic areas, are primarily targeted at bundled offers (TV, broadband and voice (both mobile and fixed)).⁵³² With the rollout of alternative broadband networks, customers are increasingly migrating to broadband networks that support RFTS as part of multi-product bundles. Accordingly, at least a subset of the population which has already made the decision to purchase broadband (and/or TV) in addition to RFTS, has a greater choice of RFTS SPs, compared to those end users who only want standalone RFTS, as well as end users in FNA areas who are unable to avail of bundled offers, but would if they were available, following the rollout of NG Broadband (see paragraph 4.96).
- 4.464 ComReg's position is that, in locations where, in particular, CATV or FTTx-based RFTS is available (including based on SPs' use of upstream WLA/WCA inputs), the competitive constraint on Eircom is greater, as end users can substitute to bundles of CATV or FTTx broadband and RFTS.

⁵²⁷ It should be noted however, that some recent housing developments may not have requested access to the PSTN, and so a small proportion of premises likely are not connected to the PSTN.

⁵²⁸ NBI network rollout commenced in late 2020, with the first end users connected in January 2021.

⁵²⁹ https://esb.ie/docs/default-source/investor-relations-documents/esb-annual-financial-results-2020.pdf?sfvrsn=12f907f0_2.

⁵³⁰ <https://www.eir.ie/pressroom/eir-launches-0.5-billion-fixed-network-investment-programme/>

⁵³¹ Vodafone meeting with ComReg 9 October 2018.

⁵³² Although mobile telephony is delivered over a different network to fixed broadband/RFTS.

- 4.465 According to the 2019 Residential Market Research, of those respondents that had switched over the two years preceding the market research, 44% were previously with Eircom, 16% were previously with Vodafone and 16% were previously with Virgin Media.⁵³³ This suggests that there may be competitive pressures in relation to the sale of bundles that include RFTS, depending on where Virgin Media, Vodafone and other SPs are present.
- 4.466 While there may be some emergent localised competition for RFTS (for example from regional SPs such as Rapid Broadband,⁵³⁴ Carnsore⁵³⁵ or Westnet⁵³⁶), ComReg's position is that the evidence on the number and size of potential competitors is insufficient to support the view that there are sub-national geographic markets. This is because the major competitors to Eircom for RFTS compete nationally and have considerable national coverage of NG Broadband that enables the provision of Managed VoIP-based RFTS (see Table 27). Only those areas without NG Broadband availability are likely to see Access Seeker SPs rely on upstream FACO inputs. Accordingly, it is in these areas that ComReg continues to regulate FACO (see paragraphs 5.496 to 5.580). As previously noted in paragraph 4.220, the numbers of Managed VoIP customers from SPs other than Virgin Media are low but growing. In addition, the cohort of standalone RFTS users is in decline (see Figure 24).

Distribution and evolution of market shares

- 4.467 Figure 45 and Figure 46 give a snapshot of market shares by location from the 2019 Residential Market Research. However, it is important to note that it does not represent actual market shares for Dublin and other regions where Virgin Media is present – it is based on survey evidence only and, hence, can be interpreted only as indicative evidence. Eircom has a higher market share in rural areas for both standalone RFTS and RFTS in a bundle, while Virgin Media has a higher market share in urban areas for RFTS in a bundle:

⁵³³ Slide 80 of the 2019 Residential Market Research.

⁵³⁴ <http://rapidbroadband.ie/coverage/>

⁵³⁵ <https://www.carnsorebroadband.com/>

⁵³⁶ <https://www.westnet.ie/>

Figure 45: Residential Standalone RFTS Market Shares by Location⁵³⁷

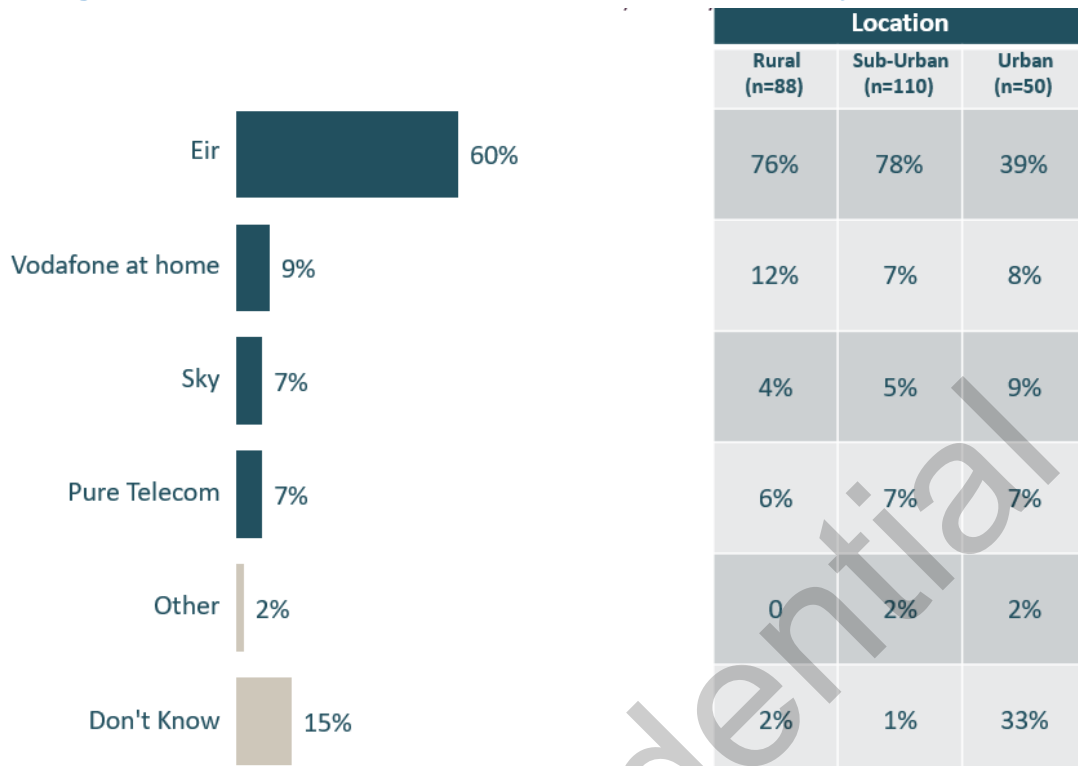
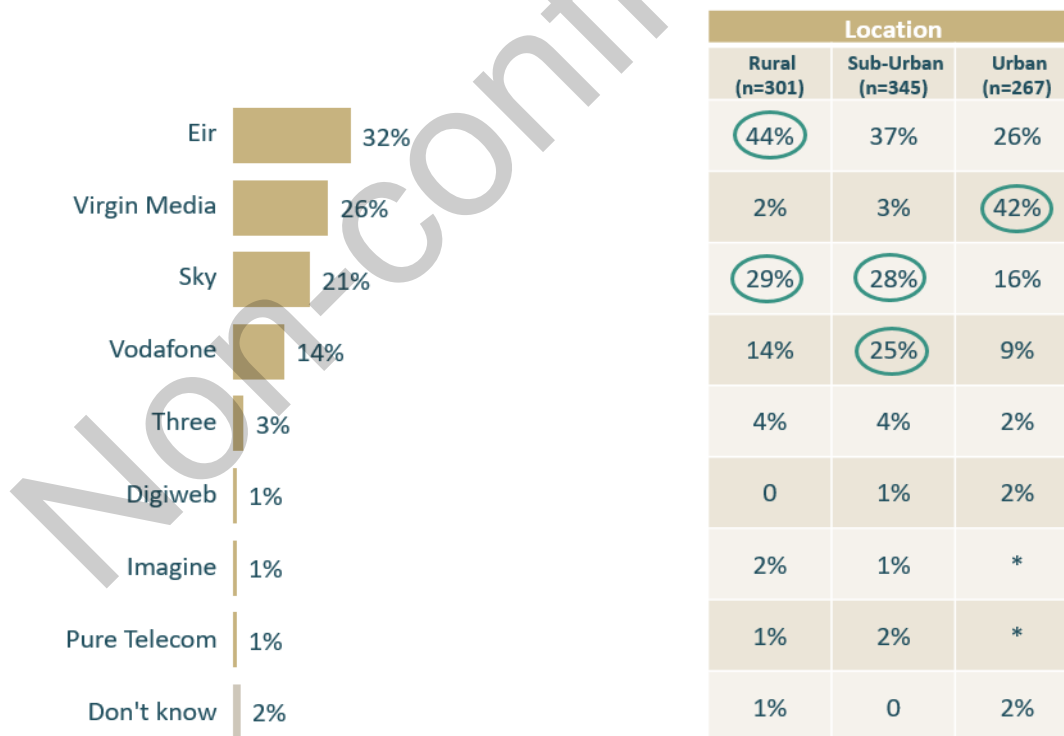


Figure 46: Residential Bundled RFTS Market Shares by Location⁵³⁸



⁵³⁷ Slide 29 of the 2019 Residential Market Research.

⁵³⁸ Slide 33 of the 2019 Residential Market Research.

- 4.468 Increasing competitive pressures from bundled RFTS offers from alternative network-based SPs may prospectively differ by geographic area, subject to underlying structural characteristics and investment incentives. However, the presence of alternative infrastructures and emergent structural changes is, in itself, insufficient to support the existence of sub-national geographic markets.
- 4.469 The emergent localised competition observed to date is targeted at the sale of broadband bundles that include an RFTS component, where broadband is often the anchor product.
- 4.470 ComReg's position is that it is unclear whether increasing competition with regard to wider bundles of services (in particular RFTS and broadband) indicates that competitive conditions are sufficiently different between different areas and sufficiently stable to merit defining separate sub-geographic RFTS markets at the retail level. Eircom's continued FTTP investment, continued rollout by SIRO and Virgin Media in other areas and NBI in the remaining areas, coupled with uptake of WLA/WCA in these areas by Access Seekers, means that the current boundaries of the Bundled LL-RFTS market segment are unlikely to be stable over the period of the market review. It is likely that, as NG Broadband becomes more available, and a proportion of standalone RFTS customers switch to bundles comprising (at least) RFTS and broadband, the cohort of standalone RFTS customers will decline, undermining any previously defined boundary between the Standalone LL-RFTS Market and the Bundled LL-RFTS Market.
- 4.471 Thus, it is ComReg's position that, on a geographic basis, the distribution of market shares does not suggest sufficient differences exist in competitive conditions across different geographic areas.

Evidence of differentiated pricing or marketing strategies

- 4.472 ComReg has assessed whether there is evidence of differentiated pricing or marketing that might indicate the presence of different regional and/or local competitive conditions, in particular, geographically de-averaged or differentiated retail (or wholesale) pricing. Furthermore, variation in product quality between geographic areas (which may infer effective price differences), or variation in the marketing of RFTS products, may also be suggestive of localised competitive pressures within a market.

- 4.473 As noted above in paragraph 4.438, RFTS is provided by Eircom on a national basis and Eircom's pricing of RFTS is uniform across the country, although this is in the presence of regulation.⁵³⁹ The only geographic difference in pricing arises based on the availability of various RFTS products. For example, where FTTx is available, RFTS is typically bundled with broadband and, hence, retail prices differ between standalone and bundled RFTS offerings. This differentiated pricing is not driven by competitive conditions, but rather by availability of specific RFTS products. However, where FTTx is available, standalone RFTS is still sold to end users that demand it.
- 4.474 As noted in paragraph 6.201, the 2016 USO Decision imposed a GAP obligation on Eircom, to ensure affordability, in particular, for high cost customers in rural areas where competition for voice access is not fully effective.
- 4.475 ComReg's review of SPs' RFTS packages does not indicate any variation in prices by geographic region, e.g. an RFTS package with a price differential between one part of the country and the other (see Table 17).
- 4.476 While Eircom is required, under its USO obligation, to maintain GAP at the retail level for RFTS (connection and PATS service),⁵⁴⁰ other SPs have no such obligations. Based on the data available, there is *prima facie* evidence that SPs are nonetheless pursuing a commercial policy of pricing uniformly on a national basis, suggesting that competitive conditions for standalone RFTS are sufficiently homogenous nationwide. In areas where the competitive dynamic is enhanced by the existence of multiple suppliers of RFTS sold in a bundle, there has, to date, been no variance in the pricing or marketing of standalone RFTS products. For example, where Vodafone offers broadband bundles including an RFTS element delivered over SIRO FTTP, these are priced uniformly. Any variance in RFTS pricing is driven by availability of NG Broadband and, consequently, availability of bundled RFTS products.

⁵³⁹ In accordance with the 2014 RFVA Decision, Eircom's pricing of RFVA is currently priced at €25.78. ComReg mandated that Eircom not increase tariffs (in respect of the recurring charge, connection and takeover) by more than CPI-0% for Standalone LLVA services. The obligations that ComReg imposed on the Standalone LLVA market were: (a) no excessive prices pursuant to Regulation 13(1) of the Universal Service Regulations (b) retail price cap of CPI-0% pursuant to Regulation 13(3) of the Universal Service Regulations (c) no unreasonable bundling - now imposed via ComReg D12/18 pursuant to Regulation 13 of the Access Regulations (d) transparency pursuant to Regulation 13(2)(a) of the Universal Service Regulations (e) cost accounting and accounting separation (ComReg 10/67) pursuant to Regulation 13(4) of the Universal Service Regulations.

⁵⁴⁰ See paragraph 532 of the 2016 USO Decision. 'Publicly Available Telephone Service' ('PATS') means a service made available to the public for originating and receiving, directly or indirectly, national or international and international calls through a number or numbers in a national or international telephone numbering plan. As set out at footnote 515 above, ComReg is currently consulting on an updated USO requirement.

- 4.477 Eircom is the main supplier of wholesale products to support the provision of RFTS. Eircom's SB-WLR pricing is currently nationally averaged and stable, for standalone RFTS and for purchasing with WLA/WCA for bundled RFTS, in the presence of FACO regulation. SPs can purchase wholesale inputs from Eircom on a national scale, at nationally uniform prices and conditions. ComReg notes that, absent FACO regulation, WLA and Regional WCA Market products would still be available on a regulated basis. ComReg considers the Relevant RFTS Markets absent FACO regulation in Section 8 below.
- 4.478 Insofar as potential differences in prices across different geographic areas are concerned, there is little behavioural evidence to suggest that sufficiently different competitive conditions exist, specifically in the provision of RFTS between different geographic areas. For example, ComReg has not observed evidence that, in areas where bundled offers involving an RFTS component are available, standalone RFTS products have been priced differently to areas where bundled offerings are not available. However, ComReg will continue to monitor the situation and to revisit its market definition, competition analysis and/or remedies as appropriate.

Geographic differences in product functionalities and demand characteristics

- 4.479 A further indicator of potential regional/local variations in competitive conditions identified by the EC includes differences in the functionalities or types of products being offered by both the incumbent and OAOs, or in the marketing strategies being pursued.
- 4.480 In terms of RFTS, the core products and quality of service that are provided over FNA are identical regardless of the geographic area of provision. As noted in the product market definition assessment at paragraphs 4.206 to 4.428 above, with regard to product functionality, ComReg also considers Managed VoIP over NG Broadband to be similar to RFTS delivered over FNA, though unlike the latter, it is predominantly offered as part of a bundle of services. In terms of the core functionality of RFTS, no SP currently offers functionally-distinct RFTS in different geographic areas, aside from ancillary services offered to businesses such as SLAs, voicemail and call features not made available to residential end users.
- 4.481 While differences might arise in the mix of underlying wholesale inputs used to support RFTS (due, for example, to network capacity, spectrum availability, whether the local exchange has been unbundled or not, network availability, etc.), this has not led to any material differences in the functionality of RFTS offered over such inputs. Eircom's commercial strategy to date has not led it to vary the functionality of its (retail or wholesale) FNA-based RFTS by geography. Hence, Access Seekers relying on Eircom FNA inputs (either using SB-WLR/WLV and/or POTS-based WLA/WCA inputs) have also not varied the functionality of their RFTS offerings on a sub-national basis.

- 4.482 Demand for RFTS emanates from end user demand for RFVC. National coverage of Eircom's legacy FNA network ensures that all end users that demand FNA RFTS can avail of it. Demand for RFTS is likely to only vary geographically based on premises density and investment decisions, e.g. in sparsely populated areas, end users may only have access to Eircom's FNA network. As such, ComReg considers that demand for RFTS is likely to be national in nature.
- 4.483 However, given the distinction in the product market definition between Standalone LL-RFTS and Bundled LL-RFTS, ComReg is of the view that there may be a difference in demand for RFTS by geographic area, dependent on whether bundled RFTS products are available, for example with broadband and/or TV and mobile voice. It is possible that, in areas where no broadband is available (i.e. the NBP IA), demand for Standalone LL-RFTS would shift to the Bundled LL-RFTS Market as broadband becomes available.
- 4.484 Furthermore, in relation to HL-RFTS, demand for the latter is likely to be concentrated in urban and semi-urban areas and business parks. This suggests that there could be a distinction between demand characteristics by geographic location for each of the three Relevant RFTS Markets.
- 4.485 As such, while there may be some variation in demand for RFTS, ComReg is of the view that sub-geographic markets do not exist for Standalone LL-RFTS, Bundled LL-RFTS and HL-RFTS. ComReg does not consider it feasible to determine boundaries for each of these markets, as dynamic developments such as NG Broadband rollout can ultimately mire these defined boundaries.

Conclusion on RFTS Geographic Market Definition

- 4.486 ComReg's position is that the Relevant RFTS Product Markets are national in scope. This is based on limited variations in the number and size of potential competitors geographically, insufficient evidence of differentiated pricing or marketing strategies on a sub-national basis, and limited differences in demand characteristics across regions.
- 4.487 However, this is notwithstanding the emergence of some localised competitive pressures, particularly insofar as RFTS is sold as part of a bundle of services. ComReg notes that there may be differences in demand for RFTS between Standalone LL-RFTS, Bundled LL-RFTS and HL-RFTS end users, depending on geographic location. These differences in demand may be due to availability of broadband and location of businesses and large corporates.
- 4.488 ComReg notes that there may be some geographic differences in entry conditions around the country, depending on availability of NG Broadband which would allow Access Seekers (including BT/Sky, Vodafone, Digiweb and Pure Telecom) to provide Managed VoIP-based RFTS to end users, thus removing any reliance on upstream FACO inputs from Eircom.

- 4.489 ComReg's position is that, on balance, there is insufficient evidence to conclude that there are sufficient grounds to define sub-geographic markets in respect of any of the Relevant RFTS Product Markets, despite defining sub-national geographic markets on the upstream Relevant FACO Markets.
- 4.490 However, even if it were appropriate to define sub-national RFTS markets consistent in scope with the sub-national Urban FACO Markets and Regional FACO Markets, ComReg is of the view that this would not materially alter the regulatory outcome for the Relevant RFTS markets. ComReg considers the possibility of sub-national RFTS markets in the presence of sub-national FACO markets below in paragraphs 8.5 to 8.19.
- 4.491 Within the footprint of any potential candidate Urban RFTS Market, Access Seekers would be able to provide RFTS by means of Managed VoIP over wholesale NG Broadband networks, or by purchasing SB-WLR or WLV from Eircom, if Eircom chose to continue to provide these latter products on a commercial basis. In these associated EAs, there would be no clear grounds to impose SMP obligations on Eircom in the provision of RFTS, given the absence of SMP obligations on the upstream Urban FACO Markets (assuming a significant, if not necessarily perfect, overlap between the footprints of the Urban FACO Markets, and any potential candidate Urban RFTS Market). WLA would, however, be offered on a regulated basis nationally. There would likely be effective competition in the provision of RFTS on any potential candidate Urban RFTS Market, such that regulation of RFTS or upstream wholesale inputs would be unnecessary.
- 4.492 Within the footprint of a potential candidate Regional RFTS Market, Access Seekers would have fewer opportunities to provide RFTS by means of Managed VoIP, given the lower coverage levels of NG Broadband, and would therefore be more likely to rely on purchasing SB-WLR or WLV from Eircom to offer RFTS to end users, assuming that this market was coterminous with the Regional FACO Markets where Eircom is subject to SMP remedies in respect of the provision of SB-WLR. As evidenced by regulatory practice since the publication of the 2014 RFVA Decision, ComReg has taken the opportunity to move away from the application of remedies at the retail level, in preference for levying remedies at the wholesale level, where appropriate, in order to address any competition problems at the most upstream level possible. For example, the only SMP remedy outstanding on the previously defined Bundled-LLVA and HLVA Markets (as per the 2014 RFVA Decision) is a cost accounting remedy, while a more substantial regulatory obligation of price control, continues to be in effect on the Standalone-LLVA market.⁵⁴¹

⁵⁴¹ See Table 1 on page 17 of the 2014 RFVA Decision.

- 4.493 Accordingly, in an MGA scenario whereby Eircom is subject to SMP remedies on the Regional FACO Markets, it is unlikely that Eircom would need to be subject to SMP remedies on any potential candidate Regional RFTS Market, given that the competition problems are addressed at the upstream level.
- 4.494 In such a scenario, although sub-national RFTS markets could have been defined, SMP remedies would not be levied on either potential sub-national RFTS market. In circumstances where no regulation is present at retail level due, on the one hand, to sufficient wholesale competition and, on the other hand, to the presence of SMP regulation at wholesale level, it is, in terms of regulatory outcomes, ultimately immaterial whether a single national, or several sub-national, geographic RFTS market(s) is defined.

4.4 Overall Conclusion on RFTS Market Definition

- 4.495 ComReg has analysed the Relevant RFTS Markets from a product and geographic perspective and considered Respondents' views throughout Section 4 above, in addition to developments in the market since the publication of the 2020 Consultation in June 2020.
- 4.496 ComReg maintains that it is appropriate to define three national markets for RFTS, which are delineated as follows:
- (a) **Market 1a:** Standalone Low-Level RFTS ('**Standalone LL-RFTS**') including RFTS delivered over PSTN and ISDN BRA, and Managed VoB delivered over NG Broadband on a standalone basis;
 - (b) **Market 1b:** Bundled Low-Level RFTS ('**Bundled LL-RFTS**') including RFTS delivered over PSTN and ISDN BRA, and Managed VoB delivered over (and with) NG Broadband on a bundled basis together with any of broadband, television or mobile services; and
 - (c) **Market 1c:** High-Level RFTS ('**HL-RFTS**') including RFTS delivered over ISDN FRA and PRA and Hosted PBX or SIP Trunking delivered over NG Broadband, including, on a standalone basis or on a bundled basis together with any of broadband, television or mobile services.

5 Relevant FACO Market Definition

- 5.1 As noted in Section 2,⁵⁴² the 2014 Recommendation established that the FVCO market is no longer susceptible to *ex ante* regulation. Accordingly, ComReg must carry out a 3CT⁵⁴³ to determine whether *ex ante* regulation of the FACO market (noting that FACO consists of both a FVCO component and a FA component) continues to be warranted. In order to do so, it is first necessary to define the parameters of the FACO markets on which the 3CT will be carried out by carrying out a market definition exercise.
- 5.2 Market definition is not an end in itself. Rather, it is a tool that enables the identification and assessment of the boundaries of competition between SPs, ultimately – in the current instance – to assess whether *ex ante* regulation continues to be warranted and, if so, whether any SP has SMP on a duly-defined market. In defining the Relevant FACO Markets, ComReg begins by identifying the appropriate focal product at the wholesale level. ComReg then examines whether this focal product constitutes a separate market on its own, or whether, taking into account direct demand-side and supply-side substitutes, a broader market should be defined. Finally, ComReg assesses the degree to which indirect constraints arising from downstream retail markets might effectively constrain wholesale market behaviour, before assessing the geographic scope of the Relevant FACO Markets. This ultimately provides the product and geographic boundaries of a given market, beyond which conditions of competition appreciably differ.
- 5.3 The Notice on Market Definition states that a relevant market consists of both a product and a geographic component:
- (a) A relevant **product market** comprises all those products and/or services which are regarded as interchangeable or substitutable by the consumer by reason of the products' characteristics, prices and intended use; and
 - (b) A relevant **geographic market** comprises the area in which the firms concerned are involved in the supply of products or services, and in which the conditions of competition are sufficiently homogeneous.

⁵⁴² See paragraph 2.25 above.

⁵⁴³ The 3CT is detailed at paragraph 2.30 above.

- 5.4 In line with the MGA described at paragraph 4.437 above, ComReg's market definition assessment starts from the assumption that regulation is not present in the market under consideration, i.e. the FACO markets. However, regulation present in other related markets, or through the general regulatory framework, is assumed to be present. This is to avoid drawing conclusions regarding the competitive structure of a particular market which may be influenced by, or indeed premised on, existing regulation on that market. Considering how the Relevant FACO Markets may function absent regulation helps to ensure that regulation is only applied (or withdrawn) in circumstances where it is justified and proportionate to do so.
- 5.5 Market definition provides the context for the 3CT and any subsequent competition analysis and SMP assessments. The market definition exercise allows ComReg to consider (direct and indirect) competitive constraints imposed by demand-side and supply-side substitutes (and, consequently, the buyers and suppliers of those substitutes) on a forward-looking basis – that is to say, taking into account expected or foreseeable technological or economic developments over a reasonable time horizon linked to this market review.⁵⁴⁴
- 5.6 The remainder of this section consists of the product and geographic market assessment, which considers the following issues:
- (a) Identifying the focal product, which is the initial product against which potential substitute products are assessed (paragraphs 5.9 to 5.99 below);
 - (b) Whether any alternative FACO products should be included in the relevant wholesale markets, having regard to the effectiveness of any direct constraints from demand-side substitutes or supply-side substitutes, including self-supplied inputs (paragraphs 5.100 to 5.215 below);
 - (c) Whether any RFTS products should be included in the relevant wholesale markets, having regard to the effectiveness of any indirect constraints from downstream retail markets (paragraphs 5.216 to 5.361 below);
 - (d) Access Seeker alternatives to FACO (paragraphs 5.362 to 5.399 below); and
 - (e) The geographic scope of the Relevant FACO Markets (paragraphs 5.400 to 5.578 below).

⁵⁴⁴ As set out at Recital 163 of Directive 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (Recast).

5.1 Relevant FACO Product Market Assessment

- 5.7 Of the five Respondents who submitted comments on the 2020 Consultation, three, namely ALTO, BT, and Eircom (and CE on behalf of Eircom) provided comments in response to Question 4 in the 2020 Consultation.⁵⁴⁵ Vodafone and Sky did not respond.

Identifying the Focal Product

- 5.8 ALTO, BT, Eircom and CE each disputed ComReg's preliminary findings in respect of the FACO Focal Product, and disagreed with ComReg's designation of a combined focal product. These comments are set out in paragraphs 5.30 to 5.31, and paragraphs 5.71 to 5.82 below. ComReg addresses each of these responses in paragraph 5.32, and paragraphs 5.83 to 5.98. These comments are set out in paragraphs 5.30 to 5.31, and paragraphs 5.72 to 5.84. ComReg addresses each of these responses in paragraph 5.32, and paragraphs 5.85 to 5.100.

- 5.9 The first step in the product market definition process is identifying the relevant focal product. According to BEREC,

“The focal product is defined as the main product under investigation and the focal area is the area under investigation, in which the focal product is sold. The definition of the focal product may depend on specific market conditions and on the issues that NRAs want to address during the market analysis.

(.....) an NRA should start by identifying the focal product considering their national market conditions. One of the possible criteria chosen by NRAs might be to define the focal product as the one where competition problems are believed to exist.”⁵⁴⁶

- 5.10 The 2015 FACO Decision⁵⁴⁷ concluded that Eircom's FVCO product was the appropriate starting point for defining the focal product. However, ComReg ultimately concluded that the relevant focal product should be expanded to FACO, to include both FVCO and FA. Since Eircom continues to hold a strong position in the supply of FACO, this is a product in respect of which the competition assessment can take place (as may be broadened, considering any effective substitutes).

- 5.11 The FACO focal products defined in the 2015 FACO Decision comprised of:

⁵⁴⁵ Question 4: Do you agree with ComReg's preliminary conclusions on the product market assessment for the Relevant FACO Markets? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views

⁵⁴⁶ BEREC Report on Impact of Fixed-Mobile Substitution in Market Definition, at p.12. BoR 12 (52), 24 May 2012. Available online at https://www.berec.europa.eu/eng/document_register/subject_matter/berec/reports/363-berec-report-impact-of-fixed-mobile-substitution-fms-in-market-definition (the 'BEREC FMS Report').

⁵⁴⁷ At paragraph 4.41.

- (a) Wholesale fixed access ('FA') to the public telephone network for the provision of voice telephony services by means of
- (b) In the case of **Low-Level FACO**, PSTN, which supports a single voice channel, or ISDN BRA which supports two voice channels, and
- (c) In the case of **High-Level FACO**, ISDN FRA, which supports between 16 and 29 voice channels, or ISDN PRA, which supports up to 30 voice channels; together with
- (d) FVCO, being calls originated at a fixed location of an end user which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange associated with the FA at which the voice call was originated.
- (e) In addition to LL-FACO and HL-FACO, Eircom's self-supply, including its supply of FACO via Managed VoB, was also included in the FACO Markets (with ComReg noting that Managed VoB was ultimately likely to replace Eircom's traditional circuit-switched PSTN/ISDN services).

5.12 Thus, as set out in the 2015 FACO Decision, FACO is a combination of FA delivered over PSTN or ISDN, and FVCO, as well as Eircom self-supply, including self-supply by means of Managed VoB.

5.13 The definition of the FACO focal product did not distinguish between the types of telephone numbers being called. In Section 4 above,⁵⁴⁸ ComReg set out its position that, at the retail level, separate markets for calls made from a fixed location to different types of telephone numbers do not exist. ComReg also considers this to be the case at the wholesale level, and notes that Eircom FVCO encompasses call origination to all number types including geographic, non-geographic⁵⁴⁹ and mobile numbers. Thus, the same infrastructure can be utilised by Eircom (and other SPs) to deliver originated calls, irrespective of the number called.

⁵⁴⁸ See paragraphs 4.112 to 4.137.

⁵⁴⁹ Pursuant to ComReg Decision D15/18, from 1 December 2019, a call to an 1850, 1890, 0818 or 076 non-geographic number ('NGN') cost no more than the cost of calling a landline number. From 1 January 2022, the five NGN ranges will be reduced to two. The 1850, 1890, and 076 ranges will be withdrawn and the 1800 (Freephone) and 0818 range will remain.

FACO is the focal product

5.14 Pursuant to the 2014 Recommendation, FVCO is no longer listed as being susceptible to *ex ante* regulation. In view of national market circumstances, ComReg is of the view that it is not appropriate to designate standalone FVCO as the focal product. In the first instance, market dynamics indicate that standalone FVCO is in decline – since September 2016, Eircom has not offered standalone FVCO (**‘Carrier Pre-Select’**, or **‘CPS’**) to new wholesale customers, and CPS is now offered on a legacy basis only.⁵⁵⁰ In the second instance, the 2015 FACO Decision has already designated FACO, rather than FVCO, as the focal product. Thus, designating FVCO as the focal product would not reflect market realities, and would therefore fail to accurately describe the characteristics of the focal product. Accordingly, ComReg considers that Eircom FACO is a suitable starting point for determining the focal product.

Focal Product includes Wholesale Line Rental (WLR)

- 5.15 The focal product is FACO, which includes Wholesale Line Rental (**‘WLR’**) as the FA component. As discussed in Sections 3 and 4,⁵⁵¹ there is a strong tendency for end users to purchase RFVA and RFVC together as RFTS and, increasingly, to purchase RFTS as part of a broader bundle of services. Moreover, CPS is steadily declining, and Eircom no longer offers CPS to new customers.
- 5.16 Access Seeker demand for SB-WLR greatly exceeds demand for CPS⁵⁵² (which was deregulated by means of the 2015 FACO Decision). As set out at Figure 23 above, in Q4 2020, CPS accounted for just 1.2% of all indirect access paths (comprised of CPS, SB-WLR and WLV), having fallen from 3.55% at the time of the 2015 FACO Decision. Bearing in mind that demand at the wholesale level is a derived demand arising from end user demand for RFTS, this suggests that end users value the reduced transaction (and potentially other) costs arising from purchasing RFTS from an SP.
- 5.17 An Access Seeker wishing to offer RFTS cannot purchase FNA based FA (WLR) from Eircom and CPS (FVCO) from a different SP (or vice versa) and must purchase WLR and FVCO together from Eircom as SB-WLR.⁵⁵³

⁵⁵⁰ As set out at Service Schedule 120 of open eir’s Reference Interconnect Offer (**‘RIO’**), “open eir Carrier Pre Selection (CPS Service) is no longer available to new customers from the 8th September 2016. Any customer account availing of the service on this date will not be affected.”

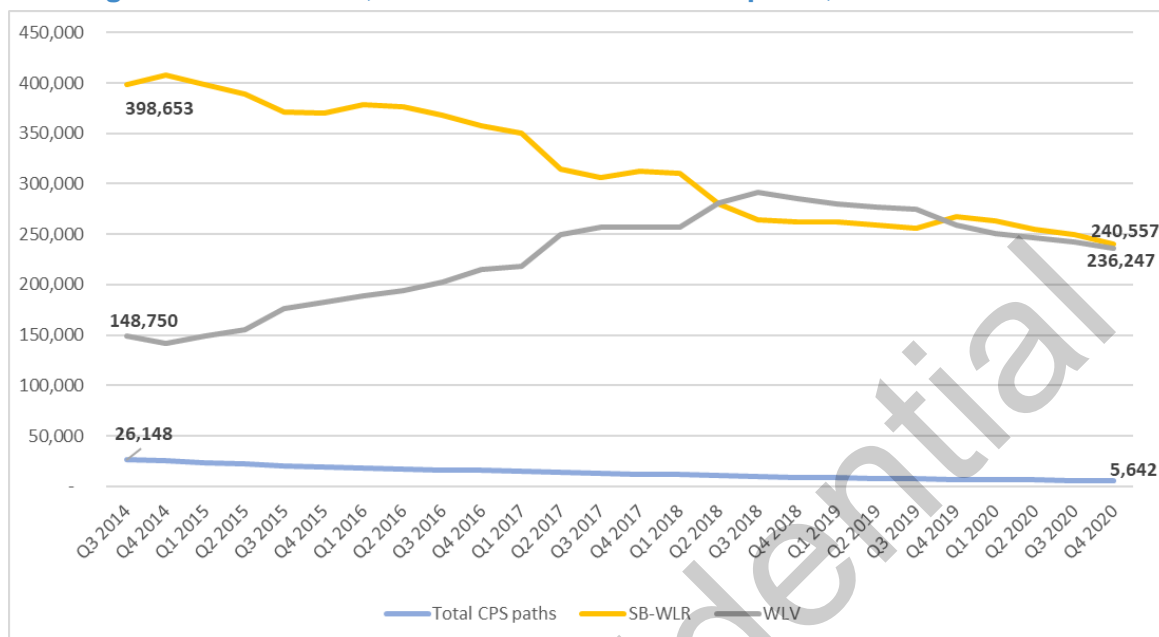
⁵⁵¹ See paragraphs 3.128 to 3.132, and paragraphs 4.21 to 4.76.

⁵⁵² Regulatory obligations in respect of the provision of CPS were removed by means of the 2015 FACO Decision.

⁵⁵³ However, an Access Seeker wishing to offer RFTS to end users can purchase FA (VUA or Bitstream Plus) from another SP and procure or develop the Managed VoIP component (FVCO) itself, and need not purchase both components from the same SP.

- 5.18 Figure 47 below shows that, as at Q4 2020, Eircom merchant market supplied a total of 482,446 indirect access paths⁵⁵⁴ comprising 5,642 CPS access paths, 240,557 SB-WLR access paths and 236,247 WLV access paths.

Figure 47: Total CPS, SB-WLR and WLV access paths, Q3 2014 – Q4 2020



- 5.19 Having regard to the above, ComReg considers that, given current market circumstances, Access Seekers purchasing SB-WLR in order to provide RFTS to end users would, in response to a SSNIP (of FA, FVCO, or both) be unlikely or unable to unpick these individual bundle elements and substitute to alternative products, such that it would render the SSNIP unprofitable.
- 5.20 Given the high degree of complementarity between FVCO and WLR, ComReg considers that the focal FACO product consists of both call origination and WLR, that is, both the FA and FVCO components.

Eircom self-supply and merchant market supply of FACO

- 5.21 The 2020 Explanatory Note states:

“NRAs should commence the exercise of defining the relevant product or service market by grouping together products or services that are used by consumers for the same purposes (end use). Where self-supply and external supply are undistinguishable from a consumer perspective and services are functionally similar and interchangeable, such self-supply should be considered to be part of the same product market as the services supplied externally.

In cases where there is likely demand substitution, i.e. where wholesale customers are interested in procuring from alternative operators, it may be justified to take self-supply of such products into

⁵⁵⁴ A single indirect access path may consist of multiple voice channels. For example, a single ISDN BRA access path includes 2 voice channels.

consideration for the sake of market delineation. Even where there is an alternative potential supplier, it may share the same strategic interests as the incumbent regarding supply to third parties. Alternative operators' self-supply should, in particular, be assessed when alternative operators' networks are included in the relevant market due to the strong direct pricing constraints they exert on the incumbent operator. However, this is not justified if alternative operators face capacity constraints, or their networks lack a sufficiently large scale within the relevant geographic market expected by access seekers, and/or if alternative providers have difficulty in entering the merchant market readily.

The correct treatment of self-supply in the market analysis is not only relevant for the question whether the wholesale market comprises only one or multiple network infrastructures. It is also essential in order to carry out a proper market analysis and to identify correctly the competition problems in the market, which need to be taken into account in the assessment of the appropriate remedies.

In addition, in many cases the incumbent operator is the only undertaking that is in a position to provide a potential wholesale service. In the absence of a merchant market and where there is consumer harm at retail level, it is justifiable and appropriate for NRAs to construct a notional market when potential demand exists. Here the implicit self-supply of this input by the incumbent to itself should be taken into account.”⁵⁵⁵

- 5.22 Eircom FACO is available nationwide and is purchased by Access Seekers in the form of SB-WLR. SB-WLR is also an upstream input into WLV offered by Eircom. Eircom offers FACO over FNA to its own retail arm (self-supply), and to Access Seekers (merchant market supply). Eircom self-supply of FVCO can likely easily be converted to merchant market supply in the short term without incurring significant additional costs or risks, such that Eircom FACO self-supply and merchant market supply fall within the same product market.
- 5.23 Eircom currently offers SB-WLR in accordance with the FACO SMP obligations set out in the 2015 FACO Decision and on terms of supply set out in its Reference Interconnect Offer ('RIO').⁵⁵⁶

Eircom self-supply of Managed VoIP⁵⁵⁷

- 5.24 The 2015 FACO Decision concluded that Eircom self-supply of FACO – including its notional supply of FACO via Managed VoB - fell within the focal product on a forward-looking prospective basis, despite the fact that, at the time, Eircom had not yet commenced offering Managed VoB at any meaningful scale.

⁵⁵⁵ At p. 34.

⁵⁵⁶ Available at https://www.openeir.ie/Reference_Offers/.

⁵⁵⁷ The 2015 FACO Decision did not explicitly distinguish that Managed VoIP was an overarching term which included (i) Managed VoB, (ii) Hosted PBX, and (iii) SIP Trunking.

Respondents' Views

5.30 Eircom argued in its Submission that the 2014 Explanatory Note recognises the evolution of the market explaining that

"...wholesale call origination can be relatively easily self-supplied by operators who establish a direct connection to end-customers (either on the basis of their own infrastructure or through - regulated - wholesale products such as LLU and/or bitstream)".⁵⁶⁴

5.31 As a result, Eircom claimed that the EC anticipated that the demand for CS/CPS services and WLR would

"...become less relevant over the review period of this Recommendation, especially in view of the migration to all-IP networks (which do not have the same characteristics concerning quality/resilience as PSTN)."

ComReg's Assessment of Respondents' Views

5.32 ComReg has considered the evolution of the wholesale market, specifically in terms of self-supply of Managed VoIP. This is evident from its inclusion in the Relevant FACO Markets as an indirect retail constraint. However, as set out at paragraphs 5.24 to 5.29, ComReg concludes that it would be inappropriate to include the self-supply of Managed VoIP as part of the focal product due in part, but not limited to the fact, that self-supply of Managed VoB is not delivered over FNA and is therefore not easily convertible. Having considered Eircom's views on this, ComReg is satisfied that it has correctly excluded the self-supply of Managed VoIP from the FACO Focal Product.

Eircom FACO Points of Interconnection

5.33 The FVCO component of FACO provided by Eircom varies in terms of the point of interconnection ('POI') in its network at which calls are handed over to the Access Seeker. FVCO traffic is handed over by Eircom to the Access Seeker at the following exchange (or equivalent) levels within its network:

- (a) **Primary exchange level** (n=32; each individual Exchange Area ('EA') is connected to one of these 32 primary exchanges);
- (b) **Tandem/secondary exchange level** (n=14; a regional exchange higher up in the network, which is connected to a number of primary exchanges); and
- (c) **Double-tandem/tertiary exchange level** (n=4; national telephone exchange at the highest level in the network, which is connected to the tandem exchanges).

⁵⁶⁴ At p. 27.

- 5.34 FVCO products with handover on CG (circuit-switched) interconnection⁵⁶⁵ at the tandem or double-tandem level include an element of conveyance.⁵⁶⁶ Accordingly, Eircom FVCO charges depend on the level at which an Access Seeker interconnects to its network. The deeper an Access Seeker is interconnected to Eircom (and, therefore, the more infrastructure investment an Access Seeker makes), the earlier the Access Seeker can take FVCO traffic off Eircom's network and onto its own network, incurring a lower FVCO charge arising from the lower traffic conveyance that Eircom has to undertake.
- 5.35 In November 2019,⁵⁶⁷ Eircom presented preliminary proposals to industry to modernise its PSTN network by means of Multi-Service Access Nodes ('**MSAN(s)**'), due to the phasing out of vendor support for legacy PSTN switching equipment. Eircom intends that, from an end user perspective, the transition to MSANs will be seamless, and will be implemented between 2020 and 2023. Technically, the MSAN replaces the Remote Subscriber Unit ('**RSU**') in the exchange, and the end user is connected to the MSAN for RFTS. The use of MSAN technology should prolong the serviceable life of the FNA network, and the SB-WLR product provided over that network, which would otherwise be rendered obsolete as vendor support withdraws for PSTN switching equipment. The modernisation may result in a reduction in the number of points of interconnection, as legacy RSUs and core switches are removed from the network (subject to ComReg approval).⁵⁶⁸ Eircom has also proposed to cease sale of ISDN BRA by 1 January 2021, and to cease support for ISDN BRA by 31 December 2024. This request has been refused by ComReg and is addressed in paragraphs 10.90 to 10.100 below.

Code hosting / sharing

- 5.36 Each Access Seeker purchasing FVCO is allocated a unique network access code. This code is used to route the Access Seeker's originated calls, based on predefined routing tables, to the Access Seeker's nearest POI. The routing rules do not allow more than one such network code to be allocated to an Access Seeker's POI(s). While an Access Seeker that is interconnected deeply within Eircom's network can take its own FVCO traffic at the primary exchange level, because of the absence of code hosting or sharing, Eircom cannot route one Access Seeker's unique FVCO traffic to another (deeply interconnected) Access Seeker's POI.

⁵⁶⁵ Interconnection is a wholesale service that consists of a physical or logical connection between at least two networks over which voice traffic is handed in order to facilitate calls to be made between end users that are connected to their respective SPs' networks. Circuit-switched interconnection refers to interconnection on Current Generation copper networks.

⁵⁶⁶ See footnote 175 of the 2015 FACO Decision.

⁵⁶⁷ Eircom presented proposals at the Industry Product Development Workshop on 13 November 2019.

⁵⁶⁸ In March 2021, Eircom published a white paper on copper switch-off, available at https://www.openeir.ie/wp-content/uploads/2021/03/White-paper_Leaving-a-Legacy.pdf. As of May 2021, it is not clear what impact the copper switch-off proposals will have on the network modernisation programme.

- 5.37 Due to the absence of code hosting / sharing,⁵⁶⁹ Access Seekers purchasing FVCO from Eircom cannot use a third-party call transit provider between Eircom's primary exchange and the Access Seeker's nearest POI. Therefore, a transit provider cannot transit FVCO calls on behalf of Access Seekers that are not interconnected directly with a given exchange. This is particularly relevant for small Access Seekers that are not interconnected with many, or any, of Eircom's primary (and, in some cases, secondary) exchanges. These Access Seekers cannot benefit from the economies of scope enjoyed by transit providers which carry large volumes of traffic to and from primary and tandem exchanges.
- 5.38 Accordingly, the absence of code hosting / sharing requires Access Seekers to receive FVCO traffic at higher exchange levels in Eircom's network, in order to compete effectively in the RFTS market. As far as ComReg is aware, there has never been any request from an Access Seeker, or Eircom, to modify the existing code routing rules.

Exclusions from the 2015 FACO Decision

- 5.39 The 2015 FACO Decision excluded Managed VoB provided over xDSL and SIP Trunking offered over leased lines from the relevant market, as there was no evidence at that time of significant substitution between FACO and xDSL-based Managed VoB or SIP Trunking.⁵⁷⁰ There was also no evidence of SPs offering Managed VoB-based RFTS based on these inputs.
- 5.40 The potential for SPs to purchase wholesale broadband inputs and offer a Managed VoB-based solution, instead of purchasing SB-WLR, was also considered. However, ComReg noted that there was not yet at that time sufficient evidence to suggest that Managed VoB delivered over such wholesale broadband products would be considered by Access Seekers to be an effective substitute for FACO products.
- 5.41 ComReg's reasoning at the time was based on a number of factors, including low uptake of broadband platforms over which Managed VoB could be delivered, the costs and challenges associated with developing a Managed VoB calling platform, switching costs incurred by Access Seekers, and continued growth of SB-WLR, which, together, suggested that there was little demand for the provision of Managed VoB over xDSL.

⁵⁶⁹ Code hosting/sharing allows a deeply interconnected Access Seeker to accept another Access Seeker's FVCO traffic (originated on Eircom's network). However, this would likely require significant modification of the existing call routing rules of both Eircom and interconnected SPs and the capacity of their respective interconnection infrastructure. Instead, an Access Seeker purchasing FVCO is allocated a unique network code by Eircom. Eircom uses this code to route the originated calls, based on predefined routing tables, to the Access Seeker's nearest POI. The routing rules do not allow more than one such network code to be allocated to an Access Seeker's POIs. While an Access Seeker that is interconnected deeply within Eircom's network can take its own FVCO traffic at the primary exchange level, due to the absence of code hosting or sharing, Eircom cannot route another Access Seeker's unique FVCO traffic to the other deeply interconnected Access Seeker's POI.

⁵⁷⁰ Using the terminology in this Decision, Managed VoB delivered over leased lines would likely more accurately be described as SIP Trunking or Hosted PBX (forms of Managed VoIP) delivered over leased lines.

- 5.42 The 2015 FACO Decision did not impose obligations on Eircom with respect to access to its notional NG FACO. Although Eircom was not subject to obligations in respect of the delivery of Managed VoB, it was required, however, to meet all reasonable requests for the provision of, and access to, Next Generation Interconnection Services.⁵⁷¹
- 5.43 ComReg considered that limiting access obligations to FNA FACO served the dual purpose of safeguarding competition in the short to medium term (through the FNA FACO remedies), while encouraging Access Seekers to develop their own Managed VoIP-based capabilities over the longer term.

Are Low-Level FACO and High-Level FACO separate focal products?

- 5.44 The 2015 FACO Decision defined separate High-Level and Low-Level FACO focal products. This Decision considers whether that distinction continues to be valid. The Low-Level Fixed Access ('LL-FA') component of the focal product consists of the provision of WLR over PSTN or ISDN BRA. The High-Level Fixed Access ('HL-FA') component of the focal product consists of the provision of WLR over ISDN FRA or ISDN PRA. LL-FA combined with FVCO is referred to as Low-Level Fixed Access and Call Origination ('LL-FACO'). HL-FA combined with FVCO is referred to as High-Level Fixed Access and Call Origination ('HL-FACO'). SB-WLR facilitates delivery of the LL-FACO and HL-FACO focal products.
- 5.45 All SP respondents to ComReg's April 2019 IIRs agreed that the distinction between HL-FACO and LL-FACO remains valid, although [X █████ X] added that moves towards Managed VoB suggested that supply of standalone RFTS would become challenging.
- 5.46 Demand for FACO derives from downstream demand for RFTS, which consists of both RFVA and RFVC. RFVA is offered in various forms which are dimensioned to the needs of different categories of retail end users. For example, RFVA provided by means of PSTN or ISDN BRA is typically provided to residential and SME end users, whereas large businesses may require multi-channel voice services provided over ISDN FRA or ISDN PRA.
- 5.47 These differences were reflected in the 2014 RFVA Decision, which defined three separate RFVA markets, all of which are national in scope:
- (a) **Standalone Lower-Level Retail Fixed Voice Access** via PSTN and ISDN BRA (as well as analogous broadband connection);⁵⁷²

⁵⁷¹ As defined in the 2015 FACO Decision Instrument, Next Generation Interconnection describes packet switched based interconnection used to convey FVCO, and includes both the physical connection from the Eircom network to the Access Seeker's equipment at the Access Seeker premises, the exchange, or an alternatively mutually-agreed location, and the Interconnection Paths, which are the physical and logical transmission paths between the networks of two Access Seekers to facilitate Interconnection based on packet switched infrastructure.

⁵⁷² In the 2014 RFVA Decision, broadband was included in the Standalone LL-RFVA market definition since, prospectively, a scenario could arise where an SP, in light of evolving access technologies, delivered a standalone managed voice service (i.e. Managed VoIP over a broadband access path) equivalent to a standalone narrowband

- (b) **Bundled Lower-Level Retail Fixed Voice Access** via PSTN and ISDN BRA (as well as analogous broadband connection); and
- (c) Higher-Level Retail Fixed Voice Access via ISDN FRA and ISDN PRA.

- 5.48 The above distinctions reflect, firstly, the fact that end users purchasing standalone and bundled RFVA face different competitive conditions, and, secondly, the fact that ISDN FRA and ISDN PRA are functionally distinct from ISDN BRA and PSTN, given differences which include the number of channels and direct dial numbers supported, which indicate that they meet different end user requirements.
- 5.49 The 2014 RFVA Decision defined separate RFVA markets on the grounds that there was limited demand and supply-side substitution between PSTN and ISDN BRA on the one hand ('**LL-RFVA**') and ISDN FRA and ISDN PRA on the other ('**HL-RFVA**'). This distinction arose due, amongst other things, to differing functional characteristics, resulting in the absence of a common pricing constraint. In addition, ComReg considered that different conditions of supply were present in the above markets.
- 5.50 This delineation of two separate LL-RFVA markets, as well as a HL-RFVA market is reflected at the wholesale level, where Eircom SB-WLR products encompass the same range of FNA services.
- 5.51 Eircom provides SB-WLR products that are used by Access Seekers to offer RFTS. These SB-WLR products differ according to whether the underlying WLR component is based on PSTN, ISDN BRA, ISDN FRA, or ISDN PRA.
- 5.52 To determine whether LL-FACO and HL-FACO form part of the same product market or constitute separate markets in their own right, ComReg considers whether LL-FACO and HL-FACO are substitutes for one another.
- 5.53 Demand-side substitution assesses the extent to which purchasers of LL-FACO would be prepared to switch to HL-FACO in response to a SSNIP (and vice-versa). Supply-side substitution assesses the extent to which suppliers of LL-FACO would be prepared to commence supplying HL-FACO in response to a SSNIP of HL-FACO (and vice-versa). Whether the break in the chain of substitution identified by ComReg at the retail level also exists in respect of FACO products must also be considered.

Are LL-FACO and HL-FACO demand-side substitutes?

- 5.54 In determining whether LL-FACO and HL-FACO are demand-side substitutes, ComReg takes into account the product characteristics, prices and intended use of both products.

PSTN voice service. For example, from a technical standpoint, an SP could use a broadband access path to provide standalone managed voice over IP/broadband as a product, but without also providing internet access. At the time of the 2014 RFVA Decision. ComReg deemed this type of voice product to be somewhat notional.

Product characteristics

- 5.55 The functional differences between ISDN BRA and PSTN are minor, with PSTN offering one voice channel and ISDN BRA offering two voice channels. ISDN FRA and ISDN PRA both support a much larger number of voice channels – 16 to 29, and 30 voice channels respectively. Accordingly, PSTN and ISDN BRA on the one hand, and ISDN FRA and ISDN PRA on the other hand, are likely to satisfy differing end user needs.
- 5.56 The CPE used to support PSTN and ISDN BRA also differs from ISDN FRA and ISDN PRA in terms of its functionality and cost. Accordingly, in response to a SSNIP of HL-FACO, Access Seekers purchasing HL-FACO in order to deliver RFTS would, in ComReg’s view, be unlikely to switch in sufficient numbers to purchasing LL-FACO to satisfy their own end user RFTS demand, such that it would make the SSNIP unprofitable.
- 5.57 Similarly, Access Seekers purchasing PSTN or ISDN BRA LL-FACO are, in ComReg’s view, unlikely to switch in sufficient numbers to HL-FACO, such that it would make the SSNIP unprofitable, given the different functional and cost characteristics. In particular, an Access Seeker using LL-FACO to provide RFTS to a residential end user serviced by a PSTN connection is very unlikely to consider the pricing, functionality, and associated technology associated with ISDN FRA or PRA as an effective demand-side substitute for PSTN access, in view of the fact that the Access Seeker’s demand for LL-FACO is a derived demand arising from its end users’ demand for LL-RFTS.

Pricing

- 5.58 Table 28 below shows Eircom wholesale pricing for PSTN and ISDN access (in the presence of regulation). The data suggest that, per channel, prices for wholesale PSTN and ISDN BRA access are broadly comparable and have broadly similar functionality, whereas ISDN FRA and ISDN PRA are significantly more expensive than PSTN/ISDN BRA, and differ in their functionality:

Table 28: Eircom Pricing for WLR access services, June 2021⁵⁷³

Product	Access channels	Connection charge	Monthly rental		Total cost over 3 years	
			Total	Per channel	Total	Per channel
PSTN	1	€ 0	€ 16.59	€ 16.59	€ 597.24	€ 597.24
ISDN BRA	2	€ 174.12	€ 27.95	€ 13.98	€ 1,180.32	€ 590.16
ISDN FRA	16	€ 2,837	€ 143	€ 8.95	€ 7,991.62	€ 499.48
ISDN PRA	30	€ 2,837	€ 238	€ 7.94	€11,414.14	€ 380.47

⁵⁷³ Prices available in Service Schedule 401, Table 2 of Eircom’s Reference Interconnect Offer Price List, version 18.0 Final dated 27 January 2021 https://www.openeir.ie/Reference_Offers/.

- 5.59 Eircom's ISDN FRA and ISDN PRA products attract a wholesale connection charge of €2,837 and a monthly rental charge dependent on the number of channels. For example, a 16 channel ISDN FRA costs €143 per month, and a 30 channel ISDN PRA costs €238 per month. The monthly charge per channel for ISDN FRA is €8.95,⁵⁷⁴ compared with a single PSTN line rental price of €16.59. This suggests that, in response to a SSNIP of PSTN or ISDN BRA, it is unlikely that a sufficient number of end users would switch to ISDN FRA or PRA, given the much higher connection charge associated with those services, and the likelihood that these end users are unlikely to benefit from having a large number of additional channels available. Similarly, in response to a SSNIP of ISDN FRA or PRA, an insufficient number of end users would be prepared to substitute to individual PSTN or ISDN BRA lines, given that the monthly rental cost per channel would increase by almost 50%.
- 5.60 Therefore, there appears to be an observable distinction between LL-FACO and HL-FACO pricing, to an extent that justifies, when considered alongside differences in product functionality and intended use, defining separate product markets. Eircom's retail pricing of PSTN and ISDN suggest that this pattern is repeated at the retail level, such that there is an equivalent distinction between LLVA and HLVA pricing, as set out at Table 29 below:

Table 29: Eircom Pricing for RFVA (ex-VAT)⁵⁷⁵ as of June 2021

Product	Access channels	Connection charge	Monthly rental		Total cost over 3 years	
			Total	Per channel	Total	Per channel
PSTN	1	€ 107	€ 20.96	€ 20.96	€ 862	€ 861.56
ISDN BRA	2	€ 202.47	€ 36.81	€ 18.40	€ 1,527.63	€ 763.81
ISDN FRA	16	€ 3,299	€ 215	€ 13.44	€ 11,039	€ 689.94
ISDN PRA	30	€ 3,299	€ 355	€ 11.83	€ 16,079	€ 535.97

Intended use

- 5.61 Given these differences, the ability of a HM supplier of LL-FACO to profitably implement a SSNIP is unlikely to be constrained by Access Seekers switching in significant numbers to HL-FACO, whose demand for LL-FACO is a derived demand arising from the need to satisfy the requirements of its low volume users (whose needs are likely satisfied by the one or two voice channels available over PSTN or ISDN BRA).
- 5.62 Similarly, the ability of a HM supplier of HL-FACO to profitably implement a SSNIP is unlikely to be constrained by Access Seekers who provide RFTS to high volume users (who require the multiple voice channels available over ISDN FRA or PRA) switching in significant numbers to LL-FACO.

⁵⁷⁴ €143 / 16 access channels = €8.95 per access channel, per month.

⁵⁷⁵ Prices available at 'Your Telephone Line', valid as of June 2021 <https://www.eir.ie/opencms/export/sites/default/group/pricing/phoneline/>.

Are LL-FACO and HL-FACO supply-side substitutes?

- 5.63 From a supply-side perspective, the infrastructure needs associated with providing HL-FACO differ from those required to offer LL-FACO. The question to be answered, therefore, is whether a HM supplier of LL-FACO could switch into the supply of HL-FACO (or vice versa) in the immediate to short term (typically within one year), without incurring significant costs, and start supplying services of equivalent characteristics to the focal product.
- 5.64 In this regard, ISDN FRA and PRA infrastructure used to provide HL-FACO to large corporate customers may not facilitate quick and effective supply-side substitution into the provision of LL-FACO to residential and SME end users, at a price which those end users would be willing to pay. Doing so would likely entail significant costs and timing delays in terms of additional network build and adjustments needed in terms of marketing arrangements, or customer support. Similarly, a PSTN or ISDN BRA network designed to provide LL-FACO may not be easily re-dimensioned to facilitate provision of HL-FACO.
- 5.65 Having regard to the above, LL-FACO provided over PSTN and ISDN BRA falls within a LL-FACO focal product market. Given functional and pricing differences, as well as demand-side and supply-side considerations, HL-FACO products provided over ISDN FRA and ISDN PRA fall within a HL-FACO focal product market. LL-FACO and HL-FACO constitute separate and distinct product markets, and ComReg notes that all SP respondents to the 2020 Consultation concur with this view.

Does White Label Voice (WLV) fall within the FACO Focal Product?

- 5.66 WLV is an end-to-end access and call conveyance service provided over FNA that, similar to FACO, allows an Access Seeker to provide RFTS to end users without the need to develop its own interconnection infrastructure. WLV services are provided by Eircom.⁵⁷⁶
- 5.67 In effect, WLV is a bundle that includes FA, FVCO, and transit.⁵⁷⁷ It is a virtual service that allows for the reselling of a 'white label' fixed access and calls product, and involves calls being handled entirely by the seller of the WLV service. WLV is likely to be attractive to entrants to the RFTS market that have not (yet) materially invested in network infrastructure, such as interconnection, and may be unlikely to do so, or to expand any existing interconnection, given that Managed VoIP would likely render such infrastructure obsolete.

⁵⁷⁶ https://www.openeir.ie/Products/MNS/White_Label_Voice/

⁵⁷⁷ Where Eircom is interconnected with a SP, its WLV service will deliver voice calls without the need for transit. If Eircom is not interconnected with a particular SP, then it can purchase a transit service from a transit provider (or interconnect with that particular SP directly).

- 5.68 In contrast to WLV, Access Seekers purchasing FACO over FNA must operate switching infrastructure to receive FVCO traffic from Eircom for onward routing. Therefore, a FACO customer switching to WLV would have to pay for services (e.g. transit or interconnection) which it is already potentially capable of self-supplying (including on the basis of the purchase of FACO). For this reason, ComReg considers it unlikely that an Access Seeker purchasing FACO would switch to purchasing WLV in response to a SSNIP of FACO.⁵⁷⁸
- 5.69 ComReg also notes that FACO (and transit) are inputs to the supply of WLV, which suggests that WLV is positioned downstream from the FACO and transit markets, but upstream from RFTS.
- 5.70 For these reasons, ComReg does not consider WLV to be a sufficiently close substitute for FACO to warrant its inclusion in the Relevant FACO Markets. However, ComReg notes that WLV uses upstream FACO (SB-WLR) and other wholesale inputs (including interconnection), which themselves fall within the FACO markets.

Respondents' Views

- 5.71 **Eircom** asserted that there are a number of issues with ComReg's view that FVCO and FA should be assessed as a single focal product, notably:
- (a) Standalone FVCO is in decline and is no longer offered to new wholesale customers. In addition, as of Q4 2019, CPS comprised 1% of all indirect access paths, which demonstrates the differing competitive dynamics for FA and FVCO;
 - (b) Standalone CPS was deregulated by means of the 2015 FACO Decision, which has enabled the natural migration and thereby avoided a situation of artificially prolonging the life cycle of a legacy product; and
 - (c) ComReg's view that a combined FACO focal product continues to be warranted on the basis that it was determined to be the appropriate focal product in the 2015 FACO Decision does not negate the requirement for it to consider whether changes in market dynamics justify a change in approach.
- 5.72 Eircom claims that ComReg's failure to adequately consider whether it might now be appropriate to assess FA and FVCO separately, particularly in the pursuit of efficient and timely migration to all-IP networks, results in flaws in ComReg's assessment which, in Eircom's view, have led to an inevitable conclusion that a small and decreasing segment of the FACO market should continue to be subject to regulation.

⁵⁷⁸ In theory, an efficient Access Seeker purchasing FACO and operating a fixed telephone network would only be likely to switch to an end-to-end WLV service if the end-to-end SP was applying a margin squeeze between the relative price of the standalone FACO service and the price of the WLV service.

- 5.73 Eircom stated in its Submission that “*SB-WLR has also been declining and between Q3 2019 and Q4 2019, SB-WLR access paths fell by circa 33%.*”⁵⁷⁹ Eircom also stated that, in the absence of regulation, the decline would likely have been much larger. ComReg notes that Eircom has provided no supporting evidence to substantiate this claim.
- 5.74 Eircom further claims that ComReg’s conclusion that Eircom “...continues to hold a strong position in the supply of FACO” suffers from issues akin to those caused by the ‘Reverse Cellophane Fallacy’ (**RCF**):
- “That is to say that prevailing regulatory terms, in particular pricing and access obligations, result in other services appearing to be weaker substitutes than they actually are, which leads to improperly narrow market definitions and erroneous inferences of market power. This in turn leads to self-perpetuating regulation, in which NRAs insist on finding that the incumbent lacks market power before deregulating the market, while the regulated nature of the market leads to an erroneous inference of market power.”*⁵⁸⁰
- 5.75 Eircom therefore claimed that, by defining a combined focal product, as a result of regulatory history, Eircom would have a high market share, thereby dismissing the fact that the market has now evolved and FNA is no longer necessary to provide the origination of fixed calls due to Managed VoIP and upstream regulation in the WLA and WCA markets.
- 5.76 Eircom stated that, as the number of fixed calls has been steadily decreasing in recent years, if it were to refuse to supply FVCO it would also lose a share of present-day wholesale FVCO and FA revenues. Eircom suggested that it would therefore sacrifice wholesale revenues not only in the Regional FACO Market but also risk competitors migrating away from FACO in the Urban FACO Market.
- 5.77 Finally, Eircom concluded that, if ComReg recognised the full competitive dynamics of the focal products separately, this would lead to a simplification of regulatory remedies, where ComReg could effectively, at a minimum, remove regulatory remedies on the FVCO Market. **CE** supported this request on the basis that evidence on the decline in fixed usage was strongly indicative of a tendency towards increased FMS since the 2014 RFTS Decision.
- 5.78 **CE** suggested that ComReg’s approach of combining FA and FVCO may not be consistent with market developments and is, by design, conducive to prolonged regulation. CE also claimed that there is no clear-cut economic answer to whether FA should be the focal product and whether FA and FVCO should be treated separately.

⁵⁷⁹ 2020 Consultation, Table 8, p.87

⁵⁸⁰ Eircom Submission, paragraph 80.

- 5.79 CE argued that the competitive conditions between FA and FVCO appear to be materially different, which was a key reason to treat the two services separately in the 2014 review.
- 5.80 **BT** suggested that Eircom was increasing its market power and therefore considered that ComReg needed to conduct a far deeper review of the FVCO market, and that separate 3CTs should be conducted for the FA and FVCO markets.
- 5.81 BT asserted that Eircom appeared to have the opportunity and incentive to leverage its SMP in the FVCO market by impeding the ability of Access Seekers to bulk migrate from WLR to NGB VoIP whilst internally migrating Eircom's own WLV base to VoIP. BT also claimed that Eircom has both the opportunity and incentive to leverage its position to entrench its SMP in voice on the Urban FACO Market by means of margin squeezes (through the lack of a WLR price control in urban area).
- 5.82 **ALTO** submitted that ComReg had not fully analysed the FVCO market and urged ComReg to conduct an additional analysis of the FVCO aspects of the market which it considered may pass the 3CT due to Eircom SMP.

ComReg's Assessment of Respondents' Views

- 5.83 ComReg disagrees with Eircom's claims that it failed to adequately consider whether it may be now appropriate to assess FA and FVCO separately, or indeed that the appropriate focal product was determined solely on the basis of the 2015 FACO Decision. ComReg notes that its reasons for considering FACO as an appropriate starting point are outlined in paragraphs 5.13 to 5.18, and take account of factors other than the fact that a FACO focal product was defined at the time of the 2015 FACO Decision.

- 5.84 ComReg notes that standalone FVCO is in decline, and since September 2016, Eircom has not offered standalone FVCO (CPS) to new wholesale customers and offers CPS on a legacy basis only. ComReg also notes that the decline in CPS had largely occurred prior to deregulation in 2015 and so, while there has been a further decline, it was not substantial. Contrary to Eircom's argument that the decline in standalone FVCO demonstrates the differing competitive dynamics for FA and FVCO, ComReg notes that there is a high degree of complementarity between FVCO and WLR, in the sense that both access and calls must be purchased in order for end users to make a voice call. Such access can also be utilised for other services such as broadband. The vast majority of end users purchase RFTS (both line rental and calls) from a single SP (90%+), and, at the wholesale level, newer Access Seekers can now no longer purchase FA and FVCO separately.⁵⁸¹ ComReg notes that although FVCO is solely used for fixed voice calls, while FA can be used for many services such as calls, broadband, and TV, it is satisfied that despite these differences in competitive dynamics, complementarity is nevertheless sufficiently high.
- 5.85 As discussed in Sections 3 and 4, there is also a strong tendency for end users to purchase RFVA and RFVC together as RFTS and, increasingly, to purchase RFTS as part of a broader bundle of services, suggesting that end users value the reduced transaction costs arising from purchasing RFTS from a single SP. Bearing in mind that demand at the wholesale level is a derived demand arising from end user demand for RFTS, ComReg notes that Access Seeker demand for SB-WLR (and WLV), despite being in slow decline, nevertheless greatly exceeds demand for CPS (which was deregulated by means of the 2015 FACO Decision). ComReg also notes that Standalone CPS numbers were relatively low prior to deregulation in 2015, meaning that the natural migration Eircom refers to in its submission was also relatively minor.
- 5.86 As set out at Figure 22 above, as of Q4 2020, CPS accounted for just 1.2% of all Eircom merchant market supplied indirect access paths (comprised of CPS, SB-WLR and WLV), having fallen from 3.55% since the 2015 FACO Decision. An Access Seeker wishing to offer RFTS to end users cannot purchase FNA-based FA (WLR) from Eircom and CPS (FVCO) from a different SP (or vice versa) and must purchase WLR and FVCO together from Eircom as SB-WLR. Having regard to the demand-side and supply-side considerations above, ComReg considers that, given current market circumstances, Access Seekers purchasing SB-WLR in order to provide RFTS to end users would, in response to a SSNIP (of FA, FVCO, or both) be unlikely, or unable, to unpick these individual bundle elements of the focal product and purchase WLR and CPS separately, such that it would render the SSNIP unprofitable.

⁵⁸¹ ComReg considers the self-supply of Managed VoB later in paragraphs 5.137 to 5.141 and concludes that Eircom's self-supply of Managed VoB does fall within the FACO Product Market.

- 5.87 This indicates that the focal FACO product should, indeed, consist of both call origination and WLR, that is, both the FVCO and FA components respectively, as this is now fully reflective of market dynamics, as was the case at the time of the 2015 FACO Decision. ComReg notes that defining FA and FVCO as separate focal products would essentially ignore the interplay between the two and would have ultimately failed to capture the decline in CPS.
- 5.88 ComReg notes that Eircom's concerns regarding the migration to all-IP networks (which ComReg understands to mean NG Broadband) are addressed later as part of its constraints analysis, and not at the focal product identification stage. ComReg notes that the purpose of identifying the focal product, in accordance with the BEREC FMS Report outlined at paragraph 5.2 above, is to identify the point where competition problems "*are believed to exist*".⁵⁸² Only after identifying this does ComReg then assess which other products should be included in the relevant product market on the basis of the direct or indirect constraint which they generate.
- 5.89 Eircom has not substantiated its claim that, absent regulation in the Regional FACO Market, the decline in access paths would likely have been much larger than the 33% fall recorded between Q3 2014 and Q4 2019. Although a decline in access paths may happen organically over a specific time period, Eircom has not provided any meaningful argument to support this assertion, or indeed, any information which would lead ComReg to assume this claim were reasonable or valid. It is ComReg's position, as set out in Section 8 below,⁵⁸³ that a further decline in merchant market FNA access paths would likely only occur due to Eircom, in a MGA scenario, wielding its market power to, amongst other things, withdraw access to, or increase the price of, SB-WLR.

⁵⁸² As set out at p.12 of BEREC's 2012 report, *Impact of fixed-mobile substitution (FMS) in market definition*, "(...) The focal product is defined as the main product under investigation and the focal area is the area under investigation, in which the focal product is sold. The definition of the focal product may depend on specific market conditions and on the issues that NRAs want to address during the market analysis.

When analysing FMS in an asymmetric substitution situation, an NRA should start by identifying the focal product considering their national market conditions. One of the possible criteria chosen by NRAs might be to define the focal product as the one where competition problems are believed to exist."

⁵⁸³ See paragraphs 8.31 to 8.38.

- 5.90 ComReg notes that the points raised in Eircom's Submission, detailed at paragraphs 5.72 and 5.77 above, are more appropriately addressed in Section 7 where ComReg sets out its assessment of SMP in the Regional FACO Markets. However, ComReg notes Eircom's statement that, should it refuse to supply FVCO, it would sacrifice both FVCO and FA wholesale revenues, appears to bolster ComReg's argument for combining FVCO and FA as a single focal product. Eircom provides CPS (FVCO) on a legacy only basis, which accounts for only 1.2% of all indirect access paths. Given that complements are characterised by demand going in the same direction, and if demand for FVCO declined (because Eircom withdrew it), then, as Eircom stated, FA demand – and therefore FA revenues – would also decline. Therefore, Eircom's reasoning suggests that ComReg has correctly identified FA and FVCO as complements which should be assessed as a joint focal product. It is for this reason that ComReg concludes that it is appropriate to define FACO as the focal product.
- 5.91 ComReg refutes the suggestion that its analysis suffers from issues similar to those caused by the RCF. ComReg notes that the RCF refers to issues arising as a result of an incorrectly applied SSNIP test at the point of product market definition in a market analysis. For the RCF to occur, the SSNIP is applied at a price level which is below the competitive price of a product or service. This might occur in a regulated market if the regulated price were artificially maintained at a price below cost levels, which is then used as the base price on which the SSNIP test were applied. In this hypothetical scenario, and as discussed by Aron and Burnstein,⁵⁸⁴ these *"...uneconomically low prices cause other services to appear to be weaker substitutes than they are and therefore lead to improperly narrow market definitions and erroneous inferences of market power."* This appears to be the academic definition which Eircom relies on its submission.
- 5.92 However, as described in paragraph 5.189 of the 2020 Consultation, and paragraph 5.223 of this Decision, the base price on which the SSNIP was carried out for SB-WLR was estimated at the competitive price level. ComReg used the regulated price for FVCO and WLR as a proxy for the competitive price in this case, given that, absent regulation, wholesale charges would, in ComReg's view, likely be above cost. Eircom has provided no evidence to substantiate the suggestion that the starting price is uneconomically low, or that the starting price differs from the designated competitive price point outlined by ComReg in Section 5 on the 2020 Consultation.

⁵⁸⁴ Aron, D. and Burnstein, D., 2010. REGULATORY POLICY AND THE REVERSE CELLOPHANE FALLACY. *Journal of Competition Law and Economics*, 6(4), pp.973-994.

- 5.93 ComReg further notes that Eircom's argument that combining a single focal product would result in a high market share for the incumbent appears to confuse the focal product exercise with the definition of the wider FACO Product Market. ComReg notes the purpose of identifying the focal product, as detailed in paragraph 5.9 above, is to identify the point where competition problems exist, before then defining a (potentially) wider FACO market which includes any demand side, supply side, and indirect retail constraints, as per ComReg's analysis set out later in this Section. ComReg therefore considers all potential substitution possibilities when carrying out its product market definition exercise. Having defined the Relevant Markets, ComReg then proceeds to an assessment of market power. This assessment resulted in the inclusion of White Label VoIP and RFTS delivered as Managed VoIP over NGA Broadband in the FACO Markets, as well as Eircom SB-WLR.
- 5.94 ComReg notes CE's claim that ComReg's approach to combining FA and FVCO may not be consistent with market developments, although CE failed to specify which market developments it was referring to. ComReg considered market developments since the publication of the 2015 FACO Decision AT Section 3.3 above, and, having regard to these developments, designated FACO as being the appropriate focal product. ComReg also notes that CE has provided no evidence, or indeed any information to support its statement that combining FA and FVCO is, by design, conducive to prolonged regulation. ComReg notes that it has carried out its 3CT and SMP Assessment on the FACO Markets and has proposed to deregulate the Urban FACO Markets, in the foot print of which 74% of RFTS lines are located. Where there has been a finding of SMP in the Regional FACO Markets, ComReg has sought to only impose those obligations which most appropriately address the competition problems identified in Section 9. In addition, ComReg noted in paragraph 11.7 of the 2020 Consultation its intention to carry out a Mid-term Assessment (the 'MTA') after a period of 24 months from the Effective Date of this Decision has elapsed. The purpose of this assessment is to examine the appropriateness of the continued imposition of regulatory obligations in the Regional FACO Markets which could lead to, for example, the maintenance of existing regulation or its removal, as appropriate, in those EAs falling within the Regional FACO Markets. For this reason, given the move toward deregulation, it is unclear how ComReg's approach is conducive to prolonged regulation.

- 5.95 ComReg notes that CE has provided no information to support its statement that the competitive conditions of FA and FVCO are materially different, or clarity of which 'review' it is referring to. ComReg assumes that CE may be referring to the EC Recommendation on Relevant Markets. The 2014 Recommendation (which has since been superseded by the 2020 Recommendation) stated that, based on national circumstances, an NRA may decide to designate the focal product as a combination of FVCO with FA. Given the trend indicating Access Seekers tend to purchase both FVCO and FA combined, along with the withdrawal of Eircom's CPS offering to new customers and its decline even amongst legacy Access Seekers, ComReg's position is that, based on national circumstances, it is appropriate in this case to designate a combined focal product.
- 5.96 ComReg also notes that, in its response, BT has not justified why FA and FVCO should be separate products. BT's mere suggestion of likely competition problems is not in itself sufficient grounds for defining separate markets. Similarly, ALTO failed to provide any evidence that FVCO should be assessed as a separate focal product, or indeed, a separate market, beyond simply asserting that it would pass the 3CT. This is not in itself a sufficient reason to define a separate market.
- 5.97 In conclusion, ComReg notes that a number of Respondents argued above that FA and FVCO should be assessed as separate focal products, on the grounds that these separate products (or indeed markets) would pass a 3CT, would merit a finding of SMP, or would likely display evidence of competition problems. However, the 3CT, SMP and competition problems assessments can only be carried out once the relevant market has been defined. It is therefore not open to ComReg to define a focal product or a product market on the basis that the duly-defined market would lead to a pre-determined outcome at 3CT, SMP or competition problem assessment stage. Rather, the function of the product market definition exercise is, as set out at paragraph 5.3 above, to identify those products which are regarded as interchangeable or substitutable by the consumer by reason of the products' characteristics, prices and intended use. The starting point of the product market definition exercise is the focal products, which, as set out at paragraph 5.7 above, is defined as "*the main product under investigation*". ComReg notes that, in many cases, the above Respondents have not provided material evidence in support of the proposition that FA and FVCO should be designated as separate focal products or product markets beyond the assertion that they would pass a 3CT or warrant SMP designation. ComReg has not, therefore, been provided with meaningful evidence to justify altering its focal product assessment to identify two separate FA and FVCO focal products.
- 5.98 Having considered Respondents' views above, ComReg concludes that it is appropriate to define a FACO focal product consisting of both FA and FVCO.

Overall Position on the FACO Focal Product

- 5.99 ComReg defines two focal FACO products, each consisting of an access and a calling component, as described below:
- (a) Wholesale fixed access ('FA') to the public telephone network for the provision of voice telephony services by means of
 - (i) In the case of **Low-Level FACO**, PSTN, or ISDN BRA, and
 - (ii) In the case of **High-Level FACO**, ISDN FRA or ISDN PRA; with
 - (b) Fixed Voice Call Origination ('FVCO'), being calls originated at a fixed location of an end user which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the FA at which the voice call was originated.
 - (c) For the avoidance of doubt, Eircom self-supply over PSTN, ISDN BRA, ISDN FRA, and ISDN PRA is also included in the FACO focal products, on the grounds that it is relatively easy and simple to convert self-supply to merchant market supply.
 - (d) For the reasons set out at paragraphs 5.24 to 5.29 above, ComReg now removes Eircom self-supply by means of Managed VoIP from the focal products, and considers same at the direct constraint stage of analysis.
- 5.100 The focal products are currently offered on a wholesale basis to Access Seekers by Eircom. The SB-WLR focal product is offered on a wholesale merchant market basis over Eircom's FNA network to Access Seekers, and on a self-supply basis to Eircom's retail arm.

Assessment of Direct Constraints

- 5.101 ComReg considers the strength of any direct constraints on the focal FACO products to determine whether those markets should be broadened to include effective substitutes. In particular, ComReg considers:
- (a) Network coverage and the effectiveness of direct and indirect constraints (see paragraphs 5.104 to 5.112 below);
 - (b) Potential demand-side substitution (paragraphs 5.113 to 5.147 below); and
 - (c) Potential supply-side substitution, including the self-supply of vertically-integrated SPs (see paragraphs 5.148 to 5.203 below).

- 5.102 Eircom, alone, submitted comments in respect of ComReg's assessment of direct constraints and asserted that MTS should be included as supply-side substitute to the FACO Focal Product. Eircom's submission on this topic is detailed in paragraphs 5.203 to 5.206, while ComReg's assessment of this submission is outlined in paragraphs 5.207 to 5.211. No submissions were received from any of the Respondents pertaining to demand-side constraints.
- 5.103 ComReg's overall conclusions on the assessment of direct constraints are set out at paragraphs 5.214 to 5.215 below.

Network coverage and effectiveness of direct and indirect constraints

- 5.104 A product will be more likely to be an effective constraint if it meets Access Seeker expectations in terms of factors including pricing, availability, functionality, QoS and so on, including in the context of it meeting end user needs. If a product does not meet Access Seeker expectations in this regard, it follows that it is unlikely to be an effective (direct or indirect) constraint, and will not be included in the relevant product market.
- 5.105 One factor which ComReg deemed to be of particular importance in assessing substitutability against the focal FACO product in its 2015 FACO Decision was the level of network ubiquity. ComReg held the view at the time that, *ceteris paribus*, Access Seekers would display a preference for making use of upstream inputs which have national availability, in preference to making use of multiple upstream inputs with local or regional availability. However, at the time of the 2015 FACO Decision, ComReg was in possession of insufficient evidence of Access Seekers purchasing network access from multiple sources or providing Managed VoIP to their own RFTS end users on a self-supply basis.
- 5.106 This view was based on the assumption that an Access Seeker would avoid the financial, technical, and practical transaction costs associated with interconnecting with multiple FACO SPs. Instead, an Access Seeker would express a preference for interconnecting with a single FACO SP to avoid those transaction costs (up to a limit where the price of FACO from a single SP with ubiquitous reach exceeds the prices and transaction costs of purchasing FACO from multiple SPs with sub-national reach).
- 5.107 In support of this proposition, [X ██████ X] suggested in its response to the April 2019 IIR that, given limited OAO network rollout, the FA component of FACO continues to be wholly reliant on Eircom's ubiquitous network, such that deregulation of FACO would risk reducing the supply of FA, thereby limiting FACO competition.

5.108 Similarly, [REDACTED]⁵⁸⁵ [REDACTED] noted in its response to the IIR that:

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]⁵⁸⁶

5.109 These views suggest that coverage ubiquity continues to be a core expectation of an Access Seeker purchasing FACO. However, in the presence of Managed VoIP, Access Seekers may be willing to accrue ubiquitous coverage using multiple network footprints, rather than a single network footprint. ComReg notes that BT currently offers its White Label VoIP service over both Eircom FTTx and SIRO FTTP, neither of which offers ubiquitous coverage,⁵⁸⁷ and that [REDACTED] [REDACTED] for supply of its White Label VoIP product delivered over these networks.⁵⁸⁸ This suggests that 100% ubiquity provided over a single network may not, in fact, be a prerequisite for an Access Seeker, although a sufficiently high level of overall network coverage arising from the use of multiple networks may be required. In this respect, ComReg notes that, on the WLA market, Access Seekers including Vodafone and BT already purchase VUA from both Eircom and SIRO, which suggests that, on markets upstream of the Relevant FACO Markets, Access Seekers have already demonstrated their willingness to purchase from multiple network operators. ComReg does, however, note that although Access Seekers seem to be willing to use multiple network inputs to deliver Managed VoIP, for example, VUA delivered over SIRO or Eircom FTTx (as per the 2018 WLA/WCA Decision), FNA FACO and VUA are not directly substitutable due to the different technologies and inputs required to deliver voice services over FNA on the one hand, and NG Broadband on the other.

5.110 It also suggests that Access Seekers may be willing to choose between:

- (a) Incurring the added costs associated with purchasing wholesale services from more than one upstream provider, in order to achieve ubiquitous coverage, or
- (b) Purchasing wholesale services from a single upstream provider in the knowledge that this will provide less than ubiquitous coverage levels.

⁵⁸⁵ [REDACTED] [REDACTED]

⁵⁸⁶ [REDACTED] [REDACTED] April 2019 IIR response to Q.19, at p.14.

⁵⁸⁷ As of Q4 2020, approximately [REDACTED] [REDACTED] premises are passed by both SIRO and Eircom FTTP, approximately [REDACTED] [REDACTED] premises are passed by both SIRO and Eircom FTTC, and approximately [REDACTED] [REDACTED] premises are passed by SIRO, Eircom FTTP, and Eircom FTTC. Note: these overlaps were mapped using eircodes, therefore it is likely that the figures could be higher in some cases.

⁵⁸⁸ Eircom FTTx network coverage stood at 86% of premises as of Q4 2020, while SIRO network coverage will extend to c.21% of premises, and, as of Q4 2020, extended to 360,000 premises.

- 5.111 ComReg considers that an effective constraint on the FACO focal product must have sufficient – but not necessarily ubiquitous - coverage to allow an Access Seeker to avoid, or minimise, the transaction costs associated with purchasing FACO from multiple SPs. Thus, any product with insufficient *geographic* coverage is unlikely to fall within the relevant *product* market.
- 5.112 The example of the BT White Label VoIP product suggests that non-ubiquitous coverage offered by an SP may nevertheless be deemed ‘sufficient’ by an Access Seeker, including when it can be combined with coverage from alternative sources of supply which, in combination, provide an overall high degree of coverage. Accordingly, unlike the analysis set out by ComReg in the 2015 FACO Decision, ComReg is now of the view that, having regard to the available evidence, Access Seekers may be willing to make use of upstream inputs which do not necessarily have ubiquitous coverage. ComReg now considers that, in principle, a network which is not ubiquitous is, nevertheless, capable of acting as an effective constraint.

Demand-Side Substitution

- 5.113 Demand-side substitution measures how customers react to price increases, and is an important tool in determining whether a given product should be included on a relevant market, based on the likelihood of end users switching in sufficient numbers to purchases of that product. As set out in further detail below, ComReg is of the view that White Label VoIP delivered over NG Broadband by BT and Eircom is capable of acting as a demand-side substitute on the Relevant FACO Markets. Consistent with the approach taken by the EC, ComReg considers NG Broadband to encompass technologies capable of delivering

“Next generation access (NGA) networks’ (NGAs) means wired access networks which consist wholly or in part of optical elements and which are capable of delivering broadband access services with enhanced characteristics (such as higher throughput) as compared to those provided over already existing copper networks. In most cases NGAs are the result of an upgrade of an already existing copper or co-axial access network.”⁵⁸⁹

- 5.114 In practice, NG Broadband excludes technology which consists entirely of copper, that is, FNA networks including PSTN, ISDN BRA, ISDN FRA, and ISDN PRA, but includes technology which consists fully or partially of optical elements. Accordingly, NG Broadband includes FTTP, FTTC,⁵⁹⁰ and DOCSIS 3.0 and 3.1 CATV.

⁵⁸⁹ Commission Recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA) (Text with EEA relevance) (2010/572/EU) (the ‘**2010 NGA Recommendation**’).

⁵⁹⁰ VDSL is the underlying technology in FTTC. Thus, exchange-based VDSL (eVDSL) is included within FTTC.

- 5.115 As set out at paragraph 4.223 above, ComReg considers that low broadband speed profiles are capable of supporting Managed VoIP once the appropriate QoS markings are set on the VoIP traffic (by the SP's CPE)⁵⁹¹ and adhered to by the network (as they are on Eircom's NG network). QoS is available on all NGA lines by default, and it is the responsibility of the Access Seeker to set the correct QoS markings on the traffic leaving its CPE (e.g. modem). Each voice channel requires bandwidth of approximately 100kbps in the uplink and downlink direction. As a result, one of the lowest NG profiles (7 Mbps download, 1Mbps upload) could support up to 10 VoIP channels simultaneously, thus supporting a Managed VoB service.
- 5.116 The measurement of demand-side substitution is formalised in the hypothetical monopolist test ('HMT'). The HMT assesses whether a small but significant non-transitory increase in price ('SSNIP') above the competitive level - taken to be in the range of 5 to 10% - of a focal product supplied by a Hypothetical Monopolist ('HM') would cause a sufficient number of customers to switch to an alternative substitute product, such that it would render the price increase unprofitable. If enough customers switch to the alternative product, rendering the price increase unprofitable, then the alternative product is also included in the relevant product market. The HMT is carried out for any given number of alternative products which, by means of their characteristics, prices and intended use, may constitute an effective substitute to the focal product. If switching to these alternative products renders the SSNIP of the focal product unprofitable, then these are also included in the definition of the relevant product market.
- 5.117 Eircom is currently the only provider of FNA FACO to Access Seekers, and, since March 2019, Eircom has also offered a wholesale Managed VoIP product on a commercial basis over FTTx to Access Seekers [X [REDACTED] X]. In January 2019, BT launched a wholesale White Label VoIP product to Access Seekers over FTTx which, in principle, could act as a demand-side substitute to the focal product.
- 5.118 An Access Seeker could engage in demand-side substitution by, for example switching from purchasing FNA FACO to self-supplying Managed VoIP, or, in the alternative, purchasing a substitute product at the wholesale level, such as White Label VoIP.

⁵⁹¹ Customer Premises Equipment ('CPE').

- 5.119 To self-supply Managed VoIP, an Access Seeker would need to obtain (or self-supply) NG Broadband access at the wholesale level, for instance by purchasing VUA or Bitstream Plus,⁵⁹² and develop or procure a VoIP platform which would allow it to provide Managed VoIP to its own RFTS end users, thereby avoiding the need to purchase FNA FACO from Eircom.
- 5.120 In order to offer a demand-side substitute at the wholesale level, such as White Label VoIP, an SP would again need to obtain broadband access at the wholesale level, either by rolling out its own network or by purchasing VUA or Bitstream Plus, and developing or procuring a VoIP platform which together would allow it to offer White Label VoIP to Access Seekers.
- 5.121 Barriers to entry to providing a VoIP platform are, in ComReg's view, relatively low in circumstances where a wholesale NG Broadband service is available for the FA component, and provided the SP has a sufficiently sizeable customer base over which to spread these costs. VoIP platforms are available which meet the needs of various business models, from small SPs providing business VoIP services on a regional basis, to large SPs providing VoIP across multiple sectors nationally. VoIP platforms can be rolled out on dedicated hardware purchased from vendors, or as software-only solutions residing on either dedicated commercial off-the-shelf hardware, or in a virtual environment. These VoIP platforms must, however, be integrated into billing and order handling systems, but the complexity of this task is directly related to the capability and flexibility of the existing BSS and OSS systems used by an SP, and the degree of complexity required in the retail product offerings.
- 5.122 Migrating an existing SB-WLR customer to FACO delivered by means of Managed VoIP is a relatively straightforward process, provided that the inter-operator and order management processes function effectively. The prerequisite to any migration is the availability of a suitable broadband service (i.e. with QoS enabled) to transport the VoIP traffic with the appropriate priority over other data traffic. Three actors are involved for every migration from SB-WLR:
- (a) Eircom (making available SB-WLR numbers for migration, providing standalone NGA service in some cases);
 - (b) SP (provisioning Managed VoIP and, in some cases, broadband); and
 - (c) Porting XS⁵⁹³ (number porting/migration in all cases).

⁵⁹² As set out at paragraph 7.153 below, ComReg considers that CG broadband (LLU or CG Bitstream) would be unsuitable for the delivery of Managed VoIP, as it would be unlikely to have the necessary speed and QoS parameters to allow for the delivery of an effective Managed VoIP service.

⁵⁹³ Porting XS is the industry platform used to facilitate Fixed Number Portability ('FNP') in the State.

- 5.123 Broadband provided on the Eircom network will require a PNS⁵⁹⁴ order to migrate from SB-WLR to standalone NGA and free the telephone number for porting off the Eircom network (the SP will need to coordinate PNS order completion and number portability via Porting XS to minimise any outage of the telephone service for the end user). Broadband provided by the SP network will require installation prior to instigation of number porting/migration if broadband is not already available. Once broadband is present, the existing number portability process via Porting XS is used to port/migrate the telephone number off the Eircom network to the recipient SP network.
- 5.124 The recipient SP then needs to coordinate provisioning of the telephone number on its VoIP platform with the Porting XS number portability process. Depending on the solution provided by the recipient SP, the end user may re-use the existing POTS telephone (CPE) or may require a VoIP handset.
- 5.125 To enable the above, SPs may also have to either procure a VoIP platform from a third party or develop one in-house which facilitates the provision of voice services, as well as a modem, and a platform which configures the modem once deployed, and connects to the IP Multimedia Subsystem ('IMS')⁵⁹⁵ switch where all services are uniquely configured for the user interface for the market. SPs have the option to procure access to a cloud VoIP platform from a third party or purchase a standalone platform from an equipment vendor for integration into their own networks. Purchasing from a third party will allow an SP a quicker time to market and a lower upfront cost but will mean less flexibility in product offerings due to the out-of-the-box nature of buying from a third party, and also higher ongoing OPEX costs. This option also allows the SP to flexibly expand capacity as its business grows. On the other hand, an SP procuring its own VoIP platform will incur greater upfront costs in terms of the platform itself and integration into its OSS and BSS systems, but much more flexibility in the product offerings which can be developed, as well as lower OPEX costs.

⁵⁹⁴ 'Provide NGA Soft Migration', or 'PNS', is an order type which allows for the provision of a Standalone NGA subscription arising from a migration from an SB-WLR based service (either porting off-net or ceasing the telephone number). The process is outlined in Section 7.5 of open eir's NGA Industry Process Manual ('IPM') (v21, dated 11 June 2021).

⁵⁹⁵ IP Multimedia Subsystem which is an architecture which enables voice and multimedia services to be provided over an IP network.

5.126 BT⁵⁹⁶ indicated that [✂ [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] ✂]

This suggests that that the option of acquiring a VoIP platform from a third party may be more appropriate for small new entrants, who do not need to migrate across existing customer bases, whereas Access Seekers with existing customer bases may find it more beneficial/appropriate to develop a bespoke VoIP platform in-house.

5.127 Despite these costs, Managed VoB subscriptions are growing (noting that some new Managed VoB connections may be at greenfield sites, and therefore avoid some switching costs). In particular, ComReg data indicate that, although the majority of Managed VoB subscriptions continue to be provided over CATV, growth in Managed VoB subscriptions delivered over WLA/WCA substantially exceeded growth in Managed VoB subscriptions delivered over CATV in Q4 2020, as set out at Table 30 below. These data indicate growth in both Eircom self-supply of Managed VoB and Access Seeker supply of retail Managed VoB using Eircom WLA/WCA or SIRO WLA wholesale inputs to provide the FA component. This suggests that barriers to Access Seekers developing their own Managed VoB capabilities are lower and, in some cases, have been overcome:

⁵⁹⁶ Email from BT to ComReg, 2 September 2019.

Table 30: Retail Managed VoB subscriptions, Q3 2015 – Q4 2020 [REDACTED]

	Q3 2015	Q4 2020	Change
Virgin Media	[REDACTED] ⁵⁹⁷	[REDACTED] ⁵⁹⁸	[REDACTED] ⁵⁹⁹
Eircom	[REDACTED] ⁶⁰⁰	[REDACTED] ⁶⁰¹	[REDACTED] ⁶⁰²
Access Seekers	[REDACTED] ⁶⁰³	[REDACTED] ⁶⁰⁴	[REDACTED] ⁶⁰⁵
Total	[REDACTED] ⁶⁰⁶	[REDACTED] ⁶⁰⁷	[REDACTED] ⁶⁰⁸

Is White Label VoIP a potential Demand-Side Substitute?

- 5.128 ComReg considers that White Label VoIP is a potential demand-side substitute to the focal product. White Label VoIP is an end-to-end product which delivers the origination (and termination, where calls are delivered on-net) components of Managed VoIP. Accordingly, White Label VoIP is closer to the characteristics of WLV (which is excluded from the relevant market definition), than SB-WLR (which is the focal product). It is therefore necessary to detail why ComReg considers that WLV falls outside the relevant product market, but White Label VoIP fall within the relevant market, even though both are end-to-end products consisting of access and origination components.
- 5.129 As set out at paragraphs 5.66 to 5.70 above, WLV is excluded from the relevant market (SB-WLR upstream inputs that are a component of WLV are, however, included) on the following grounds:
- Access Seekers purchasing FACO must operate switching and routing infrastructure to receive FVCO traffic from Eircom for onward routing. Therefore, an Access Seeker switching from purchasing SB-WLR to WLV would be required to pay for services which it is already potentially capable of self-supplying; and
 - FACO is an input to the supply of WLV, which suggests that WLV is positioned downstream from the Relevant FACO Markets (but upstream from RFTS).

⁵⁹⁷ In the range of 350,000-375,000.

⁵⁹⁸ In the range of 300,000-325,000.

⁵⁹⁹ In the range of 50,000-75,000.

⁶⁰⁰ In the range of 0-25,000.

⁶⁰¹ In the range of 100,000-125,000.

⁶⁰² In the range of 100,000-125,000.

⁶⁰³ In the range of 25,000-50,000.

⁶⁰⁴ In the range of 100,000-125,000.

⁶⁰⁵ In the range of 75,000-100,000.

⁶⁰⁶ In the range of 375,000-400,000.

⁶⁰⁷ In the range of 500,000-525,000.

⁶⁰⁸ In the range of 125,000-150,000.

- 5.130 These factors, while relevant to the provision of CG end-to-end WLV are not necessarily applicable to the provision of NG end-to-end services (White Label VoIP). This is principally because no SP offers a standalone wholesale Managed VoIP FACO product delivered over NG Broadband – that is, a product which conveys the Access Seeker’s FVCO traffic to another SP to carry out the routing function. The absence of a standalone wholesale Managed VoIP FACO product delivered over NG Broadband implies that there is no scope to describe such a product as existing separately from, and upstream of, a downstream White Label VoIP product, to which it is an input.
- 5.131 The reasons set out above for excluding WLV from the relevant market do not similarly apply in respect of White Label VoIP. In particular, in the absence of a standalone wholesale Managed VoIP FACO product delivered over NG Broadband, the closest demand-side substitute delivered over NG Broadband to the FACO focal product is White Label VoIP.
- 5.132 For these reasons, ComReg considers that, in the absence of a standalone wholesale Managed VoIP-based FACO product delivered over NG Broadband, it is appropriate, from a product characteristics perspective, to conclude that White Label VoIP – that is, an NG end-to-end wholesale product consisting of both FVCO and FA components – is capable of acting as an effective demand-side substitute to the focal product.

BT White Label VoIP

- 5.133 According to its response to the April 2019 IIR, BT launched its White Label VoIP product in January 2019, [REDACTED]
[REDACTED]
[REDACTED] [REDACTED].⁶⁰⁹ BT’s White Label VoIP product consists of a proprietary end-to-end platform which includes a call origination component, and a fixed access component which is reliant on BT’s purchases of standalone wholesale FTTx broadband inputs from both open eir and SIRO. BT notes that the geographic reach for its White Label VoIP service is limited to areas where SIRO or Eircom FTTx is available, and has also separately confirmed to ComReg⁶¹⁰ that its White Label VoIP can be supplied for both FTTC and FTTP platform orders.

⁶⁰⁹ As of Q4 2019, [REDACTED]
[REDACTED].

⁶¹⁰ SP responses to ComReg QKDR Q2 2019 queries - VoB wholesale and retail.

- 5.134 At this stage, it is important to note that the outcome of the SSNIP test is not contingent on whether *any* switching would occur. Rather, it is contingent on whether *sufficient* switching would occur, to render the SSNIP unprofitable. Subject to widespread availability, and considering any switching costs, BT is likely, on a forward-looking basis, to act as a sufficiently effective demand-side substitute to the focal product, from a product perspective. However, this demand-side substitution possibility is only likely to be effective in areas where BT has geographic coverage through its purchases of WLA from SIRO and Eircom, and of WCA from Eircom. BT has also confirmed that it expects that its White Label VoIP product would also be compatible with WLA products to be provided by NBI.
- 5.135 ComReg further considers that the limited self-supply by BT of White Label VoIP to its own large corporate retail customers is likely to be easily and quickly convertible to merchant market supply within a reasonable timeframe, and should therefore be included in the assessment of BT White Label VoIP.

Eircom White Label VoIP

- 5.136 At the wholesale level, Eircom supplies a White Label VoIP product on a commercial basis, which it launched in March 2019, [REDACTED] [REDACTED] At retail level, Eircom already self-supplies a Managed VoB product (eir Broadband Talk) to its retail FTTx customers,⁶¹¹ as well as a Managed VoIP product (eir SIP Voice) to its business retail customers.⁶¹²
- 5.137 In the case of Managed VoB, the underlying FA element is NG Broadband, which can be provided by means of VUA or Bitstream Plus delivered over both FTTC and FTTP (i.e. FTTx). The FVCO element is delivered by means of a VoIP platform which makes use of [REDACTED] Like BT White Label VoIP, the Eircom product is an end-to-end White Label VoIP service, rather than a FACO-only service.
- 5.138 As of Q4 2020, Eircom had [REDACTED] [REDACTED] Managed VoIP RFTS subscriptions. The number of White Label VoIP subscriptions provided at the wholesale level by Eircom to [REDACTED] [REDACTED] Accordingly, approximately [REDACTED] [REDACTED] of Managed VoIP subscriptions provided by Eircom are self-supply of RFTS provided to its retail arm.

⁶¹¹ See <https://www.eir.ie/eirbroadbandtalk/>

⁶¹² See <https://business.eir.ie/sipvoice/>

⁶¹³ Between 50,000 and 75,000.

⁶¹⁴ Between 0 and 25,000.

⁶¹⁵ Between 90% and 100%.

- 5.139 ComReg considers that Eircom self-supply (that is, where Eircom provides both the fixed access path and the FVCO product on a self-supply wholesale basis over broadband) and Eircom merchant market supply of Managed VoB both fall within the Relevant FACO Markets.
- 5.140 ComReg accordingly concludes, for reasons similar to those set out above in respect of BT's White Label VoIP product, that Eircom White Label VoIP (including self-supply) acts as an effective direct demand-side substitute to the focal product, in those areas served by broadband of appropriate quality (that is, NG Broadband capable of delivering the speed and QoS necessary for Managed VoIP). Eircom FTTx broadband capable of delivering Managed VoIP extended to approximately 86% of premises in the State, as of Q4 2020.
- 5.141 ComReg further considers that the self-supply by Eircom of Managed VoIP to its own retail customers (eir Broadband Talk, eir SIP Voice, and eir Collaborate) is likely to be easily and quickly convertible to merchant market supply and should be included in ComReg's assessment of Eircom wholesale Managed VoIP.
- 5.142 ComReg also notes that enet describes the availability of a White Label VoIP service on its website, although with minimal description.⁶¹⁶ In response to a query from ComReg, enet indicated it provides a White Label VoIP product bundled with wholesale broadband access [§
[REDACTED] §] enet therefore does not offer a standalone White Label VoIP product, as it can only be purchased together with wholesale broadband access. As of Q4 2020, enet provided [§
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED] §]
- 5.143 Given the extremely limited rollout of White Label VoIP by enet, ComReg does not, at this stage, consider that enet White Label VoIP is likely to act as a sufficiently effective direct demand-side constraint, and therefore does not include enet White Label VoIP in the relevant market. However, ComReg notes that its exclusion, or inclusion, in the market would not have any effect on the regulatory outcome of this Decision.

⁶¹⁶ <https://www.enet.ie/next-generation-ip-services.html>, accessed on 2 March 2021.

Conclusion on demand-side substitutes

- 5.144 Aside from BT and Eircom, no other SP indicated in its response to ComReg that it offered, or intended to offer, FNA FACO (SB-WLR) or NGA FACO (White Label VoIP) to Access Seekers over any form of network infrastructure. In this respect, were Eircom to impose a SSNIP of the focal FACO products, existing Access Seeker purchasers would, to the extent that White Label VoIP were available at a particular location, be in a position to readily switch to an alternative supply of FACO, which does not make use of FNA infrastructure.
- 5.145 White Label VoIP may be provided over both FTTC and FTTP. ComReg accordingly concludes that BT White Label VoIP and Eircom White Label VoIP delivered over FTTx currently act as effective direct demand-side substitutes to the focal product, but only where there is sufficient coverage of NG Broadband. ComReg data suggest that the combined Eircom and SIRO NG Broadband footprint, over which VUA or Bitstream Plus are, in principle, capable of being delivered, extended to over 80%⁶¹⁷ of premises in the State, as of Q4 2020. It follows that, in principle, the provision of White Label VoIP by Eircom and BT is feasible in this geographic area, and will, on a forward-looking basis, be feasible over NBI's FTTP network, once it is rolled out (on the assumption that Access Seekers buy wholesale NG Broadband from NBI).
- 5.146 On the basis of intended functionality, and the extent of current and planned geographic coverage, ComReg concludes that White Label VoIP products offered by BT⁶¹⁸ and Eircom are likely to act as demand-side substitutes to the focal product. For the reasons set out at paragraphs 5.134 and 5.141 above, self-supply by BT and Eircom of White Label VoIP is also likely to act as a demand-side substitute falling within the relevant product market.
- 5.147 Finally, based on its extremely limited rollout and activity in this space, ComReg excludes enet White Label VoIP from the relevant markets.

Supply-Side Substitution

- 5.148 ComReg must also consider whether any alternative products could represent an effective supply-side substitute to the focal product and the direct demand-side constraints identified above. Supply-side substitution measures how potential (rather than actual) competitors are likely to react to price increases and the level of constraint imposed by consequential entry. The HMT assesses whether a SSNIP of a product(s) supplied by a HM would cause sufficient new entry in the short term into the relevant market by potential competitors, such that it would render the price increase unprofitable.

⁶¹⁷ Based on Eircom network data set out at paragraph 5.264 below, and conservatively assuming 100% overlap between SIRO and Eircom networks.

⁶¹⁸ BT's network coverage is contingent on suitable FTTx network coverage provided by both Eircom and SIRO (and potentially NBI) and accordingly, in principle, passes at least 80% of premises in the State.

- 5.149 The Notice on Market Definition makes clear that the impact of supply-side substitution must be equivalent to the impact of demand-side substitution, in terms of effectiveness and immediacy:

*“Supply-side substitutability may also be taken into account when defining markets in those situations in which its effects are **equivalent to those of demand substitution in terms of effectiveness and immediacy**. This means that suppliers are able to switch production to the relevant products and market them in the short term without incurring significant additional costs or risks in response to small and permanent changes in relative prices. When these conditions are met, the additional production that is put on the market will have a disciplinary effect on the competitive behaviour of the companies involved. **Such an impact in terms of effectiveness and immediacy is equivalent to the demand substitution effect.**”*

- 5.150 In particular, ComReg considers whether an SP would be likely, in response to a HM's SSNIP of FACO prices above the competitive level, to switch production into FACO in the immediate to short term (typically within one year), without incurring significant costs, and start supplying services of equivalent characteristics to the focal product. ComReg must also consider whether supply-side substitution would likely render the HM's price increase unprofitable through any consequential demand-side substitution.

- 5.151 Aside from the demand-side substitution possibility identified at paragraph 5.145 above, constraints on the focal LL-FACO and HL-FACO products may also arise from potential competitors who, by means of supply-side substitution, may offer wholesale merchant market FACO. This could potentially include suppliers of broadband or high capacity business data services (e.g. leased lines) supplying FACO by means of wholesale Managed VoIP (i.e. Managed VoB, Hosted PBX, or SIP Trunking).

Development costs and systems requirements

- 5.152 In order to provide a FACO product over broadband on either a self-supply or a merchant market basis, an SP would need to develop or acquire a VoIP platform. The costs involved in developing a VoIP platform would likely vary and depend on a number of factors such as:

- (a) **Economies of scale:** larger SPs with scale in terms of customer numbers and resources will likely face greater costs associated with a VoIP platform implementation, including costs associated with hardware (such as media gateway controllers and media gateways), systems and IT/software integration costs. However, such SPs may also have access to greater financial or other resources and be in a position to spread these costs over their larger customer base.

- (b) **Presence in the market.** if the SP is already active in the RFTS market, it may be able to utilise existing IT systems and processes (mediation, billing etc.), particularly if it is already offering RFTS by means of Managed VoIP. However, if an SP is a new entrant to the RFTS market, it will need to incur (potentially considerable) costs associated with acquiring billing systems, CPE, appropriate QoS standards, traffic prioritisation, and other technical requirements necessary to provide a FACO service over NG Broadband which would be of at least equal quality to the equivalent SB-WLR service, which may represent a barrier to investing in such upgrades.

- 5.153 In order to be active in the provision of FACO, an SP would also require effective front and back office operation 'service wraps' which would cover all aspects of the provisioning and service assurance functions. These service wraps would encompass order and fault management processes, and Managed VoIP SPs using Eircom VUA or Bitstream Plus inputs or SIRO VUA would also need to ensure that their individual IT systems and processes dovetail with open eir's wholesale systems and processes, in order to create an effective end-to-end delivery chain. In practice, this means that Access Seekers would need to tailor their access to open eir's Unified Gateway ('UG')⁶¹⁹ to seamlessly match their own systems and processes, and vice versa. 53 SPs currently interact with the UG and, for prospective Access Seekers not already active on the UG, this would represent an additional cost of market entry, compared to existing Access Seekers.⁶²⁰
- 5.154 An SP would also require complex product and fault management systems to facilitate the various possible combinations of broadband and RFTS bundles. Similarly, the billing mediation and rating software must also be matched, not just to produce individual retail end user bills (in the case of self-supply of FACO) or wholesale bills (in the case of merchant market supply of FACO), but also to allow complex bill reconciliation.⁶²¹
- 5.155 The systems requirements set out above highlight that the development of a Managed VoIP-based FACO capability requires network, hardware, software and operational support adjustments that would likely take a significant length of time to develop, in the case of an SP which was not already offering Managed VoIP RFTS, and a shorter, but likely non-trivial, length of time and development effort where the SP already offers Managed VoIP RFTS.

⁶¹⁹ open eir's UG is an order management and fault handling system designed to be the primary access point between Eircom and Access Seekers. It accepts and validates Access Seeker orders and faults, and is a software brokerage system inputting to Eircom's production and fault management systems.

⁶²⁰ <https://www.openeir.ie/unified-gateway/>

⁶²¹ The retail Customer Data Records ('CDRs') should correspond to the relevant wholesale invoices of the upstream wholesale SPs.

- 5.156 Given the set-up costs associated with entering the Relevant FACO Markets by means of supply-side substitution on the basis of the purchase of wholesale NG Broadband inputs, it may be that SPs consider it more economical to purchase wholesale NG Broadband inputs for the purpose of self-supply only of Managed VoIP RFTS to their own end users. If an SP were to enter the Relevant FACO Markets by means of supply-side substitution, given the upfront costs involved in doing so, that SP could potentially require some level of upfront commitment from Access Seekers prior to investing, to mitigate the risk of failing to recover the costs of investment, [X ██████████ ██████████ X]
- 5.157 Broadly, supply-side substitution possibilities are likely to arise from SPs already present on closely-related markets, who may already have a level of market expertise, or may have engaged in investments which partially fulfil infrastructure requirements associated with supply-side substitution. In this regard, ComReg distinguishes two categories of supply-side substitution possibilities. These are:
- (a) 'Top-down' supply-side substitution from SPs already active in the provision of wholesale NG Broadband inputs. In such cases, supply-side substitution would arise where the SP added the provision of a wholesale Managed VoIP platform to its existing provision of wholesale NG Broadband access (WLA and/or WCA):
 - (i) Wholesale-only OAO FTTP SPs (discussed in paragraphs 5.160 to 5.168 below); and
 - (ii) SIP Trunking or Hosted PBX over leased lines (discussed in paragraphs 5.169 to 5.176 below).
 - (b) 'Bottom-up' supply-side substitution from SPs already active in the provision of RFTS only. In such cases, supply-side substitution would arise where the SP moves upstream from existing provision of RFTS self-supply to its own end users, to wholesale provision of FACO:
 - (i) CATV (discussed in paragraphs 5.177 to 5.184 below);
 - (ii) FWA (discussed in paragraphs 5.185 to 5.190 below);
 - (iii) Very localised vertically-integrated OAO FTTP (discussed in paragraphs 5.191 to 5.197 below);
 - (iv) Mobile telephony (discussed in paragraphs 5.198 to 5.199 below); and
 - (v) RFTS SPs active in the self-supply of Managed VoIP using wholesale inputs (discussed in paragraphs 5.200 to 5.203 below).

'Top-down' supply-side substitution using wholesale NG Broadband inputs

- 5.158 ComReg considers whether an SP currently active in the provision of wholesale NG Broadband inputs (WLA and/or WCA), but not currently active in the supply of FACO, could act as an effective supply-side substitute on the Relevant FACO Markets by offering a Managed VoIP FACO capability over such WLA/WCA inputs,⁶²² and, if so, whether this would act as a sufficiently effective supply-side constraint to warrant inclusion in the relevant markets.
- 5.159 Coupled with a VoIP platform for FVCO, on a top-down basis, an SP could deploy Managed VoIP-based FACO making use of wholesale NG Broadband inputs, by developing a VoIP platform itself and integrating this into its associated order management and billing systems, or acquiring a VoIP platform from a third party.

Wholesale-only OAO FTTP networks

- 5.160 ComReg considers the potential for supply-side substitution arising from wholesale-only OAO (non-Eircom) FTTP networks. In such instances, supply-side substitution would occur were an existing provider of WLA or WCA to buy or build a VoIP platform which would enable it to sell White Label VoIP, as well as WLA or WCA, to Access Seekers. Both SIRO and NBI intend to offer FTTP connectivity to Access Seekers on a wholesale-only basis, and do not themselves intend to offer retail services. As noted at paragraph 3.121 above, **SIRO** is currently rolling out its FTTP network to 51 locations nationwide, and, as of Q4 2020, had passed 360,000 premises,⁶²³ and accrued [X] customers. **NBI** has commenced the initial stages of FTTP network rollout within the NBP IA and, as of May 2021, NBI services were live in parts of both Cork and Cavan. ComReg notes that many of the development costs, systems requirements, and Access Seeker response conditions set out above, apply in respect of the use of SIRO or NBI wholesale NG Broadband inputs.
- 5.161 SIRO is focussed on the rollout of its network to 51 towns nationwide, while the NBP IA is located in predominantly rural areas nationwide, focussing on areas not served – and unlikely to be commercially served - with NG Broadband. Accordingly, there is likely to be little overlap between the SIRO and NBI networks.

⁶²² SPs tend not to offer Managed VoIP over FNA, due to bandwidth, speed, capacity constraints and lack of QoS guarantees, as noted by [X] in its response to the April 2019 IIR.

⁶²³ www.siro.ie.

⁶²⁴ In the range of 40,000 to 50,000.

- 5.162 Before carrying out a detailed supply-side substitution analysis, ComReg notes that SIRO has confirmed⁶²⁵ that it is not active in the provision of such services. ComReg also notes that SIRO has not indicated any active intention to commence provision of such services.
- 5.163 As of May 2021, NBI is in the early stages of its network rollout.⁶²⁶ The services which NBI is required to offer, as well as additional services which it is entitled to offer, subject to compliance with certain underlying conditions, were first set out in the 2015 NBP Project Information Memorandum ('PIM') issued by the Department of Communications, Energy and Natural Resources,⁶²⁷ and finalised in the contract signed with NBI on 19 November 2019. In addition to its primary objective of providing wholesale NG Broadband, the PIM permits NBI to supply additional wholesale offerings including, but not limited to, leased line and voice access services. The delivery of these additional services is only permitted upon completion of the rollout of wholesale NG Broadband and is also subject to the presence of reasonable demand in the market. The provision of such services must also be in accordance with state aid rules and other regulatory policy, as determined by ComReg.
- 5.164 ComReg therefore forms the view that NBI would, in principle, and if it satisfied strict rollout, demand, state aid and regulatory criteria, be capable of entering the Relevant FACO Markets by means of supply-side substitution. However, it should be noted that it is not clear whether NBI currently has plans to do so, or whether it would be capable of doing so within the lifetime of this market review, given that it cannot roll out additional services until it has first completed its broadband rollout, which it is scheduled to do over a seven-year period (beyond the lifetime of the current market review).

⁶²⁵ By means of email dated 23 April 2019.

⁶²⁶ <https://nbi.ie/news/latest/2021/02/02/nbi-connects-first-premises-in-cavan-under-the-national-broadband-plan/>
See Table 7 for NBI's projected rollout.

⁶²⁷ Department of Communications, Energy and Natural Resources, 2015. "National Broadband Plan: State Led Intervention Project Information Memorandum" <https://s3-eu-west-1.amazonaws.com/govieassets/8528/6abdd259605a42439295d496c7ca8496.pdf>

- 5.165 Suppose an Access Seeker purchased FACO in the form of SB-WLR. It is not clear to what extent it would consider market entry by a network operator adding wholesale Managed VoIP⁶²⁸ to its existing provision of wholesale NG Broadband access to be a demand-side substitute to SB-WLR (that is, FNA FACO). This is due to the currently more limited rollout of SIRO (with NBI's network rollout having only recently commenced), which means that it would only satisfy demand within its network footprint. The Access Seeker would therefore still need to either self-supply or source alternative SPs outside the network footprint. Moreover, Access Seekers would incur switching costs associated with interconnecting with the Managed VoIP FACO alternative (to the extent that they were not already interconnected – for instance, for use of other services already offered), including systems integration and installing CPE such as VoIP telephones.⁶²⁹ These costs may disincentivise switching to FACO delivered over wholesale-only OAO FTTP (or may make self-supply of FACO – which is a potential indirect retail constraint - a comparatively more attractive proposition).
- 5.166 Whether standalone VUA and Bitstream Plus (WLA and WCA products respectively) could support a FACO product that meets the expectations of Access Seekers would depend on a number of factors, including:
- (a) Costs to the potential FACO SP of developing or acquiring a VoIP platform;
 - (b) Switching costs (described at paragraph 5.134 above) which a potential Access Seeker would incur in moving from SB-WLR to FACO offered over Bitstream Plus or VUA; and
 - (c) Whether the quality of the broadband service supports robust RFTS.
- 5.167 In principle, ComReg considers that the provision of FACO over SIRO or NBI FTTP is technically possible. However, ComReg is not aware of specific plans by SIRO or NBI to offer a FACO-based wholesale Managed VoIP product. Accordingly, to offer RFTS by means of Managed VoIP, Access Seekers would have to purchase WLA from SIRO or NBI and then procure or develop their own VoIP platform. In such a scenario, SIRO or NBI would only be offering the FA component of FACO, while the Access Seeker in question would be self-supplying the FVCO component. In such instances, a wholesale-only FTTP network could not be held to fall within the Relevant FACO Markets by means of supply-side substitution on the grounds that the provision of FA only amounts to the provision of part of the FACO product.

⁶²⁸ Noting that Managed VoIP includes RFTS delivered in the form of Managed VoB, Hosted PBX, or SIP Trunking.

⁶²⁹ Except in instances where the legacy telephone handsets support both FNA and Managed VoIP, for example https://www.gigaset.com/hq_en/gigaset-a540-ip-anthracite/.

5.168 ComReg is, therefore, of the view that supply-side substitution by means of hypothetical FACO provided by SIRO or NBI is unlikely to warrant inclusion in the Relevant FACO Markets, although ComReg recognises that the wholesale NG Broadband access sold by these SPs can be used as inputs to wholesale White Label VoIP, or, in the alternative, by SPs to self-supply Managed VoIP-based RFTS.

FACO delivered over Leased Line SIP Trunking and Hosted PBX

- 5.169 SIP Trunking and Hosted PBX are capable of being delivered over a variety of platforms. ComReg has considered the degree to which supply-side substitution from SPs using SIP Trunking or Hosted PBX over leased lines (also known as '**Wholesale High Quality Access**', or '**WHQA**') could be used to potentially provide wholesale Managed VoIP-based FACO, and the extent to which this might act as a constraint in the HL-FACO Market, noting that leased lines, as an access component only, are unlikely themselves to be deemed effective supply-side substitutes on the HL-FACO market.⁶³⁰ SIP Trunking and Hosted PBX are two of the three means of delivering Managed VoIP (the other being Managed VoB), and can be delivered over WLA, WCA or WHQA, where the SP originating a voice call possesses the appropriate CPE and other necessary infrastructure.
- 5.170 Leased lines are technically capable of supporting various wholesale and retail services, including RFTS and - potentially - FACO. RFTS can be provided in a product bundle over a leased line⁶³¹ using SIP Trunking or Hosted PBX, and the potential indirect retail constraint arising from business user purchases of SIP Trunking or Hosted PBX is discussed below at paragraph 5.294.
- 5.171 In the case of HL-FACO, leased lines can be used to provide access and data transmission services at the wholesale level. Leased lines could therefore provide the HL-FA component, while a SIP Trunking or Hosted PBX package configured to wholesale purposes would provide the FVCO component of a supply-side substitute to FACO delivered over leased lines.
- 5.172 In its response to the April 2019 IIR, BT indicated that it provides wholesale SIP Trunking to other SPs. ComReg notes that a number of other SPs including BT, Colt, Eircom, and Verizon also offer business connectivity services on a wholesale and retail basis.

⁶³⁰ A leased line is a transmission link and therefore would not, in and of itself, represent a demand-side substitute for HL-FACO. Leased lines are currently subject to regulation by ComReg, pursuant to the 2014 Recommendation.

⁶³¹ ComReg published its assessment of competition in the leased lines markets in January 2020: *Market Review - Wholesale High Quality Access at a Fixed Location. Response to 2018 Further Consultation and Decision D03/20* (the '**2020 WHQA Decision**').

- 5.173 An SP already active in the provision of RFTS by means of SIP Trunking over leased lines could potentially shift from self-supply of FACO to its own SIP Trunking end users, to supplying FACO on a merchant market basis over leased lines to other Access Seekers. In doing so, an SP would be supplying a full HL-FACO product consisting of HL-FA (the leased line) and FVCO (the SIP Trunk) to an Access Seeker. This product could, in principle, meet the needs of corporate customers with heavy data usage and RFTS requirements.
- 5.174 The extent to which SIP Trunking by means of leased lines could act as a direct supply-side substitute for the HL-FACO focal product is not clear. A large corporate end user will have distinctive RFTS requirements which may be met by an Access Seeker purchasing HL-FACO in the form of SB-WLR from Eircom, where the transmission link is provided by ISDN FRA or ISDN PRA with enhanced SLAs. However, ComReg considers that there is currently insufficient evidence indicating that SIP Trunking provided over leased lines is likely, within the short to medium term, to pose an effective direct competitive constraint on the provision of HL-FACO.
- 5.175 This conclusion is supported by ComReg research which suggests that, from a pricing perspective, there is a break in the chain of substitution between HL-FACO over ISDN FRA or PRA on the one hand, and leased lines on the other hand (assuming that a business is not already separately paying for a leased line for data purposes, and ISDN FRA/PRA for RFTS purposes). As the following table indicates, Ethernet leased line prices – which do not include an FVCO component – are approximately two and a half to three and a half times more expensive for equivalent access channels than ISDN FRA or ISDN PRA. Accordingly, in response to a SSNIP of the focal HL-FACO product, ComReg is of the view that insufficient switching to leased lines would occur, to render that SSNIP unprofitable:

Table 31: Comparative cost of HL-FACO and Ethernet⁶³² leased lines, Q4 2020⁶³³

Product	Voice channels	New connection charge	Monthly rental		Total cost over 3 years	
			Total	Per channel	Total	Per channel
ISDN FRA	16	€2,837	€143	€8.95	€7,991	€499
ISDN PRA	30	€2,837	€238	€7.94	€11,414	€380
Ethernet, 10Mb/s	16	Intentionally blank			€27,660	€1,728
	30	Intentionally blank			€27,660	€922
	75	Intentionally blank			€27,660	€369
	100	Intentionally blank			€27,660	€277

5.176 Table 26 above also shows leased line pricing for an illustrative example of NGA Ethernet requiring same region handoff, 1.5km radial distance on average from the exchange, and delivering 10Mbit/s, which similarly demonstrates the presence of a significant price difference. Accordingly, ComReg is of the view, based on the significant differences in pricing and functionality set out above between leased lines on the one hand, and ISDN FRA and ISDN PRA on the other hand, that FACO delivered over leased lines would not be an effective supply-side substitute for HL-FACO (although SIP Trunking or Hosted PBX delivered over NG Broadband WLA or WCA would fall within the Relevant HL-FACO Product Market).

‘Bottom-up’ supply-side substitution

5.177 ComReg also considers whether an SP currently active in the provision of RFTS by means of Managed VoIP could act as a supply-side substitute on the Relevant FACO Markets by offering a Managed VoIP FACO capability at the wholesale level, and, if so, whether this would act as a sufficiently effective supply-side constraint to warrant inclusion in the relevant markets.

5.178 On a bottom-up basis, an SP could deploy Managed VoIP-based FACO by integrating up the supply chain from its self-supply of RFTS by means of wholesale access inputs and a VoIP platform, by offering this access and calling platform to other Access Seekers.

⁶³² The Ethernet pricing data in this table are based on Annex 5 to the 2020 WHQA Decision, a report prepared by Oxera in September 2019 on behalf of ComReg entitled “Assessing whether there is a bandwidth break at 1Gbps in MI WHQA Services”. A number of cells in the table are empty. This is because connection charges are not charged on a standalone basis for retail leased lines, and are instead bundled into the overall cost.

⁶³³ ComReg notes the recent development of a wholesale 1mb LL offering, but the technical capacity associated with this is similarly unlikely to be a suitable substitute for a HL-FACO Service.

5.179 Before carrying out a detailed supply-side substitution analysis, ComReg notes that it is not aware of plans by SPs currently offering Managed VoIP on the RFTS market to enter the upstream Relevant FACO Markets. Accordingly, ComReg's assessment starts from a founding assumption that no Managed VoIP RFTS SPs currently have plans to enter the Relevant FACO Markets.

CATV

5.180 ComReg considers potential supply-side substitution arising from vertically-integrated CATV SPs which supply RFTS. In particular, Virgin Media offers retail bundles including RFTS, broadband, and TV over its CATV network, as well as mobile telephony offered on a MVNO basis over Three's network. Virgin Media does not sell RFTS on a standalone basis. Virgin Media already self-supplies FACO to facilitate its delivery of RFTS as part of a bundle but does not offer FACO to Access Seekers on a merchant market basis.

5.181 ComReg notes that Virgin Media has neither publicly, nor in its response to the IIR, expressed an interest in providing FACO on its CATV network on a merchant market basis. Even if Virgin Media were to enter the FACO markets in response to a SSNIP by the HM, such entry would likely involve significant time delays and incur significant costs associated with, for example, the provisioning of wholesale billing systems and order management interfaces.

5.182 As with migrating to any other platform, Access Seekers would also incur costs when switching to FACO hypothetically provided by Virgin Media associated with, for example, interconnecting with Virgin Media and migrating retail end users to a VoIP-based FACO platform. Furthermore, switching to Virgin Media could involve stranding interconnect circuits and associated equipment already in place with Eircom, the costs of which may be sunk. Access Seekers would also likely need to develop their own IT and order handling systems to integrate with Virgin Media's order handling and management systems. Access Seekers would also be faced with replacing RFTS CPE, such as modems and telephone handsets, to ensure compatibility with VoIP-based FACO delivered over CATV. Such factors would be likely to discourage Access Seekers from switching, and even were they to switch, the likely duration of the transition process would be such that it would undermine the immediacy of any competitive impact.

5.183 ComReg considers that supply of FACO on a CATV network should not be included as a supply-side substitute because:

- (a) Virgin Media has specifically ruled out offering FACO to Access Seekers on a merchant market basis;
- (b) Virgin Media is therefore unlikely to enter the FACO Markets in response to small but significant non-transitory changes in relative prices; and

- (c) Even if it were minded to offer merchant market FACO, it is unlikely that Virgin Media could provide a FACO product to third parties in a timely manner, without incurring significant additional costs.

5.184 Virgin Media also stated in its April 2019 IIR Response that [§
 [REDACTED]
 [REDACTED]
 [REDACTED] §]

5.185 ComReg's position is that, as set out in its assessment of indirect retail constraints below, the ability of SPs to self-supply RFTS making use of wholesale NG Broadband inputs would potentially undermine the incentive of new SPs to, instead, purchase FACO offered over, *inter alia*, CATV.

5.186 For these reasons, ComReg considers that merchant market FACO hypothetically supplied over Virgin Media's CATV network is unlikely to provide an effective supply-side constraint on the provision of FACO by a HM within the period of this market review. ComReg considers whether the provision of RFTS by Virgin Media (using self-supplied FACO inputs) amounts to an effective indirect retail constraint on the focal product at paragraphs 5.309 to 5.316 below.

FWA

5.187 ComReg has considered the potential for supply-side substitution arising from vertically-integrated FWA SPs currently offering RFTS entering the Relevant FACO Markets. As noted in Section 3,⁶³⁴ Imagine and other smaller providers of FWA offer Managed VoB-based RFTS as an 'add-on' to their FWA broadband service.⁶³⁵ As of Q4 2020, data provided to ComReg indicate that [§ [REDACTED] §]⁶³⁶ Managed VoB subscriptions were delivered over FWA.

5.188 Imagine does not currently offer FACO. With respect to the potential for supply-side substitution on FWA networks, ComReg notes that:

- (a) It is unclear whether it would be technically possible to provide an effective substitute for FACO over FWA which would support a voice service of sufficient quality to meet the expectations of Access Seekers (and, ultimately, RFTS end users);

⁶³⁴ See paragraphs 3.29 to 3.35 above.

⁶³⁵ In addition to using FWA to provide RFTS and broadband, Imagine also purchases other wholesale inputs, and use these inputs to offer RFTS and retail broadband.

⁶³⁶ In the range of 25,000 to 50,000.

- (b) It is unlikely that there would be significant wholesale demand for FACO provided over FWA, even if it were technically possible to do so. Since Q3 2014, demand for broadband and other services provided over FWA networks has fallen significantly, and at Q4 2020 stood at 61,480 subscribers.⁶³⁷ As a platform for the potential delivery of FACO, FWA appears to be in decline;
- (c) Spectrum used for the provision of FWA is licensed on a regional basis with six SPs active as of Q4 2020 (a decline from approximately 20 SPs as at Q3 2013). No FWA network offers significant network coverage, nor is there likely to be national coverage arising from all of the FWA networks collectively. However, Imagine has announced plans to roll out '5G ready' fixed wireless access to 1 million premises in rural Ireland,⁶³⁸ and, as of June 2021, had announced the launch of this service at 268 fibre hubs covering 1.18 million premises nationwide.⁶³⁹ Even with such potential coverage, Access Seekers would need to purchase wholesale services from multiple FACO SPs to provide RFTS to end users located throughout the State. This could impose additional transaction costs on FACO;
- (d) FACO over FWA would deliver Managed VoB RFTS. Access Seekers would be likely to incur costs when switching to a Managed VoB-based FACO SP, as described at paragraph 5.182 above. These factors may discourage Access Seekers from switching; and
- (e) In its 2018 WLA/WCA Decision, ComReg concluded that FWA should not be included in the WLA Relevant Product Market or the WCA Relevant Product Market, on the grounds that it was unlikely that there would be sufficient demand from Access Seekers for such a product. Accordingly, Access Seekers would be unlikely to purchase wholesale broadband inputs provided over FWA in response to a SSNIP.⁶⁴⁰

5.189 ComReg considers that the supply of FACO by FWA-based SPs is unlikely to provide an effective supply-side constraint on the provision of FACO by a HM within the period of this market review. ComReg considers whether the provision of RFTS by FWA SPs (using self-supplied FACO inputs) amounts to an effective indirect constraint at paragraphs 5.348 to 5.349 below.

⁶³⁷ FWA broadband subscriptions peaked at 123,456 in Q1 2008, indicating a decline of 50% since then.

⁶³⁸ <https://www.siliconrepublic.com/comms/imagine-5g-broadband-rural-ireland>. ComReg understands that '5G Ready' base stations are being rolled out in the 3.6GHz band. This suggests that these base stations would be using 4G (LTE Advanced), which would be upgradable to 5G NR using additional vendor-supplied software.

⁶³⁹ <https://www.imagine.ie/the-broadband-network/> accessed on 15 June.

⁶⁴⁰ As set out at paragraphs 4.8, 9.8, and 9.9 of the 2018 WLA/WCA Decision.

5.190 ComReg concludes that there is unlikely to be sufficient demand from Access Seekers for an FWA-based FACO product. ComReg also notes that points (a) to (e) in paragraph 5.181 above would continue to apply, even if it were assumed that the self-supply of FWA could readily be transferred to merchant market supply of FWA Managed VoB, i.e. White Label VoIP delivered over FWA. ComReg notes that FWA-based FACO is, therefore, unlikely to provide an effective direct constraint by means of supply-side substitution on the focal FACO product over the period of this market review.

Very localised vertically-integrated OAO FTTP networks

5.191 ComReg has considered the potential for supply-side substitution arising from very localised vertically-integrated FTTP networks that provide RFTS. As noted in Section 3, Magnet and Digiweb are two vertically-integrated SPs providing RFTS as part of broader product bundles. Digiweb offers FTTP both over SIRO's network, and over its own FTTP network.⁶⁴¹ Magnet offers 'Bespoke Fibre' FTTP to its business customers, and also intends to offer retail services delivered over SIRO's network in Dublin, Galway, Limerick, Cork, Drogheda and Dundalk.⁶⁴² The total coverage of very localised vertically-integrated OAO FTTP networks and the take-up⁶⁴³ of related FTTP-based retail products (either broadband and/or RFTS) in Ireland is limited and dispersed, but has been increasing in recent quarters. According to data available to ComReg, between Q1 2017 and Q4 2020, total FTTP broadband retail subscriptions increased by over 1,000%. However, [~~] currently account for 73.8% of these subscriptions, while [~~]~~~~

5.192 ComReg understands that no very localised vertically-integrated FTTP OAO has expressed an intention to provide FACO. Even if a very localised vertically-integrated OAO offered FACO across the entirety of its network footprint, this would still fall far short of offering sufficient coverage from an Access Seeker perspective.

⁶⁴¹ <https://digiweb.ie/gigabit-broadband-ftth/>

⁶⁴² <https://www.magnetnetworks.com/business/products/business-fibre/> and <https://www.techcentral.ie/magnet-networks-to-offer-fibre-broadband-in-dublin-cork-limerick-louth/>

⁶⁴³ In respect of RFTS, both Magnet and Digiweb fell below the 2% market share threshold and were therefore included in the QKDR 'OAO' category. Accordingly, the maximum hypothetical RFTS market share accounted for by very localised vertically-integrated OAO FTTP is 4%. In practice, the figure is likely to be much lower, since Magnet and Digiweb also make use of other technologies to deliver services to end users, such that it is unlikely that all their RFTS subscriptions are delivered over their own FTTP networks.

- 5.193 ComReg accordingly considers that it is unlikely that FACO provided over these networks would meet the expectations of Access Seekers, given the limited geographic coverage of the very localised vertically-integrated OAO FTTP networks owned and operated by Magnet and Digiweb, neither of whom have significant coverage levels on their own FTTP networks. Therefore, ComReg's position is that, given that Magnet and Digiweb both rely on third party network inputs in addition to their own very localised vertically-integrated OAO FTTP networks, an Access Seeker would be unlikely to switch to FACO over FTTP provided by a vertically-integrated OAO on a local basis.
- 5.194 Table 32 below shows retail FTTP broadband lines by SP as of Q4 2020. 33 SPs offer retail FTTP, of which 7 account for 92% of the market. Of all SPs, Eircom accounts for [REDACTED] while Virgin Media engages in self-supply only, and Vodafone purchases FTTP inputs from Eircom and SIRO. Magnet and Digiweb are accordingly the only OAOs offering FTTP on a vertically-integrated basis with non-trivial market shares.
- 5.195 Together, Magnet and Digiweb account for [REDACTED] of all FTTP lines, while, according to QKDR data, FTTP subscriptions account for 13.4% of all fixed broadband subscriptions. However, it should be noted that both Magnet and Digiweb purchase WLA from SIRO. In Q4 2020, Magnet offered [REDACTED]
[REDACTED]
[REDACTED] [REDACTED]:

Table 32: Retail FTTP lines, Q4 2020⁶⁴⁴ [REDACTED]

Retail SPs	n	%
Eircom	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]
Virgin Media	[REDACTED]	[REDACTED]
Digiweb	[REDACTED]	[REDACTED]
Sky	[REDACTED]	[REDACTED]
OAOs	[REDACTED]	[REDACTED]
Total Residential	[REDACTED]	[REDACTED]
Total Non-Residential	[REDACTED]	[REDACTED]
Total Retail FTTP Lines	162,361	100%

⁶⁴⁴ ComReg Quarterly Broadband Statistics, Q4 2020.

- 5.196 ComReg considers that the self-supply of FACO by very localised vertically-integrated OAO FTTP is unlikely to provide an effective supply-side constraint on the provision of FACO by a HM within the period of this market review. ComReg considers whether RFTS over very localised vertically-integrated OAO FTTP (using self-supplied FACO inputs) amounts to an effective indirect constraint on the focal product at paragraphs 5.346 to 5.347 below.
- 5.197 Accordingly, ComReg's position is that, over the period of this market review, vertically-integrated OAOs such as Magnet and Digiweb, providing FTTP on their own very localised networks, are unlikely to provide an effective direct constraint by means of supply-side substitution.

Mobile networks

- 5.198 ComReg has considered the potential for supply-side substitution arising from vertically-integrated mobile network operators ('**MNOs**') that provide mobile telephony service ('**MTS**'). Excluding MVNOs which do not own their own networks, three MNOs provide MTS, namely Vodafone, Eircom, and Three Ireland. As noted in Section 3,⁶⁴⁵ while there is evidence of some substitutability between RFTS and MTS, the level of fixed-mobile substitution varies substantially across call types such that, for certain call types, there is little substitution from RFTS to MTS. As a result, it is unlikely that call origination provided over mobile networks would meet the expectations of Access Seekers purchasing FACO to satisfy demand for RFTS across all call types from their end users.
- 5.199 ComReg's position is that call origination over mobile networks would not represent an effective supply-side substitute for FACO, given that, as suggested by the 2019 Residential Market Research,⁶⁴⁶ RFTS and MTS are unlikely to be effectively substitutable for all call types at the retail level, and would therefore be unlikely to pose a direct constraint on the FACO focal product by means of supply-side substitution. Self-supply of call origination on a mobile telephone network is similarly unlikely to exercise an effective direct competitive constraint on FACO. In particular, ComReg notes that Vodafone and Eircom self-supply MTS, but Vodafone also separately purchases FACO, WLV, and WLA from other SPs in order to offer RFTS, rather than solely using its mobile network to provide RFTS. Similarly, Eircom relies on self-supply of FACO to offer RFTS, rather than using its mobile network to do so.

⁶⁴⁵ See paragraphs 3.96 to 3.102 above.

⁶⁴⁶ See, for instance, slide 12 – Reasons for not using a landline.

RFTS SPs active in the self-supply of Managed VoIP using wholesale NG Broadband inputs

- 5.200 ComReg has considered the potential for supply-side substitution arising from RFTS SPs active in the self-supply of Managed VoIP using wholesale inputs (for example, Vodafone). Such SPs purchase wholesale NG Broadband inputs which allow for the delivery of Managed VoIP RFTS when paired with a FVCO VoIP platform.
- 5.201 ComReg is not aware of any RFTS SP having expressed an interest in commencing the provision of FACO on a merchant market basis. In order to do so, an SP would need to continue to purchase wholesale NG Broadband inputs, and re-engineer its VoIP platform to deliver FVCO at the wholesale level. Such entry would be likely to involve significant time delays and incur significant costs associated with, for example, the provisioning of wholesale billing systems and order management interfaces.
- 5.202 Access Seekers would also likely incur costs when switching to FACO hypothetically provided by an RFTS SP associated with, for example, migrating their own retail end users to a VoIP-based FACO platform. Access Seekers would also likely be required to develop their own IT and order handling systems in order to integrate with the FACO SP's order handling and management systems. Access Seekers would also be faced with replacing RFTS CPE, such as modems and handsets, to ensure compatibility with VoIP-based FACO. Such factors would be likely to discourage Access Seekers from switching, and even were they to switch, the likely duration of the transition process would be such that it would undermine the immediacy of any competitive impact.
- 5.203 For these reasons, ComReg considers that FACO supplied by RFTS SPs active in the self-supply of Managed VoIP using wholesale inputs is unlikely to provide an effective supply-side constraint on the provision of FACO by a HM within the period of this market review.

Respondents' Views – MTS as FACO supply-side substitute

- 5.204 Eircom was the only Respondent to provide views on MTS as a supply-side substitute. It disputed ComReg's preliminary view that telephony services provided over mobile networks should be excluded from the Relevant FACO Markets because they do not act as an effective supply-side substitute based, *inter alia*, on the premise that the level of fixed-mobile substitution ('FMS') varies substantially across call types such that, for certain call types, there is little substitution from RFTS to mobile telephony services ('MTS'). Eircom asserted that ComReg cannot conclude that MTS is not an effective substitute for RFTS on the basis that, for certain call types, there is little substitution from RFTS to MTS, as this fails to capture the interplay between the overall fixed and mobile markets.

- 5.205 Eircom also argued that ComReg should have assessed the *overall* level of substitutability between fixed and mobile telephony, and alluded to data from ComReg's MCE Survey which, it suggested, demonstrated that a large cohort of end users already uses mobile telephony as its primary means of communication, irrespective of whether they retain RFTS or not.
- 5.206 Eircom considered that the MCE Survey indicated that consumers generally perceive mobile calls to be an effective or better than alternative to RFTS calls, and that this has been one of the main drivers of FMS. Eircom further asserted that ComReg's analysis of retail market trends had failed to accurately capture switching behaviour, which likely stemmed from ComReg's flawed approach of assessing the FA and FVCO elements of the market as a single FACO product.
- 5.207 Finally, Eircom noted that the EC, in its 2014 Explanatory Note, addressed issues related to accurately determining the extent to which mobile exerts a competitive constraint on fixed networks:

"...where the mobile services could be considered to fall within the same relevant retail market for access to telephone network at a fixed location, the (self-supplied) wholesale call origination services in the mobile networks should also be considered to fall within the boundaries of the market for wholesale call origination in the fixed networks" [emphasis added] and that "[w]here mobile telephony services can substitute fixed networks on the market for outgoing retail calls, the wholesale call origination services in the fixed networks are subject to direct competitive pressure from (self-supplied) mobile call origination".

ComReg's Assessment of Respondents' views

- 5.208 ComReg notes that Eircom's supply-side substitute argument is fundamentally premised on the argument that RFTS and MTS are retail-level substitutes. This argument is dealt with at paragraphs 4.276 to 4.302 above.

- 5.209 ComReg does note, however, that contrary to Eircom's assertion, it has considered the interplay between the overall fixed and mobile voice markets. In order to do so, it was necessary to break down specific voice calls and behaviours in order to assess switching behaviour overall. Eircom states that ComReg cannot conclude MTS is not an effective substitute for RFTS on the basis of the lack of FMS for certain call types. However, on the same note, ComReg notes that it cannot conclude that MTS is a substitute for RFTS on the basis of specific call types either. ComReg cannot accurately determine whether MTS is an effective substitute for RFTS overall without examining specific calling behaviours and trends. Failure to do so would potentially enable overall figures to mask any issues or trends related to specific cohorts of end users and potentially result in an inaccurate conclusion in terms of overall levels of substitutability. In this case, and as detailed in paragraph 5.165 of the 2020 Consultation, as end users typically use RFTS and MTS for specific call types, it is unlikely that call origination provided over mobile networks would meet the expectations of Access Seekers purchasing FACO to satisfy demand for RFTS across all call types from their end users. Therefore, due to MTS not being substitutable for RFTS in all usage cases, it is reasonable to conclude that it would not meet the Access Seeker requirements to be deemed an effective supply side substitute overall to the FACO focal product.
- 5.210 ComReg notes that, generally, end users who purchase both RFTS and MTS tend to use a mix of these services to meet different needs. MTS may therefore represent a substitute for RFTS in some usage cases, but not a sufficient number of cases to be deemed an effective substitute. Data from the Residential Market Research suggested that, of those end users with both RFTS and MTS, 54% indicated that they predominantly used MTS as their primary means of making calls. 19% indicated that they use a mix of RFTS and MTS, while 27% stated that they primarily used RFTS. ComReg therefore notes that 46% of end users do not use MTS as their primary means of communication, while the 54% of those indicated above who predominantly use MTS, still possess both RFTS and MTS but choose to use MTS more frequently. Overall price differences between fixed and mobile calls, and variations in end user usage, preferences and perceptions regarding MTS calls versus RFTS calls, indicate that MTS does not pose a sufficiently strong constraint on the focal products to warrant inclusion in the Relevant RFTS Markets. Therefore, FACO over MTS would not be demanded by Access Seekers as it likely would not meet the needs and expectations of their RFTS end users. In order to conclude on this issue, ComReg carried out an extensive analysis on FMS in paragraphs 4.276 to 4.388 which sets out why it does not consider MTS to be an effective substitute for RFTS overall.

- 5.211 Contrary to Eircom's suggestion that behavioural trends (specifically, switching behaviour) were not accurately captured in its analysis of retail trends and developments, ComReg notes that it specifically examined MTS in paragraphs 3.57 to 3.62, whilst also considering the differences in RFTS and MTS trends in terms of Penetration Rates (Figure 3), Traffic and Revenues (Figure 5), Minute Volumes (Figure 6), Voice Traffic (Figure 10), Access (Figure 18) and Usage Patterns (Figure 19). Considering this assessment, ComReg is satisfied that it has, in fact, considered switching behaviour in the context of FMS. Having set out these trends in Section 3, ComReg notes in paragraph 3.96 that, while the direction of change is likely towards increasing FMS, in general, the current evidence suggests that end users consider access through mobile networks and RFTS to be broadly complementary. Since insufficient end users consider MTS to be a full substitute for RFTS, the justification for designating call origination delivered over MTS as a supply-side substitute for the FACO focal product falls away, given that Access Seeker demand for FACO is a derived demand arising from downstream RFTS demand from end users.
- 5.212 Furthermore, ComReg notes that it has set out the retail trends and developments in Section 3 above, prior to the consideration of the FACO focal product. Therefore, it is unclear how ComReg's designation of a focal product consisting of both FA and FVCO components could have any impact on its assessment of retail trends and developments, or the market data which it presented.
- 5.213 Finally, ComReg notes that the excerpt which Eircom references above from the 2014 Explanatory Note is not applicable in the case of Relevant FACO markets (at wholesale level), given that MTS has already been ruled out as a substitute in the Relevant RFTS Markets (at retail level). The 2014 Explanatory Note reasoning is that, where MTS falls into the relevant retail market, then mobile call origination should fall into the relevant wholesale market. Since ComReg has not included MTS in the downstream RFTS market, the reference to the 2014 Explanatory Note is moot. The reasons for ruling out MTS as a constraint in the Relevant RFTS Markets are set out in paragraphs 4.276 to 4.388 above.

Summary of Overall Conclusions on Direct Constraints

- 5.214 In paragraphs 5.113 to 5.199 above, ComReg has considered whether demand-side and supply-side constraints exercised by alternative platforms, including CATV, FWA, very localised OAO FTTP networks, mobile telephony, wholesale NG Broadband inputs, wholesale-only OAO FTTP networks, and leased lines, are likely to exert a sufficiently timely and effective direct constraint on LL-FACO and HL-FACO, such that products provided over these platforms warrant inclusion in the relevant product markets.

5.215 ComReg notes that Eircom and BT offer demand-side substitutes to the FACO focal product, in the form of White Label VoIP. ComReg is of the view that no potential supply-side substitutes are likely to provide a sufficiently immediate and effective competitive constraint on a HM's provision of FACO, which would warrant their inclusion in the FACO Markets.

Assessment of Indirect Constraints

5.216 Of the 5 Respondents to the 2020 Consultation, ALTO and Eircom are the only Respondents to submit responses in respect of indirect constraints. ALTO disagreed with ComReg's preliminary conclusion that RFTS delivered using wholesale NG Broadband should be included as an indirect retail constraint on the FACO focal product. This submission is detailed in paragraphs 5.285 to 5.287, while ComReg's assessment of ALTO's comments is set out in paragraphs 5.289 to 5.293. Eircom's submission disputed ComReg's preliminary findings in the 2020 Consultation that MTS does not act as an effective indirect retail constraint on the focal product. Eircom's comments are outlined in paragraphs 5.329 to 5.334, while ComReg's assessment of this view is set out in paragraphs 5.335 to 5.345.

5.217 Even in the absence of actual or potential direct demand-side or supply-side constraints, a vertically-integrated SP's self-supply of RFTS, or the use by an RFTS SP of third-party wholesale inputs, could potentially fall within either of the Relevant FACO Markets if the SP's presence in the RFTS market exercised a sufficiently strong and immediate indirect pricing constraint on a HM's wholesale supply of FACO. In this respect, end user behaviour may, through demand-side substitution at the retail level, indirectly impact the ability of the HM FACO supplier to profitably sustain a SSNIP of wholesale prices above the competitive level, i.e. indirect constraints from the RFTS market may limit FACO market price-setting behaviour.

5.218 ComReg seeks to determine whether substitution to alternative RFTS platforms by end users in response to a SSNIP of FACO by the HM would render that SSNIP unprofitable,⁶⁴⁷ for example, if the profitability of the SSNIP declined due to a fall in sales of FACO. This could occur where Access Seekers pass through FACO price increases into their RFTS prices which, in turn, results in their end users switching to other RFTS SPs or lowering their consumption of existing services (for example, making fewer calls or cancelling their RFTS subscriptions entirely). The assessment therefore examines the end user's most likely response to the pass through⁶⁴⁸ of an increase in the price of FACO by Access Seekers into RFTS prices.

⁶⁴⁷ For the purpose of this exercise, ComReg has assumed that a SSNIP of FACO by Eircom would involve a simultaneous increase in the price of FVCO and FA.

⁶⁴⁸ While likely, it is by no means certain that some or all of the increase will be passed through. This will depend on the Access Seeker's ability and incentive to absorb the price increase.

- 5.219 ComReg assesses the magnitude of possible indirect retail constraints emanating from platforms that are considered to form part of the RFTS market, in particular, platforms which are not reliant on FACO inputs (e.g. Managed VoIP-based RFTS provided over CATV, FWA, WLA or WCA). While ComReg's position in Section 4⁶⁴⁹ was that MTS does not fall in the same market as RFTS, ComReg nonetheless considers the extent to which MTS might potentially exert an indirect constraint on the Relevant FACO Markets.
- 5.220 In line with EC guidance⁶⁵⁰ on the assessment of indirect retail substitution effects arising from a SSNIP by a HM at wholesale level in the specific case of FACO, the following factors are considered relevant:
- (a) How would a SSNIP of FACO be likely to impact on the RFTS market? Based on the wholesale/retail price ratio,⁶⁵¹ to what extent, if any, would Access Seekers be forced to pass a hypothetical wholesale price increase on to their retail end users? (see paragraphs 5.223 to 5.245 below);
 - (b) What response in retail demand would be required to result in a SSNIP being unprofitable? Would there be sufficient demand substitution at the retail level in response to pass through of the SSNIP in FACO into retail prices, such as to render the wholesale price increase unprofitable? (see paragraphs 5.246 to 5.348 below); and
 - (c) Whether the retail end users of the Access Seekers purchasing FACO would switch, to a significant extent, to the retail arm of the integrated HM, in particular, if the HM does not raise its own retail prices when it raises its wholesale prices (see paragraphs 5.350 to 5.358 below).
- 5.221 ComReg summarises the conclusions of its assessment of indirect retail substitution effects at paragraphs 5.359 to 5.361 below.
- 5.222 ComReg has carefully considered the EC guidance on indirect constraints set out above and assesses each of the above three criteria in turn below. Although the EC suggests taking indirect constraints, where they are found to exist, into account at the SMP assessment, rather than at the market definition stage, ComReg assesses the strength of such constraints at both the market definition and SMP analysis stages to ensure that both immediate constraints and any medium-to-long term effects, if they arise, are considered.⁶⁵²

⁶⁴⁹ See paragraphs 4.276 to 4.388 above.

⁶⁵⁰ See p.47-48 of the 2014 Explanatory Note, and cases NL/2005/281, UK/2007/0733, ES/2008/805, PT/2008/85.

⁶⁵¹ This is the wholesale price as a proportion of the overall retail price.

⁶⁵² As noted in BEREC 'Report on self-supply', [BoR 10\(09\), March 2010](#), the majority of NRAs address self-supply at both the market definition and SMP analysis stages of their market reviews.

Criterion (a): How would a SSNIP of FACO likely impact the RFTS market?

- 5.223 The assessment of indirect constraints is concerned with determining the likely impact of a 5% to 10% SSNIP of FACO on the downstream price of RFTS and assessing the likelihood of end user substitution in response to any pass through. ComReg assesses the relationship between wholesale and retail prices, and considers the extent to which Access Seekers would be likely to pass through a wholesale price increase imposed by a HM supplier of FACO to their own retail end users.
- 5.224 The extent of competition in affected markets influences whether wholesale price increases would likely be passed on to retail end users. For example, faced with a strong competitor who had the ability to absorb a FACO increase (and not pass it through to higher RFTS prices), a competing SP would consider, in response to a FACO price increase, the degree to which it could raise its prices for RFTS (or across a portfolio of services), and the probability that this would cause end users to switch. Alternatively, if an SP decided to absorb the FACO price increase, this would represent a cost to the SP.
- 5.225 ComReg works from the MGA, which assumes that SMP is not present on the FACO markets and that, hypothetically, the FACO markets are therefore competitive. In that scenario, FACO inputs to downstream RFTS are likely to be provided at a competitive wholesale price level. If the RFTS market on which the Access Seeker is active is effectively competitive, an increase in the price of FACO would likely be passed through to RFTS prices as, otherwise, the Access Seeker would likely be operating its service at a loss in the long run. This is because an Access Seeker operating on a competitive market is likely to earn normal profits only and would therefore be unable to absorb increased input costs without incurring a loss in the long run. In this case, the FACO price increase impacts RFTS price levels, and the indirect price constraint is likely to have some impact.
- 5.226 If, on the other hand, the retail market were not fully competitive, the Access Seeker purchasing FACO could potentially choose not to pass through the wholesale price increase, but instead absorb the wholesale price increase itself, partially or entirely.⁶⁵³ This is because an Access Seeker active on a less than fully competitive market is likely to be earning supernormal profits, and would therefore be able to absorb increased input costs, while still earning a (smaller) profit. In such circumstances, the indirect constraint may be weaker, as it may not result in any price effects at the retail level. In such instances, a direct constraint may have a greater disciplining effect on the HM.

⁶⁵³ ComReg notes that, in the short term, an Access Seeker may decide not to pass through price increases, but over the medium to long term would be unlikely to sustain this position, given the impacts on profitability.

- 5.227 Even where the purchaser of FACO intends to pass through some or all of the wholesale price increase into retail prices, its impact will likely be diluted. This is because, where there are multiple upstream inputs to a retail product or service, any single increase in the price of an upstream input will be diluted once it is translated into a retail price increase. In the case of RFTS, assume FACO is one of five upstream inputs to the eventual retail price. Accordingly, an increase of 10% in the price of FACO may translate into – for instance – a 2.5% increase in the overall price of all upstream inputs to RFTS. Accordingly, it is unlikely that a 10% increase in the price of FACO would lead to a commensurate 10% increase in the price of RFTS. When assessing indirect constraints, establishing the ratio between the FACO price and downstream RFTS prices is central to the application of criteria (b) and (c) set out at paragraph 5.220 above for assessing indirect constraints.
- 5.228 A second dilution effect arises in the case of end users who purchase RFTS as part of a bundle, rather than on a standalone basis. In that case, the SSNIP of FACO is diluted as it is passed through to RFTS, for the reasons set out in the previous paragraph. However, RFTS purchased as part of a bundle accounts for only a proportion of that bundle price. Any price increase arising from the SSNIP pass through will therefore only lead to an increase in the price of the RFTS component of the bundle, rather than on the overall price, as would be the case in respect of standalone RFTS.

Calculating the Price-Cost Ratio

- 5.229 The wholesale/retail price ratio is the relationship between the wholesale input cost and the retail price (the '**Price-Cost Ratio**'). It is a quantitative tool which is used to assess how a SSNIP of FACO likely impacts the RFTS market. When calculating the Price-Cost Ratio, it is firstly necessary to determine which prices to use to calculate the ratio. RFTS pricing is complex and may include non-linear pricing elements, such as bundling and discounts. While a bundle contains numerous components, only the RFTS component will be impacted by an increase in the price of FACO. End users may also take various product characteristics and broader pricing features into account when deciding whether to switch between providers. In such instances, the SSNIP would only apply to the FACO input to the RFTS component of the bundle.
- 5.230 Where SPs only offer RFTS as part of a bundle, it may not be possible to be definitive about the price of the RFTS element of the bundle. However, ComReg considers the price of FACO within the context of the overall retail price for the service bundle provided by the SP.

5.233 ComReg uses the regulated prices for FVCO and WLR as a proxy for cost in a competitive market outcome.⁶⁵⁶ Eircom's FVCO charges vary depending on the point on Eircom's network at which an Access Seeker is interconnected (primary, tandem or double-tandem), and also according to the time of day an Access Seeker purchases FVCO (peak, off-peak or weekend). Eircom's FVCO charges, which have remained unchanged since July 2012, are set out in Table 33. Eircom's WLR charges are based on a price control obligation of cost orientation, and last changed in July 2019, as set out in Table 33:⁶⁵⁷

Table 33: Eircom FVCO Charges, May 2021

Charging Level	Cent Per Minute			Cent Per Call		
	Peak	Off-Peak	Weekend	Peak	Off-Peak	Weekend
Primary	0.2344	0.1301	0.1144	0.6660	0.3689	0.3231
Tandem	0.3398	0.1877	0.1645	0.7362	0.4073	0.3565
Double-Tandem	0.4194	0.2320	0.2030	0.7694	0.4255	0.3727

5.234 The above charging structure, and the point of interconnection of each SP using the Eircom network to provide RFTS, means that the result will vary by SP. Therefore, ComReg used average values for the point of interconnection and time of day for calls. While this approach is informative for the purpose of the SSNIP test, the averaging exercise is not reflective of any particular SP.

5.235 The standard monthly prices for the WLR component of SB-WLR, taken from Service Schedule 401 of the RIO Price List, are set out in Table 34 below:

Table 34: Eircom SB-WLR prices, May 2021

WLR Service	Monthly Wholesale Rental Charge
PSTN	€16.59
ISDN BRA	€27.95
ISDN FRA	€143.00
ISDN PRA	€238.00

5.236 Purchasing LL-FACO requires the rental of a wholesale PSTN or ISDN BRA line, coupled with the purchase of FVCO on a per minute and per call basis. ComReg estimates that, since March 2021, the weighted average price for the WLR elements of LL-FACO has been **€17.73**.⁶⁵⁸

⁶⁵⁶ A SSNIP is applied to an increase in price above the competitive level. As the FVCO market has, to date, been determined not to be effectively competitive, absent regulation wholesale charges would, in ComReg's view, likely be above cost.

⁶⁵⁷ These rates have been taken from [Eircom's RIO Price List](#), version 18.0, dated 27 January 2021.

⁶⁵⁸ The weighted average is calculated by multiplying the cost of PSTN and ISDN BRA WLR by the weighted distribution of PSTN and ISDN BRA access paths, as reported in the QKDR for Q4 2019: $(€16.59 * 91\%) + (€27.95 * 9\%) = €17.61$, to June 2020 and $(€16.59 * 90\%) + (€27.95 * 10\%) = €17.73$ from March 2021.

- 5.237 Based on Q4 2020 data, typical residential users are estimated to purchase 100 call minutes per month.⁶⁵⁹ ComReg calculates that the cost of the FVCO component consumed equates to a weighted average FVCO price of 0.4c per minute (including an effective call set-up cost).⁶⁶⁰ Taking this weighted average FVCO price,⁶⁶¹ the 100 call minutes purchased by the typical residential end user would result in a notional FVCO charge of €0.40.
- 5.238 Combining the above two LL-FACO elements would result in an average notional LL-FACO monthly cost for SB-WLR of €18.13. According to ComReg's 2017 *Ireland Communicates* consumer survey,⁶⁶² the average household spend on a package or bundle containing RFTS is €65. Having regard to the above assumptions, ComReg estimates the ratio of the LL-FACO price relative to the LL-RFTS product/package (the '**LL Price-Cost Ratio**') to be approximately 28%.⁶⁶³
- 5.239 Purchasing HL-FACO requires the rental of a wholesale ISDN FRA or ISDN PRA line (at €143.18 and €238.25 per month, respectively) coupled with the purchase of FVCO on a per minute basis. ComReg estimates a weighted average price for the WLR elements of HL-FACO of **€214.25** per month.⁶⁶⁴

⁶⁵⁹ Based on ComReg QKDR Data Q4 2020.

⁶⁶⁰ These estimates are based on a calculated 'weighted average' price of FVCO per-minute that is based on the charges set out in Table 33 which vary according to (a) the exchange level at which Access Seekers purchase FVCO, i.e. primary, tandem or double-tandem exchanges (b) the allocation of per a call set-up charge (which ComReg allocates on a per-minute basis having regard to the typical average call duration (see below)); and (c) whether the FVCO is provided during the day, evening or weekend periods. The exchange handover level weighting at (a) above is based on data utilised in the Decision Instrument set out in the **2011 Pricing and Transparency Decision** which was last reviewed in 2015, and which assumes a weighted average traffic handover profile of 66% at the primary level, 24% at the tandem level and 10% at double-tandem level. The per-call set-up fee at (b) above is allocated on a per-minute basis according to an estimated average call length of 3 minutes and one half second. This average call length is derived from Eircom's reported FVCO volumes (given in minutes, and in number of calls). The most recent accounts which present data in this format are for the year ended June 2015 as published at https://www.eir.ie/opencms/export/sites/default/.content/pdf/regulatoryinformation/HCA_Accounts_2015.pdf.

The time of day pricing differentials at (c) above have been weighted based on a distribution of retail peak-time, off-peak and weekend call volumes provided by Eircom to ComReg for the purpose of ComReg's routine monitoring compliance with the 2011 Pricing and Transparency Decision, provided in response to a statutory information request of 12 August 2013. In using this distribution, ComReg has assumed that the distribution is likely to be similar for Eircom's total call distribution and is estimated to be 60%, 22%, and 18% respectively.

⁶⁶¹ This estimate is based on the same set of references and conditions that are set out above in respect of the calculation of a weighted average FVCO price per minute for FVCO associated with LL-FACO.

⁶⁶² Ireland Communicates Consumer Survey 2017 (ComReg 18/23), slide 17. Available online at <https://www.comreg.ie/publication/ireland-communicates-survey-sme-consumer/>

⁶⁶³ Calculated as €18.13/€65.

⁶⁶⁴ The weighted average is calculated having regard to the distribution of sales for ISDN FRA and ISDN PRA in data provided by Eircom to ComReg for its QKDR for Q4 2020: (€143.00 * 25%) + (€238.00 * 75%) = €214.25.

- 5.240 Based on Q4 2020 data from the Quarterly Key Data Report, typical business users are estimated to consume 528 call minutes per month.⁶⁶⁵ Taking the same weighted average FVCO price of 0.4c per minute identified above,⁶⁶⁶ the 528 call minutes would result in a notional FVCO charge of €2.11.
- 5.241 Combining the above two elements would result in an average HL-FACO monthly cost for SB-WLR of €216.36. Based on data available to ComReg,⁶⁶⁷ the average business expenditure on a package or bundle encompassing RFTS is estimated at €398.98 per month. Having regard to the above assumptions, ComReg estimates the ratio of the HL-FACO price relative to the HL-RFTS product (the '**HL Price-Cost Ratio**') to be approximately 54%.⁶⁶⁸
- 5.242 The HL Price-Cost Ratio (54%) and LL Price-Cost Ratio (28%) reflect the proportion of the total bill for a package or bundle containing RFTS that would likely be affected by a SSNIP in FACO, and therefore can be used to derive the 'dilution effect', which is the percentage increase in RFTS prices that would occur in response to the pass through of a SSNIP in FACO.
- 5.243 In this respect, the approximate dilution effects for LL-FACO and HL-FACO are set out in Table 35 below. ComReg estimates that:
- A SSNIP in LL-FACO would translate into RFTS price increases of between 1% to 4% for a SSNIP of 5% and 10% SSNIP respectively; and
 - A SSNIP in HL-FACO would translate into RFTS price increases of between 2.5% to 5% for a SSNIP of 5% and 10% respectively:

Table 35: Dilution Ratios - % increase in retail prices from SSNIP in FACO

FACO Service	Weighted Average FACO Price €	SSNIP Level %	Weighted Av. FACO Price Increase	Price-Cost Ratio	Pre-SSNIP Retail Price	Effective Retail Price Increase € ⁶⁶⁹	% Retail Price Increase
LL-FACO	€18.13	5%	€0.91	27.89%	€65	€1.12	1.72%
		10%	€1.81			€2.33	3.43%
HL-FACO	€216.36	5%	€10.82	54.23%	€398.98	€10.82	2.71%
		10%	€21.64			€21.64	5.42%

⁶⁶⁵ Based on ComReg QKDR Data at Q4 2020.

⁶⁶⁶ This estimate is based on the same set of references and conditions that are set out above in respect of the calculation of a weighted average FVCO price per minute associated with LL-FACO.

⁶⁶⁷ ComReg sourced data from the OECD (<http://www.oecd.org/>), CRIF Vision Net (<https://www.vision-net.ie/>), the CSO (<https://www.cso.ie/en/index.html>) and the 2014 FACO Consultation to construct an estimate of the average Irish business spend per month (2019) on bundles/packages containing RFTS.

⁶⁶⁸ Calculated as $(€216.36/€398.98)*100$.

⁶⁶⁹ ComReg has applied a VAT rate of 23% to the pass through of the wholesale price increase to LL-FACO only, although a number of businesses likely purchase RFTS based on these wholesale inputs. However, for HL-FACO, ComReg does not apply VAT to the pass through of the wholesale price increase. RFTS based on HL-FACO is likely to be utilised by businesses which are entitled to a VAT refund. In this regard VAT effects for business users are likely to be neutral in terms of their effect on the pass through of the wholesale price increase into retail prices.

- 5.244 As noted in paragraphs 5.224 to 5.227 above, the SP purchasing FACO may choose to absorb some or all of the SSNIP in FACO, rather than passing it onto RFTS end users. This would further limit the likely extent to which retail substitution by end users might undermine the profitability of the SSNIP, as end users would face no price signals incentivising them to switch supplier. While it is uncertain whether the entire FACO price increase would be passed through to the price of RFTS or other associated prices (or, indeed, whether it would be passed through at all), ComReg assumes that it is passed through in full for the purpose of market definition, since this will prevent any underestimation of indirect retail constraints on the Relevant FACO Markets arising from the pass through of a FACO price increase into RFTS.
- 5.245 The question to be determined is whether a retail price increase of between 2% and 5% arising from SSNIP pass through would induce either reduced demand for the RFTS which is the subject of the price increase, or switching away from the HM's platform, sufficient to render the SSNIP unprofitable.

Criterion (b): What response in retail demand would likely be required to result in a SSNIP being unprofitable?

- 5.246 The EC's *second criterion* notes the need to establish whether sufficient demand substitution would occur at the retail level to render a wholesale SSNIP by a HM unprofitable.
- 5.247 The threshold at which changes in retail demand may undermine the profitability of a SSNIP is calculated using the Critical Loss Test ('**CLT**'). The CLT estimates the percentage of customers that would have to divert away from the focal product in response to a SSNIP (in this case, the pass through of a wholesale SSNIP) in order for the increase in the price of the focal product to be unprofitable. An estimate of actual loss can then be compared to the Critical Loss Value ('**CLV**'), and if the number of customers likely to switch exceeds the CLV, then the SSNIP can be considered unprofitable and the market is no wider than the focal product. In the alternative, if the degree of demand substitution from the focal product to another given product exceeds the CLV, then that product may be considered to belong to the same relevant market.
- 5.248 Calculating the critical loss requires detailed information regarding, *inter alia*, profitability, and the marginal cost of FACO in a competitive scenario. The CLT, for the purposes of this Decision, is by no means determinative in and of itself, and is considered by ComReg alongside other evidence.
- 5.249 ComReg has estimated CLVs associated with SSNIP amounts of 5% and 10% for LL-FACO and HL-FACO in Annex: 9 below. The CLT estimates that:
- (a) At a 5% SSNIP of FACO, the CLV is likely to be c.12-14% for SB-WLR; and

- (b) At a 10% SSNIP of FACO, the CLV is likely to be c.20-25% for SB-WLR.
- 5.250 These percentages estimate how many end users who purchase RFTS which relies on Eircom FACO as a wholesale input would have to switch to an alternative platform, in order for that alternative to be potentially included in the Relevant FACO Markets as a sufficient indirect constraint.
- 5.251 Typically, market definition uses the HMT to assess the responsiveness of demand for the focal product to a 5% or 10% SSNIP, and the resulting impact on profitability. However, the application of the HMT to indirect pricing constraints is somewhat different, in that it assesses the response in downstream (retail) demand for RFTS arising from the pass through of a SSNIP in an upstream (wholesale) FACO market. Given that downstream prices are normally higher than the price of the affected upstream product, the magnitude of the upstream price increase is diluted when it is translated into retail price increases, as set out at paragraph 5.227 above.
- 5.252 As set out at paragraph 5.244 above, ComReg assumes that the entirety of the wholesale price increase would be passed through by the Access Seeker to prices at the retail level. Such retail price increases could manifest themselves as increases in call prices (RFVC), line rental (RFVA), or both (RFTS). The dilution effects discussed in paragraph 5.227 and Table 35 above suggest that wholesale price increases result in a proportionately lower price increase at the retail level.
- 5.253 As set out at paragraph 5.242, the HL-FACO Price-Cost Ratio is calculated as 54.23%, and the LL-FACO Price-Cost Ratio is calculated as 27.89%. Thus, a 5% SSNIP of LL-FACO and HL-FACO translates into an increase in the price of RFTS of c.1.7% to 2.7%, while a 10% SSNIP of LL-FACO and HL-FACO translates into an increase in the price of RFTS of c.3.4% to 5.4%.
- 5.254 A SSNIP of FACO, if passed through, impacts end users who purchase RFTS (either on a standalone basis or as part of a bundle) from an SP that purchases FACO. As of Q4 2020, 476,804 RFTS access paths were provided on the basis of FNA FACO access paths (both Eircom SB-WLR and WLV, which itself uses SB-WLR as an input).⁶⁷⁰ This accounts for approximately 44% of RFTS FNA paths. If a sufficient number of these end users were to switch to alternative platforms in response to a SSNIP of FACO, then the definition of the Relevant FACO Markets could be broadened to include those alternative retail products.

⁶⁷⁰ See Table 49 below.

- 5.255 A wide range of factors are likely to be taken into account by end users when deciding whether to switch suppliers and/or reduce their consumption, including factors not related to the price and characteristics of RFTS. These factors could include, *inter alia*, costs associated with switching between SPs,⁶⁷¹ and preferences around other aspects of an RFTS package or bundle that cause inertia (for example, regarding choice of broadband provider).⁶⁷²
- 5.256 As discussed in Section 3,⁶⁷³ respondents to the 2019 Market Research reported low awareness of specific call costs, but higher awareness of the overall cost of RFTS bundles.⁶⁷⁴ This is likely to shape the potential response of end users to price changes arising from a SSNIP of FACO. Furthermore, as stated in paragraph 4.384 above, 68% of SME end users reported having an unlimited number of minutes as part of their RFTS plan.⁶⁷⁵ Of those end users who do not have unlimited minutes, 87% answered that they are unsure or don't know the cost of making a call from their business' fixed landline.⁶⁷⁶ This absence of knowledge regarding pricing structure suggests that there is a lack of price sensitivity for SMEs when it comes to their RFTS service.
- 5.257 The 2019 Residential Market Research reported that there is a relatively low incidence of churn between RFTS SPs, with 10%⁶⁷⁷ of households having switched in the previous twelve months. The 2019 SME Market Research indicated a higher propensity to switch, with 14% of SME respondents having switched in the previous 12 months. The low rate of churn suggests that there is a certain amount of inertia amongst residential end users (less so with SMEs) with respect to switching SPs, some of which may be explained by the increased prevalence of bundling of retail services, which tends to increase complexity of purchasing and switching decisions (although a non-trivial, but declining, cohort continues to purchase RFTS on a standalone basis).

⁶⁷¹ Switching costs include search costs and transaction costs associated with the purchase of new CPE and installation charges, and potential costs for early contract termination. Service disruption during the switching process may also be a factor, particularly for business end users.

⁶⁷² The factors affecting sensitivity to changes in RFTS prices are noted at paragraphs 4.98 to 4.111 above.

⁶⁷³ Despite reporting low awareness of specific call prices, the reported calling behaviour of households and businesses suggests that end users tend to have a general awareness of the relative costs of making calls from various devices. This, in ComReg's view, likely influences how consumers make different types of calls. For example, end users are more likely to use their mobile to call another mobile than an international number.

⁶⁷⁴ However, respondents also ranked the cost of making calls, or the overall bundle cost as being high in importance when choosing an SP for the provision of RFTS. This suggests that customers have a better understanding of call costs at the time when they choose an SP.

⁶⁷⁵ Slide 45 of the 2019 SME Market Research.

⁶⁷⁶ Slide 46 of the 2019 SME Market Research.

⁶⁷⁷ 2019 Residential Market Research, slide 80. 65% of residential respondents reported never having switched SP. The 2019 SME Market Research (slide 58) reported very different switching figures, with only 14% of SME respondents reporting that they had never switched.

- 5.258 Section 3 summarises outputs from the 2019 Residential Market Research with respect to respondents' reported behaviour in response to a notional €2 or €4 increase in the price of RFTS. In the context of an assessment of indirect constraints, this notional retail price increase may not map across exactly to the 5-10% increase normally calculated for SSNIP purposes. However, ComReg's experience is that survey respondents tend to have a preference for considering price increases in absolute rather than relative percentage terms. Nevertheless, survey respondents' reported behavioural responses to €2 and €4 price increases remain informative to the indirect constraints assessment.
- 5.259 The most frequently-reported residential end user responses to a €4 increase in standalone RFTS were:
- (a) No change in behaviour;
 - (b) Cancel subscription;
 - (c) Keep subscription, but make fewer calls; and
 - (d) Stay with current RFTS SP, but switch to a cheaper calls package.
- 5.260 The most frequently-reported residential end user responses to a €2 increase in bundled RFTS were:
- (a) No change in behaviour;
 - (b) Keep existing service but downgrade to cheaper bundle;
 - (c) Look at other SPs; and
 - (d) Cancel subscription.
- 5.261 Having regard to the above responses and information discussed previously, ComReg considers whether RFTS over alternative platforms (including wholesale broadband inputs, CATV, mobile telephony, very localised FTTP, and FWA) pose a sufficient and immediate indirect competitive constraint, such that it warrants inclusion in the Relevant FACO Markets.

RFTS provided using wholesale NG Broadband inputs

- 5.262 FTTx networks provide wholesale NG Broadband inputs which SPs may purchase and package with a VoIP platform (which they have procured or developed in-house) in order to deliver Managed VoIP RFTS to end users. ComReg notes that upstream WLA or WCA is an access path only, which an Access Seeker may use to deliver a range of services at retail level, including RFTS, broadband, or TV. WLA/WCA is not, therefore, in itself, a direct or indirect constraint on FACO, as it lacks the calling component. This subsection considers whether such wholesale inputs, when coupled with a VoIP platform would be used by an Access Seeker to provide Managed VoIP RFTS, and whether it would likely provide an effective indirect retail constraint on the provision of the focal FNA FACO product.

- 5.263 Access Seekers may purchase wholesale NG Broadband inputs as follows:
- (a) WLA and WCA provided by Eircom pursuant to its SMP obligations on the national WLA Market and Regional WCA Market, as set out in the 2018 WLA/WCA Decision;⁶⁷⁸
 - (b) WCA provided by Eircom on a commercial basis on the Urban WCA Market;
 - (c) WCA provided by other SPs (e.g. BT) on the basis of purchases of regulated upstream Eircom WLA inputs; or
 - (d) WLA or WCA provided by wholesale-only SPs (SIRO, and - on a forward-looking basis - NBI) on their own networks.

Eircom FTTx inputs

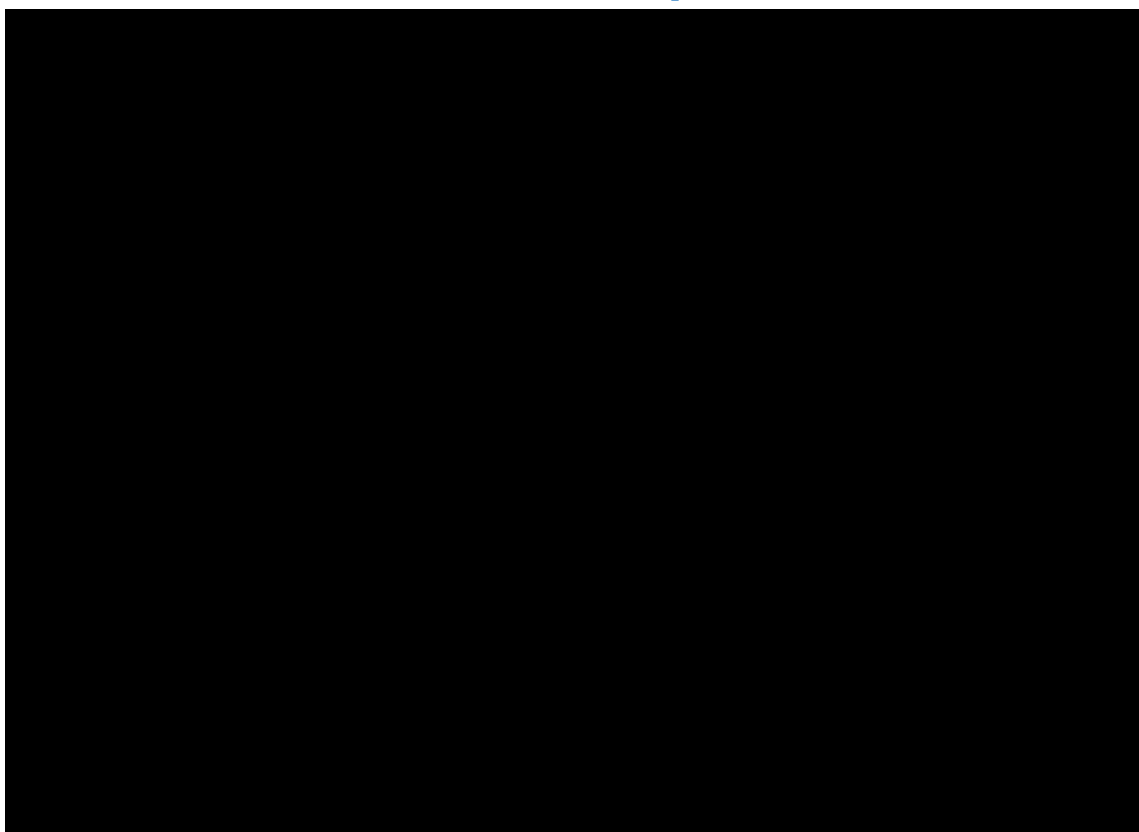
5.264 By Q4 2020, Eircom had rolled out its FTTx network to 2.1 million premises. Thus, Eircom FTTx capable of delivering Managed VoIP passed 86% of premises in the State.⁶⁷⁹ Access Seekers purchase WLA and WCA inputs from Eircom to provide a range of services at both the wholesale and retail levels. According to the QKDR, at Q4 2020, the total number of Eircom wholesale broadband lines was 463,930.⁶⁸⁰ 362,413, or 78%, of these lines are FTTx, split between WLA VUA (61%) and WCA Bitstream Plus (39%). Managed VoIP is not offered over the remaining 30% of DSL or LLU lines. Accordingly, an Access Seeker could offer Managed VoIP RFTS by purchasing Bitstream Plus or VUA from Eircom, and bundling this with a VoIP platform. The growth of VUA and Bitstream Plus (and the decline in DSL Bitstream and LLU) is shown in Figure 48 below, and indicates that (allowing for a correction in data collection methodology in 2016) the number of wholesale lines over which an Access Seeker could offer Managed VoIP continues to grow, with all categories growing but DSL and LLU:

⁶⁷⁸ ComReg Decision D10/18: Market Review - Wholesale Local Access (WLA) provided at a Fixed Location Wholesale Central Access (WCA) provided at a Fixed Location for Mass Market Products - Response to Consultation and Decision (the '2018 WLA/WCA Decision').

⁶⁷⁹ https://www.eir.ie/pressroom/eir-announces-second-quarter-FY21-results-to-31-December-2020/#_ftn1

⁶⁸⁰ Calculated as sum of Wholesale DSL Bitstream Lines, Total LLU lines, Wholesale VDSL Bitstream lines, and VULA lines reported in QKDR.

**Figure 48: Eircom wholesale and self-supply broadband lines, Q3 2015 – Q4 2020 [X
REDACTED X]**



- 5.265 Access Seeker uptake of Eircom's standalone VUA and Bitstream Plus products has increased substantially, and, if current trends continue, is likely to continue to increase. In contrast, indirect FNA paths are in slight decline, with a 15% fall in numbers since the 2015 FACO Decision, as previously strong growth in WLV (which almost compensated for steep declines in CPS and SB-WLR numbers) is now in decline, along with SB-WLR and CPS.⁶⁸¹
- 5.266 Overall, purchases by Access Seekers of indirect access paths (WLV, CPS and SB-WLR) from Eircom have been trending downwards, and have fallen 18% since their Q2 2016 peak, as of Q4 2020. In contrast, as set out in the QKDR, sales of wholesale NG Broadband lines (measure by wholesale lines – wholesale VDSL bitstream and VULA) have increased by 184% since the 2015 FACO Decision, largely due to strong growth in VUA.
- 5.267 Thus, while sales of both direct and indirect FNA paths capable of delivering RFTS are in decline, sales of wholesale NG Broadband access lines (VUA and Bitstream Plus) have increased sharply since the publication of the 2015 FACO Decision in Q3 2015.

⁶⁸¹ These data are presented at Table 2, Table 9, Table 10, Table 11, Table 30, Table 36, Table 37, and Table 42, and Figure 4, Figure 11, Figure 12, Figure 21, Figure 22, Figure 23, Figure 30, Figure 47, and Figure 48.

5.268 The decline in Access Seeker purchases of indirect FNA paths suggests that the delivery by Access Seekers of RFTS over FNA is in decline. In contrast, the increase in wholesale purchases of standalone VUA and Bitstream Plus suggests that – to the extent that Access Seekers continue to provide Managed VoB-based RFTS by means of merchant market wholesale inputs – they are switching to doing so by means of wholesale VUA and/or Bitstream Plus products. Such Managed VoB RFTS would, in the short to medium term, likely be capable of posing an effective indirect retail constraint on the focal FACO products – but only in areas where Eircom FTTx is available.

Increased uptake of standalone VUA and Bitstream Plus

5.269 At the wholesale level, open eir sells both VUA and Bitstream Plus over FTTC and FTTP in POTS-based and Standalone variants. Standalone FTTx allows an Access Seeker to offer a SAB service (allowing for the delivery of Managed VoB RFTS), while POTS-based FTTx additionally supports PSTN RFTS over legacy FNA, in parallel with the fibre-based service.⁶⁸² Access Seekers purchasing POTS-based FTTx therefore purchase FACO from Eircom to allow for the provision of PSTN-based RFTS to their end users, while Access Seekers purchasing standalone FTTx do not incur a FACO charge and, if they provide RFTS, must do so by means of Managed VoB.

5.270 Indirect retail constraints arising from the use of wholesale NG Broadband inputs to provide Managed VoIP RFTS would involve migrating RFTS end users from POTS-based VUA or Bitstream Plus to standalone VUA or Bitstream Plus, to avoid the additional costs associated with purchasing POTS-based VUA or Bitstream Plus.

5.271 QKDR data indicate that Eircom (standalone and POTS-based) VUA has grown from 17,170 lines in Q3 2015, to 220,852 by Q4 2020 (excluding FTTP). POTS-based VUA requires the Access Seeker to purchase SB-WLR (and therefore likely requires an end user to purchase RFVA). However, standalone VUA allows an Access Seeker (or Eircom retail) to sell a standalone retail broadband connection, without incurring the cost of purchasing SB-WLR. Table 36 shows growth in merchant market POTS-based and standalone VUA since the 2015 FACO Decision:

⁶⁸² Thus, eight product variants are possible: FTTC Standalone VUA, FTTC Standalone Bitstream, FTTP Standalone VUA, FTTP Standalone Bitstream, FTTC POTS-based VUA, FTTC POTS-based Bitstream, FTTP POTS-based VUA, and FTTP POTS-based Bitstream.

Table 36: Eircom Wholesale VUA Lines, Q3 2015 – Q4 2020 [REDACTED]

	Standalone	POTS-based	Total
September 2015	[REDACTED] ⁶⁸³	[REDACTED] ⁶⁸⁴	[REDACTED] ⁶⁸⁵
December 2020	[REDACTED] ⁶⁸⁶	[REDACTED] ⁶⁸⁷	[REDACTED] ⁶⁸⁸
% change	[REDACTED]	[REDACTED]	[REDACTED]

- 5.272 Growth in VUA has been significant over the time period in question, although, in the case of standalone VUA, [REDACTED]
[REDACTED]
[REDACTED] While standalone VUA has recorded higher growth rates, it still only accounts for [REDACTED] of all Eircom wholesale VUA lines, compared to [REDACTED] for POTS-based VUA.⁶⁸⁹
- 5.273 In respect of Bitstream Plus, Eircom WCA Bitstream Plus increased from [REDACTED] lines, as of September 2015, to [REDACTED] by December 2020. POTS-based Bitstream Plus requires the Access Seeker to purchase WLR (and therefore likely requires an end user to purchase RFVA). However, standalone Bitstream Plus allows an Access Seeker (or Eircom retail) to sell standalone retail broadband without the need to also purchase RFVA. Table 37 shows the growth in POTS-based and merchant market standalone Bitstream Plus from September 2015 to December 2020:

⁶⁸³ In the range of 0-25,000.

⁶⁸⁴ In the range of 0-25,000.

⁶⁸⁵ In the range of 0-25,000.

⁶⁸⁶ In the range of 100,000-125,000.

⁶⁸⁷ In the range of 125,000-150,000.

⁶⁸⁸ In the range of 225,000-250,000.

⁶⁸⁹ These data are based on SP returns provided confidentially to ComReg.

Table 37: Eircom Wholesale NGA Bitstream Lines, Q3 2015 – Q4 2020
 [REDACTED]

	Standalone	POTS-based	Total
September 2015	[REDACTED] ⁶⁹⁰	[REDACTED] ⁶⁹¹	[REDACTED] ⁶⁹²
December 2020	[REDACTED] ⁶⁹³	[REDACTED] ⁶⁹⁴	[REDACTED] ⁶⁹⁵
% change	[REDACTED] ⁶⁹⁶	[REDACTED] ⁶⁹⁷	[REDACTED] ⁶⁹⁸

- 5.274 Compared to VUA, growth in Bitstream Plus has been much more modest, and both POTS-based VUA has now outstripped its Bitstream counterpart. Standalone Bitstream Plus has recorded higher growth rates and accounts for [REDACTED] of all Eircom wholesale VUA lines, compared to [REDACTED] for POTS-based VUA.
- 5.275 Eircom's SMP obligations on the WLA Market and Regional WCA Market require it to provide the same underlying broadband services (including any QoS enhancements to enable the provision of Managed VoIP RFTS) to Access Seekers as it does to itself.⁶⁹⁹ Eircom VUA and Bitstream Plus are of sufficient quality to satisfy the needs of eir Broadband Talk (Eircom's Managed VoB product), eir SIP Voice and eir Collaborate⁷⁰⁰ (Eircom's business-focussed Managed VoIP SIP Trunking and Hosted PBX products delivered over FTTx). Therefore, these products rely on broadband which is of sufficient quality⁷⁰¹ to support RFTS by means of Managed VoIP, which is, in principle, capable of exercising an indirect retail constraint on the focal product.
- 5.276 The increase in purchases of standalone Eircom VUA and Bitstream Plus suggests that, in response to a SSNIP of FACO, there would be sufficient demand-side substitution to the delivery of Managed VoIP-based RFTS by Access Seekers to render the SSNIP unprofitable.

⁶⁹⁰ In the range of 0-50,000.

⁶⁹¹ In the range of 50,000-75,000.

⁶⁹² In the range of 100,000-125,000.

⁶⁹³ In the range of 100,000-125,000.

⁶⁹⁴ In the range of 75,000-100,000.

⁶⁹⁵ In the range of 175,000-200,000.

⁶⁹⁶ In the range of 140-150%.

⁶⁹⁷ In the range of 10-20%.

⁶⁹⁸ In the range of 60-70%.

⁶⁹⁹ As set out in further detail in the 2018 WLA/WCA Decision.

⁷⁰⁰ https://business.eir.ie/media/eir_Collaborate_Schedule_to_Master_Terms.pdf

⁷⁰¹ This includes bandwidth, QoS, jitter, latency etc.

SIRO and NBI FTTP inputs

- 5.277 SIRO has indicated that, over the course of this market review period, its FTTP network will eventually pass 450,000 premises⁷⁰² (19% of premises in the State), while the Government signed a contract with NBI in November 2019 to rollout an FTTP network in the IA extending to 544,000 premises over a 7 year period.⁷⁰³ This amounts to 23% of premises in the State. If, hypothetically, there were no overlap between SIRO and NBI, this would mean that an absolute maximum of 990,000 premises would be passed by OAO FTTP, amounting to 41% of all premises in the State. This means that OAO FTTP would not be an option for 59% of premises in the State, based on a scenario allowing for maximal coverage between both networks.
- 5.278 Any SP wishing to offer Managed VoIP RFTS on the basis of SIRO or NBI inputs could do so on a significant regional basis. Thus, in response to a SSNIP of the focal product, an end user located in NBI or SIRO's catchment area could likely switch to RFTS provided by an SP using either of those inputs. From a product market perspective, ComReg considers that it is, in principle, appropriate to include RFTS delivered by SPs making use of SIRO or NBI inputs in the relevant product market as an indirect retail constraint. However, the impact and magnitude of this constraint is likely to be contingent on the coverage of SIRO and NBI networks.
- 5.279 SPs delivering Managed VoIP RFTS over multiple FTTx networks (for instance, over both SIRO and NBI) are more likely to offer an effective indirect retail constraint, where they offer widespread geographic coverage provided collectively by these networks. In this regard, ComReg notes, for example, that [X ██████████ X] purchases wholesale NG Broadband inputs from both SIRO and Eircom, which it uses to provide retail Managed VoIP to its own RFTS end users.
- 5.280 ComReg sets out in greater detail its approach to the impact of SIRO and NBI network rollout in posing differing competitive constraints in its assessment of the relevant geographic market set out at section 5.2 below.

⁷⁰² ComReg notes paragraph 5.84 of the 2018 WLA/WCA Decision, which indicated that SIRO's rollout to date has been slower than expected, with premises passed totalling 120,000 as at the end of 2017. https://www.oireachtas.ie/ga/debates/debate/joint_committee_on_communications_climate_action_and_environment/2019-06-26/2/ It was initially envisaged that the 500,000 premises would be reached in 50 towns in Phase One, which was to complete by the end of 2018, with scope for Phase Two thereafter. As of Q4 2020, SIRO reported that it had passed 360,000 premises.

⁷⁰³ <https://www.gov.ie/en/press-release/e15062-high-speed-broadband-for-11m-people-in-homes-schools-businesses-acro/>

Existing provision of Managed VoIP RFTS using wholesale NG Broadband inputs

- 5.281 QKDR data record 523,988 Managed VoIP subscriptions as of Q4 2020, an increase of 35% from the equivalent figure at the time of the 2015 FACO Decision. Managed VoIP subscriptions now account for approximately 39% of all RFTS subscriptions. The majority of Managed VoIP subscriptions are delivered over Virgin Media CATV, but an increasing proportion of Managed VoIP is now delivered using Eircom and SIRO wholesale NG Broadband inputs. As set out at Table 10 above, the percentage of all Managed VoIP subscriptions accounted for by Virgin Media CATV has been in decline since the 2015 FACO Decision. While most Managed VoIP RFTS subscriptions continue to be delivered over Virgin Media CATV, growth in Managed VoIP subscriptions is concentrated in delivery over wholesale NG Broadband inputs, either on a merchant market or a self-supply basis.
- 5.282 Over the period of this market review, SPs may purchase wholesale NG Broadband inputs from Eircom, SIRO and, as its network rolls out, from NBI. These wholesale NG Broadband inputs allow SPs to offer Managed VoIP RFTS, subject to the SP investing in developing or procuring a VoIP platform which provides the RFVC component. Accordingly, the provision of Managed VoIP RFTS using wholesale NG Broadband inputs provided by Eircom, SIRO or NBI is likely to act as an indirect retail constraint on the FACO focal product supplied by a HM, and should therefore be included in the relevant product market. Such wholesale NG Broadband inputs are only available where Eircom, SIRO or NBI have rolled out their broadband networks. The extent of this network rollout is further considered below in discussion of the relevant geographic market.
- 5.283 RFTS delivered over Managed VoIP may not, however, be a useful switching option for end users making use of standalone RFTS. SPs offering services using wholesale NG Broadband inputs may choose which products they offer to end users. ComReg notes that 16 SPs have indicated their intention to offer retail services over NBI's network, however information is not yet available to the type of services which will be offered.

5.284 13 SPs currently offer retail packages on SIRO's network, some of whom are active on a national basis (e.g. Vodafone), and some of whom are active on a local or regional basis (for example, Carnsore Broadband is active in the south-east of Wexford).⁷⁰⁴ Of those SPs currently active on SIRO's network, ComReg understands that at least six SPs (Vodafone, Sky, BT, Digiweb, Westnet, and Airwire) offer Managed VoIP over SIRO. However, none of these SPs offer standalone RFTS over SIRO; accordingly, end users who have a preference for standalone RFTS are unlikely to switch to a broadband and RFTS bundle hypothetically offered by SPs using wholesale NG Broadband inputs unless, *inter alia*, the price of the bundle is lower than that of standalone RFTS.

Respondents' Views

5.285 ALTO and Eircom were the only Respondents which offered views on ComReg's preliminary assessment of indirect retail constraints. No respondent offered any views on the inclusion of NBI in the relevant product market as an indirect retail constraint. ALTO suggested that SPs who may have invested heavily in VUA services continue to have issues with economic viability in areas of the State, and submitted that ComReg may have been incorrect to assume that VUA is a valid substitute for continued wholesale supply of services.

5.286 ALTO alluded to the 2020 Consultation, where ComReg concluded on a preliminary basis that RFTS provided using wholesale NG Broadband inputs (including VUA provided by Eircom on a regulated basis, or SIRO and – on a forward-looking basis – NBI on a commercial basis) should be included in the Relevant FACO Markets on the basis of the indirect retail constraint which it placed on the focal products, when coupled with a VoIP platform.

5.287 ALTO has suggested that VUA may not exercise a constraint on the focal products, on the grounds that SPs who have invested in VUA are encountering issues with economic viability in parts of the State. ComReg interprets this to mean that Managed VoIP RFTS delivered over VUA may not act as an indirect retail constraint in certain areas of the State.

5.288 Eircom's consideration of indirect retail constraints focussed specifically on mobile telephony, and is set out below at paragraphs 5.329 to 5.334.

ComReg's Assessment of Respondents' Views and Position

5.289 ComReg notes that ALTO has not provided evidence in support of its assertion. ComReg disagrees with ALTO for three key reasons.

⁷⁰⁴ Sky, Vodafone, Digiweb, Carnsore Broadband, Kerry Broadband, Pure Telecom, Rocket Broadband, Westnet, Airwire, Magnet, Nova, Viatel and BlackKnight.

- 5.290 **First**, ComReg notes that, pursuant to the 2018 WLA/WCA Decision, Eircom is obliged to make VUA available on a regulated basis nationwide (where Eircom NG has rolled out), while SIRO and NBI will make available VUA in the footprint of their own FTTP networks. ComReg notes that WCA-based NG Bitstream is available in the Regional WCA Market (as per the 2018 WLA/WCA Decision), with this market footprint reflecting the competitive impact of upstream VUA is purchases. Therefore, in areas of the State where VUA is currently, or will be, available, it will facilitate Access Seekers to provide Managed VoIP, thereby acting as a viable substitute for FNA FACO.
- 5.291 **Second**, ComReg recognises differences in competitive conditions arising from the presence or absence of wholesale NG Broadband (including VUA) in its FACO geographic market assessment which assigns EAs to the Urban FACO Markets or the Regional FACO Markets on the basis, *inter alia*, of the level of wholesale NG Broadband coverage, including regulated wholesale broadband coverage. Therefore, where there is ultimately insufficient competition in the supply of FACO (including on the basis of the ability to self-supply Managed VoIP using upstream wholesale broadband inputs), ComReg applies the suite of remedies outlined in Section 10 to ensure Access Seekers, and end users, are protected.
- 5.292 **Third**, ComReg QKDR data suggest that Access Seeker purchases of VUA continue to grow. The provision of VUA lines has increased 13-fold since the publication of the 2015 FACO Decision in Q3 2015. Accordingly, there is evidence to suggest that VUA take-up has been extensive and is therefore capable, in principle of facilitating an indirect retail constraint on the FACO focal products where this is the case.
- 5.293 Having considered Respondent's views above, ComReg concludes that, where VUA is present, or in areas where there is a combination of regulated access to VUA and NG Bitstream VUA, it is capable of facilitating a sufficient indirect retail constraint on the FACO focal product. ComReg notes that areas where VUA is not utilised have been factored into the assessment of the WCA market, set out in the 2018 WLA/WCA Decision and the forthcoming WCA MTA Decision.

RFTS delivered over Leased Lines by means of SIP Trunking or Hosted PBX

- 5.294 RFTS dimensioned to the needs of high-volume business end users can be provided by means of SIP Trunking or Hosted PBX. SIP Trunking uses VoIP to connect a PBX to the PSTN, replacing a traditional 'phone trunk' such as a Primary Rate Interface ('PRI') or analogue line.
- 5.295 ComReg accordingly considers whether, in response to a SSNIP of HL-FACO, sufficient end users would switch to RFTS delivered by SIP Trunking or Hosted PBX over leased lines to render that price increase unprofitable.

- 5.296 In its response to the April 2019 IIR, [X █████ X] indicated that ISDN FRA and PRA is considered by business end users to be highly reliable, and businesses will likely have incurred costs associated with on-site telephony equipment such as PBXs. This SP suggested that, at the retail level, it has observed a steady replacement of ISDN PRA and ISDN FRA-based RFTS with SIP Trunking or VPN solutions delivered over leased lines, primarily as contracts come up for renewal.
- 5.297 [X █████ X] noted that, in its view, Managed VoB would be an unsuitable substitute in cases where businesses operated critical services which depended on business-level SLAs for outages and repairs (for example, call centres). This is because Managed VoB typically only offers consumer level SLAs. In contrast, leased lines, which can be used as an access path for SIP Trunking or Hosted PBX, offer higher-quality business-grade SLAs. This SP therefore considers that the lack of business grade SLAs for Managed VoB challenges the hypothesis that broadband is a direct replacement for HLVA at business-critical sites. However, SIP Trunking delivered over leased lines is, in this SP's view, a potential substitute for RFTS delivered by means of HL-FACO where business critical services are in question, and high-quality business-grade SLAs are required.
- 5.298 ComReg notes that leased lines have very different functionalities (and associated pricing) compared to ISDN FRA and ISDN PRA. **Firstly**, leased lines allow for symmetric, uncontended bandwidth, allowing for equivalent data upload and download speeds. **Secondly**, leased lines are typically accompanied by business-grade SLAs which deliver minimal downtime and very rapid response and repair times to reported outages – although some ISDN FRA and PRA service delivery is accompanied by 'enhanced SLAs'. **Thirdly**, leased lines are capable of carrying multiple telecommunications services, and of scaling the proportion of each service provided in response to demand – a 10Mb/s Ethernet leased line is capable, in principle, of accommodating up to 100 simultaneous voice calls. Accordingly, leased lines tend to be capable of delivering more telecommunications services, and at a higher quality, than ISDN FRA or PRA.

- 5.299 This increase in quality is reflected in the pricing of leased lines, compared to ISDN FRA or PRA. Leased lines are more expensive than ISDN FRA and PRA, at lower numbers of voice channels, subject to certain limited exceptions.⁷⁰⁵ Leased lines are typically used to deliver multiple services, rather than FACO or RFTS alone, except in the case of businesses for which voice service is business critical, such as call centres. It should also be noted that the leased line cost data below do not include an additional hypothetical cost associated with the provision of a FVCO platform.
- 5.300 This suggests that, in response to a SSNIP of ISDN FRA or PRA, an insufficient number of end users would be prepared to substitute to SIP Trunking or Hosted PBX delivered over leased lines to render that SSNIP unprofitable, given that the overall monthly cost per channel would increase by 246%, as suggested by the data set out below, when comparing the delivery of an equivalent number of voice channels over ISDN FRA, and 142% in the case of ISDN PRA. Similarly, in response to a SSNIP of ISDN FRA or PRA, it is unlikely that a sufficient number of end users would switch to leased lines, given the much higher charge per voice channel.
- 5.301 Given these differences, the ability of a HM supplier of HL-FACO to profitably implement a SSNIP is unlikely to be constrained by HL-RFTS end users, whose needs are likely satisfied by the 16 or 30 voice channels available over ISDN FRA or ISDN PRA, switching in significant numbers to SIP Trunking or Hosted PBX delivered over leased lines. Similarly, the ability of a HM supplier of HL-FACO to profitably implement a SSNIP is unlikely to be constrained by HL-RFTS end users (who require the advanced functionality and service which leased lines are capable of delivering) switching to HL-FACO.
- 5.302 For an equivalent number of voice channels, leased lines are between 2.5 and 3.5 times more expensive than ISDN FRA or PRA. Therefore, there appears to be an observable distinction between HL-FACO and leased line pricing, to an extent that justifies defining separate product markets. Accordingly, leased line functionality, cost and usage characteristics all differ from ISDN FRA and PRA, and from WLA/WCA, as set out at Table 31 above.

Barriers to, and disincentives to, switching

- 5.303 Furthermore, switching between leased lines and ISDN FRA and ISDN PRA is likely to be inhibited for a number of reasons.

⁷⁰⁵ In particular, a leased line may be cheaper in limited circumstances, where an SP is deeply interconnected, and the SP's customer is located within 3km of the interconnected exchange.

- 5.304 **Firstly**, switching to SIP Trunking or Hosted PBX over leased lines is likely to occur as part of a more general business move towards the provision of unified communications services, away from piecemeal provision of voice and data. The end user switching decision is, therefore, likely to be based on factors other than RFTS, taking into account business requirements across all electronic communications, at the point of contract renewal.
- 5.305 **Secondly**, switching is therefore likely to be asymmetric – while businesses may switch from RFTS delivered over HL-FACO to RFTS delivered over leased line SIP Trunking or Hosted PBX, as part of a general move towards unified communications, it is much less likely, given the costs of doing so, and the difference in quality and functionality, that businesses will switch from leased lines to HL-FACO. This is especially likely to be the case in respect of the business-critical services alluded at paragraph 5.297 above.
- 5.306 **Thirdly**, the provision of higher capacity NG Ethernet leased lines is growing, but the provision of lower capacity CG Time Division Multiplexing ('TDM') leased lines is in decline. Accordingly, the switching decision is therefore likely to be between ISDN FRA/PRA and Ethernet, not between ISDN FRA/PRA and TDM.
- 5.307 **Fourthly**, end users are likely to have incurred switching costs (CPE, on-site PBX) arising from switching to leased lines, and therefore face additional costs associated with the on-site equipment required to switch back to ISDN FRA/PRA.
- 5.308 Accordingly, ComReg's position is that RFTS provided over leased lines by means of SIP Trunking or Hosted PBX is unlikely to exert a sufficiently immediate and effective indirect constraint, such that it warrants inclusion in the HL-FACO Markets.

RFTS provided over a CATV network

- 5.309 In Section 4,⁷⁰⁶ ComReg identified that RFTS provided by means of Managed VoB over CATV was a likely substitute for residential end users. ComReg QKDR data suggest that the number of RFTS subscriptions on Virgin Media's CATV network has remained broadly steady over the lifetime of the current FACO market review, at 23% of all RFTS subscriptions, as at Q4 2020.
- 5.310 This sub-section considers whether RFTS provided over CATV should be included in the LL-FACO or HL-FACO Markets on the basis of indirect constraints. The relevant question is therefore whether, in response to a 5% to 10% SSNIP of FACO being passed by SB-WLR purchasers through to retail prices, a sufficient number of end users would switch to CATV-based RFTS, such that it would make the SSNIP of FACO unprofitable.

⁷⁰⁶ See paragraphs 4.223 to 4.273.

- 5.311 The magnitude of any competitive constraint posed by CATV in the RFTS market will be diluted on the FACO Markets, as discussed at paragraph 5.227 above. For example, consumers are more likely to respond to a direct SSNIP of 5% to 10% in the RFTS, than to a diluted 2.5% to 5% price increase arising from a SSNIP of FACO. Other factors are also likely to limit the potential for CATV RFTS products to constrain Eircom's FACO pricing, as set out below.
- 5.312 **Firstly**, as noted previously,⁷⁰⁷ as of Q4 2020, Virgin Media's CATV network is capable of providing RFTS to approximately 39% of premises in Ireland (946,500 premises), largely in urban areas. Accordingly, a significant proportion of RFTS end users are not in a position to switch to a CATV-based RFTS product. Virgin Media's network does not pass approximately 61% of premises in the State and, accordingly, Virgin Media cannot act as a potential indirect retail constraint at those locations.
- 5.313 **Secondly**, Virgin Media only provides RFTS as part of a broader bundle of services (with broadband, TV, or mobile telephony), and, as set out in its IIR response, does not provide RFTS on a standalone basis. Virgin Media's cheapest RFTS and broadband bundle⁷⁰⁸ is substantially more expensive than equivalent standalone RFTS products provided by Eircom or Access Seekers on the basis of FACO inputs.⁷⁰⁹ Therefore, end users who prefer to purchase standalone RFTS – even where bundles including RFTS are available - are unlikely to switch to Virgin Media in response to a SSNIP. While the proportion of RFTS purchased on a standalone basis as opposed to as part of a bundle has fallen from 27% to 17% in the period Q3 2015 to Q4 2020, it remains non-trivial, but is likely, over the lifetime of this market review, to continue to decline.
- 5.314 The number of end users who have a preference for purchasing standalone RFTS is likely to reduce the potential number of end users for whom CATV-based RFTS would be a viable substitute for a FACO-based RFTS product. However, even leaving aside end users who prefer to purchase standalone RFTS, this still leaves a substantial enough cohort of end users (83% as of Q4 2020) who could potentially be willing to switch to a bundle including RFTS provided over Virgin Media, in response to the pass through of a SSNIP of FACO, to render the SSNIP unprofitable. That switching decision, it should be noted, would likely involve a broader set of considerations in relation, not only to RFTS, but also to the other services in the bundle.

⁷⁰⁷ See paragraph 3.68 above.

⁷⁰⁸ 250Mb + World Talk Home Phone, at €63 per month after promotional period, as of 11 May 2020.

⁷⁰⁹ For example, eir's Anytime Landline, at €49.98 per month, as of 11 May 2021. Over a 24-month period, the Virgin Media package is 10.01% more expensive than the Eircom standalone product.

- 5.315 **Thirdly**, Virgin Media's network coverage is primarily residential. It provides RFTS predominantly to residential end users, with minimal provision of RFTS to businesses.⁷¹⁰
- 5.316 ComReg's position is that it is finely balanced as to whether RFTS provided by means of CATV by Virgin Media would likely exert a sufficiently immediate and effective indirect constraint in either of the FACO markets, such that they warrant inclusion in those markets. However, having regard to the considerations in the geographic market assessment below, as Virgin Media already has a sizeable retail market share in urban areas, and has been rolling out its network to regional towns, ComReg includes the self-supply of Virgin Media CATV-based RFTS within the LL-FACO market, given its potential to exert a sufficient degree of indirect constraint on products identified as falling into the LL-FACO market. On the contrary, ComReg excludes the self-supply of Virgin Media CATV-based RFTS from the HL-FACO market, given that Virgin Media has a minimal presence on this market, and that it is focussed substantially on its residential business.
- 5.317 Accordingly, ComReg's position is that RFTS provided over CATV is likely to exert a sufficiently immediate and effective indirect constraint such that it warrants inclusion in the LL-FACO Markets, in those geographic areas where it has a network footprint. Residential end users located within Virgin Media's network footprint who purchase RFTS as part of a bundle may well consider RFTS delivered over CATV to be an effective substitute. However, RFTS provided over CATV may not be a suitable switching option for residential end users located outside Virgin Media's CATV network footprint, or, in the case of end users located within Virgin Media's footprint, residential end users who have a preference for purchasing standalone RFTS. RFTS delivered over CATV is also unlikely to be a suitable switching option for business end users wishing to purchase services which are broadly equivalent to RFTS delivered over ISDN FRA or ISDN PRA.

Mobile Telephony Services

- 5.318 In Section 4,⁷¹¹ in the context of its retail market assessment, ComReg concluded that, while there is likely to be some substitutability between RFTS and MTS, the evidence suggests that end users consider RFTS and MTS to be broadly complementary rather than directly substitutable for each other. Nevertheless, ComReg considers whether, in response to a 5% to 10% SSNIP in FACO being passed through by SB-WLR purchasers to retail prices, a sufficient number of customers would be likely to switch to MTS, such that it would render a SSNIP of FACO unprofitable.

⁷¹⁰ This is borne out by Virgin Media's response to the April 2019 IIR, in which it states that [redacted].

⁷¹¹ See paragraphs 4.276 to 4.388.

- 5.319 Indirect retail substitution by means of mobile telephony could potentially take either of two forms:
- (a) The end user retains a fixed line – such that there is no impact on demand for retail line rental and, therefore, WLR – but substitutes to mobile telephony for some or all categories of calls - leading to a reduction in demand for RFVC and, therefore, FVCO, or
 - (b) The end user relinquishes their fixed line and fully substitutes MTS for RFTS, leading to reduced demand for both retail line rental and also RFVC and, therefore, FACO.
- 5.320 These two scenarios would be likely to have different effects on the profitability of a SSNIP in FACO, given the relative differences in charges for the WLR and FVCO components.
- 5.321 For example, where FACO prices increased by 5% to 10% and this only resulted in a reduction in demand for the FVCO component (the end user retains their fixed line, but makes relatively more calls on MTS), profits foregone as a result of a decline in demand for RFVC – and, therefore, FVCO - could potentially be offset by the extra profitability of the SSNIP of WLR.
- 5.322 ComReg also notes that a SSNIP of FACO, when passed through into RFTS price increases, will be diluted, as set out at Table 35 above, likely leading to an attenuated response at retail level.
- 5.323 Additional factors are, in ComReg's view, also likely to limit the potential for MTS to effectively constrain the profitability of a SSNIP of FACO. For example, end users who purchase RFTS as part of a bundle, where the RFTS component is based on FACO inputs (for example, where the bundle is delivered by means of POTS-based FTTC), may be hesitant to switch to MTS if they cannot cease purchasing the RFTS component of their bundle, or can only do so at the end of their contract period,⁷¹² particularly in response to a retail price increase of between 2.5% and 5%.
- 5.324 As noted above at paragraph 4.289, 2018 Eurobarometer data indicated that 55% of households retained RFTS, with 94% of households having a MTS.
- 5.325 For business end users, the 2019 SME Market Research indicates that retaining an RFTS service with a fixed line telephone number remains important. 77% of SME respondents had RFTS, with the majority of those without RFTS having ten or fewer employees.⁷¹³

⁷¹² For example, it does not appear possible, as of 3 May 2021, to purchase a bundle of broadband and TV from Virgin Media, with no RFTS component.

⁷¹³ 2019 SME Market Research, slide 8.

- 5.326 Respondents to the 2019 Residential Market Research⁷¹⁴ were asked how they would respond to a €2 or €4 increase in their RFTS, with 41% of respondents stating that they would reduce usage of RFTS, and instead use their mobile phone more frequently to make calls or send text messages.
- 5.327 ComReg assumes that RFTS end users will be less likely to respond to a diluted 2.5% to 5% increase in the price of RFTS, arising from pass through of a SSNIP of FACO, than a direct 10% RFTS price increase. Accordingly, ComReg considers that it is unlikely that the proportion of end users switching to MTS in response to a SSNIP of FACO would exceed the relevant CLVs identified in paragraph 5.249 above.
- 5.328 ComReg's position is that retail MTS is not likely to exert a sufficiently effective indirect constraint, such that it warrants inclusion in the FACO Markets.

Respondents' Views – MTS as FACO indirect retail constraint

- 5.329 Eircom was the only Respondent which offered views on MTS as an indirect retail constraint. It considered that ComReg's overall assessment of indirect constraints is flawed and argued that it only looks at MTS in a very cursory manner. Other than the Critical Loss Analysis ('CLA'), Eircom argues that ComReg does not include any quantitative analysis to justify its conclusion that MTS is unlikely to pose an adequate constraint at the retail level.
- 5.330 Eircom then referenced paragraph 5.265 of the 2020 Consultation, where ComReg outlined the two forms that indirect retail substitution by means of MTS could take. Eircom claimed that ComReg had not provided any quantitative analysis of the effects of the two forms of indirect retail substitution by means of MTS and stated that ComReg could not present hypothetical scenarios as evidence with regard to the actual effect of the SSNIP.
- 5.331 In addition, in response to paragraph 5.268 of the 2020 Consultation, Eircom stated that the fact that a SSNIP of FACO, when passed through into RFTS price increases, will likely be diluted does not negate the need for ComReg to actually assess the effect of the wholesale SSNIP at the retail level.
- 5.332 On the issue of the effect of a SSNIP on bundled users specifically, Eircom acknowledged that end users who purchase RFTS as part of a bundle may exhibit different switching behaviour to those who purchase RFTS on a standalone basis, but argued that the mere stating of this possibility does not meet the required threshold for the analysis of indirect constraints. In addition, a wholesale SSNIP of FACO, when passed through into RFTS price increases, would affect demand for all RFTS subscriptions. As such, Eircom stated that it is not only the individual effect of the SSNIP on the demand for standalone or bundled RFTS that is relevant but, rather, the collective effect.

⁷¹⁴ At slide 98.

- 5.333 Eircom then referenced paragraph 5.270 of the 2020 Consultation, where ComReg noted that “55% of households retained RFTS, with 94% of households having a MTS”. Eircom stated that it does not consider that the retention of RFTS subscriptions alone is indicative of complementarity between fixed and mobile services. Eircom argued that ComReg’s claim is problematic in that it completely ignores actual consumer behaviour and usage patterns.
- 5.334 Eircom suggested that, while ComReg had estimated CLVs associated with SSNIP amounts of 5% and 10% for LL-FACO and HL-FACO, it had not actually completed the analysis through a comparison with the indicated switching behaviour of survey respondents.

ComReg’s Assessment of Respondents’ views - MTS as FACO indirect retail constraint

- 5.335 ComReg notes that, in addition to the CLA, it also conducted analysis using the quantitative results from the 2019 Residential and SME Market Research.
- 5.336 ComReg carried out a Hypothetical Monopolist Test (‘HMT’) to determine whether a SSNIP above the competitive level (taken to be in the range of 5 to 10%) of the focal product supplied by the Hypothetical Monopolist would cause a sufficient number of customers to switch to an alternative to render the price increase unprofitable.
- 5.337 At paragraph 5.173 of the 2020 Consultation, ComReg set out the basis for its analysis of indirect retail constraints, this being an analysis of whether a vertically-integrated SP’s self-supply of RFTS, or the use by an RFTS SP of third-party wholesale inputs, could potentially fall within either of the candidate Relevant FACO Markets if the SP’s presence in the RFTS market exercised a sufficiently strong and immediate indirect pricing constraint on a HM’s wholesale supply of FACO. In this respect, retail end user behaviour may, through demand-side substitution at the retail level, indirectly impact the ability of the HM FACO supplier to profitably sustain a SSNIP of wholesale prices above the competitive level, i.e. indirect constraints from the retail market may limit FACO market price-setting behaviour.
- 5.338 As defined above, this analysis is inherently hypothetical. Accordingly, ComReg has no basis to examine actual effects or impacts based on hypothetical scenarios although ComReg utilises available data on market dynamics to inform its assessments. The SSNIP considers a hypothetical price increase, by a hypothetical monopolist and it is therefore only possible to provide estimates rather than actual data using this method.

- 5.339 ComReg also notes that Eircom has provided no evidence or clear reasoning as to why its analysis of indirect retail constraints warrants any changes or further analysis on its focal product assessment. As discussed at paragraph 5.97 above, it is not open to ComReg to define a focal product on the basis that it would lead to any pre-determined outcome thereafter. The starting point of the product market definition exercise is identifying the focal product, which, as set out at paragraph 5.7 above, is defined as “*the main product under investigation*”. Having identified the focal product, it is then necessary to identify those products which are regarded as sufficiently interchangeable or substitutable by the consumer by reason of the product’s characteristics, prices and intended use. Therefore, contrary to Eircom’s suggestion that its analysis of indirect retail constraints requires ComReg to reassess its focal product assessment, ComReg notes that to do so would be analytically incorrect.
- 5.340 ComReg notes that, contrary to Eircom’s claim that it did not assess the effect of the wholesale SSNIP at retail level, as outlined above in paragraph 5.329, it has assessed this effect, on both a quantitative and qualitative basis. As identified by Eircom, ComReg sought end users’ views on a hypothetical SSNIP, as detailed in the 2019 Residential Market Research. ComReg notes that the SSNIP question is posed to respondents in such a manner that it solely gauges their response to a price increase in RFTS. From the perspective of the end user, whether this price increase emanates from the wholesale or retail markets is irrelevant, thus the responses can be used to gauge consumer responses in both cases. Given that an indirect retail constraint at the wholesale level emanates from consumer preferences at the retail level, it is reasonable to infer that the quantitative results of this test are therefore applicable in ComReg’s wholesale assessment and have therefore been analysed on that basis.
- 5.341 ComReg also bolstered its analysis in Table 35 by carrying out a qualitative analysis whereby it calculated the approximate dilution ratios, using actual and percentage RFTS price increases arising from the pass through of a SSNIP of FACO. As noted in paragraphs 5.180 to 5.183, an SP purchasing FACO may choose to absorb some or all of the SSNIP in FACO, rather than passing it onto RFTS end users. This would further limit the likely extent to which retail substitution by end users might undermine the profitability of the SSNIP, as end users would face no price signals incentivising them to switch SP. Therefore, through calculating the dilution ratios, ComReg is able to estimate the likely impact a SSNIP of FACO would have on the price of RFTS, and, therefore, the switching behaviour of RFTS end users.

- 5.342 ComReg also notes that it has, in fact, assessed the effect of a SSNIP on both standalone and bundled RFTS end users. The results of this assessment are set out in Slides 97 to 103 of the Residential Market Research. However, ComReg notes that it does not, and should not, examine the collective effect of a SSNIP on both standalone and bundled RFTS end users. A SSNIP should only be assessed on markets which have been defined individually. Examining this collectively across markets would result in a failure to isolate the market specific effects and capture accurate results.
- 5.343 ComReg refutes Eircom's suggestion, set out in paragraph 5.333 above, that it solely relies on one metric to assess FMS. ComReg does not claim that the retention of RFTS subscriptions alone is indicative of complementarity between fixed and mobile services. Rather, ComReg set out at paragraphs 4.242 to 4.289 of the 2020 Consultation why it did not consider that mobile telephony to be a demand-side substitute for RFTS, and again at paragraphs 4.311 to 4.324 of the 2020 Consultation why it did not consider that mobile telephony to be a supply-side substitute for RFTS. Accordingly, despite having concluded on a preliminary basis that mobile telephony was unlikely to be a substitute for RFTS at the retail level, ComReg nevertheless also reassessed the possibility of whether mobile telephony would be likely to exert an indirect retail constraint on the provision of FACO at paragraphs 5.264 to 5.274 of the 2020 Consultation. Accordingly, it is clear that ComReg did not solely rely on data regarding end users' retention of RFTS subscriptions in its assessment of the capacity of mobile telephony to exercise a constraint on the provision of FACO.
- 5.344 In respect of Eircom's assertion in paragraph 5.334 above, ComReg notes at paragraph 4.109 that end users purchasing RFTS would, in response to a SSNIP (of RFVA, RFVC, or both), of 5 to 10%, be unlikely or unable to unpick the individual bundle elements and substitute to alternative products, such that it would render the SSNIP unprofitable, thereby excluding MTS as a demand side constraint in the relevant RFTS markets. At the wholesale level, a price increase of 5 to 10% is likely to be diluted when passed through to the retail level. This is because the RFTS price consists of a number of components, only one of which is the price of FACO. Thus, even if the full FACO price increase was passed through, it would only cause part of the RFTS price to increase. Therefore, considering ComReg's assessment at the retail level, where an insufficient number of end users would switch as a result of a 5 to 10% increase in price, it is reasonable to infer that any price increase less than this amount, due to its tendency to dilute when passed through to end users, would also result in an insufficient number of end users switching to an alternative operator to render the SSNIP unprofitable. Considering this analysis at the retail level and subsequent reasoning at the wholesale level, ComReg notes that it is not strictly necessary to proceed with its analysis in this case as the outcome would not be altered by doing so.

5.345 Having considered Respondent's views above, ComReg is satisfied that MTS does not act as a sufficiently effective indirect retail constraint on FACO.

RFTS delivered over very localised FTTP networks

5.346 ComReg's position – set out at paragraph 5.197 above – is that vertically-integrated OAOs such as Magnet and Digiweb, which provide FTTP on very localised networks, were unlikely to provide an effective direct constraint by means of supply-side substitution (including self-supply). ComReg formed this view based largely on the limited and dispersed coverage of Magnet's and Digiweb's very localised FTTP networks.

5.347 The comparatively low numbers of Magnet and Digiweb subscribers over very localised FTTP, and the very limited geographic footprints of these networks suggest that, in response to a SSNIP of the focal products, an insufficient number of end users would switch to RFTS delivered over very localised FTTP, to render that SSNIP unprofitable. Accordingly, ComReg concludes that, over the period of this market review, vertically-integrated OAOs such as Magnet and Digiweb, providing FTTP on very localised networks, are unlikely to provide an effective indirect retail constraint, and should not be included in the relevant product market.

RFTS delivered over FWA

5.348 In Section 4⁷¹⁵ ComReg concluded that RFTS provided over FWA should not be included in the Relevant RFTS Markets. The coverage and use of RFTS provided over FWA is substantially less than coverage over other networks, with only [X █████ X]⁷¹⁶ Managed VoB subscriptions were delivered over FWA. Therefore, given that indirect constraints from, for instance, MTS are not likely to be sufficient to warrant their inclusion in the FACO Markets, ComReg draws the same conclusion with respect to RFTS provided over FWA.

5.349 Moreover, demand for FWA broadband has remained largely unchanged since Q3 2014, as set out at paragraph 3.29 above, and at Q4 2020, FWA accounted for less than 3% of business or residential broadband subscriptions. As a platform for the delivery of RFTS, FWA appears to service a very small proportion of overall RFTS demand, and this is likely to dampen demand for RFTS provided over FWA.

⁷¹⁵ See paragraphs 4.223 to 4.229 above.

⁷¹⁶ In the range of 30,000 to 35,000.

Criterion (c): Would the strength of indirect constraints be weakened by RFTS end users switching to Eircom's own retail arm?

- 5.350 ComReg now considers the EC's *third criterion*, as identified in paragraph 5.220, namely whether the retail end users of the Access Seekers purchasing FACO from the HM would switch, to a significant extent, to the retail arm of the integrated hypothetical monopolist, in particular if the HM did not raise its own retail prices following the SSNIP of FACO, i.e., whether, in response to a wholesale SSNIP of FACO offered by a vertically-integrated HM supplier over a widespread or ubiquitous network, the retail end users of Access Seekers purchasing FACO would switch to the HM supplier's own retail arm.
- 5.351 In the context of Eircom's supply of SB-WLR, such switching in response to a SSNIP of FACO would result in Eircom benefiting from increased retail revenue which may act to offset any lost wholesale revenue resulting from a reduction in wholesale demand for SB-WLR.
- 5.352 Having regard to the Modified Greenfield Approach ('MGA'), absent regulation, a vertically-integrated HM supplier of FACO over a widespread or ubiquitous network would have incentives to at least hold its own RFTS prices constant⁷¹⁷ to attract RFTS end users who switch away from Access Seekers whose services are based on SB-WLR, following a SSNIP.
- 5.353 Access Seekers compete at the retail level predominantly through the purchase of Eircom SB-WLR and WLV, which are available nationally. However, in accordance with the MGA, absent regulation in the Relevant FACO Markets, SB-WLR would not necessarily be made available by Eircom and, therefore, Access Seekers would not be able to offer RFTS using SB-WLR inputs (or WLV inputs, which rely on the provision of an SB-WLR component). In order to continue receiving RFTS, end users would therefore be faced with the choice of switching from RFTS provided over Eircom FNA on a merchant market basis to Access Seekers to either:
- (a) RFTS provided by Eircom over its own FNA network on a self-supply basis, or
 - (b) Managed VoIP-based RFTS provided by SPs (including Eircom) over NG Broadband inputs including, for the avoidance of doubt, self-supply by Virgin Media over CATV, self-supply by Eircom over WLA or WCA, and RFTS supplied by SPs making use of merchant market access to Eircom, SIRO, or (in future) NBI wholesale NG Broadband.

⁷¹⁷ Although it is possible that it could increase prices for less price sensitive customers and decrease prices for more price sensitive customers.

- 5.354 Even in the presence of SB-WLR regulation, as of Q4 2020, according to the QKDR, Eircom's RFTS market share is 40%, while Virgin Media's is 23%. The provision of RFTS by Vodafone, Sky, Pure Telecom, Digiweb, and BT (to large retail customers only) involves a mixture of FNA and NG Broadband inputs. Accordingly, if a HM imposed a SSNIP of FACO sold to Access Seekers, but did not increase its own RFTS prices, it is likely that some of those Access Seeker end users would switch to the downstream arm of the HM. However, noting that a number of these Access Seekers also provide RFTS using broadband inputs, which do not require the purchase of FACO, ComReg expects that some end users would remain with their existing SP, but switch to the delivery of RFTS by means of Managed VoIP, while some would switch to other SPs which deliver RFTS by means of Managed VoIP. The degree to which end users will be able to avoid switching to the HM's downstream arm will depend on a number of factors, including:
- (a) Relative prices of the HM's RFTS, and alternative RFTS which does not require a FACO input,
 - (b) Availability of NG Broadband networks at an end user location, and
 - (c) End user preference for RFTS on a bundled or standalone basis.
- 5.355 Paragraphs 5.362 to 5.392 below consider in greater detail Access Seeker alternatives to FACO, in the context of whether end users would be forced to revert to Eircom's retail arm. As part of its geographic assessment below, ComReg assesses, on an EA basis, the extent to which, in a MGA scenario, Access Seekers would be capable of retaining their end users, were Eircom to cease offering SB-WLR to Access Seekers.
- 5.356 The extent of broadband rollout, and end user propensity to purchase RFTS as part of a bundle, both suggest that some end users would likely consider switching to Managed VoIP-based RFTS provided by Access Seekers on a bundled basis. Nevertheless, RFTS over FNA offered by the HM supplier is likely to be considered a suitable substitute by RFTS end users affected by the SSNIP because the product characteristics are identical, with relatively low switching costs (since the service would be provided over the same network and with the same or similar CPE,⁷¹⁸ there would be no requirement for porting of telephone numbers and service downtime would be limited). Furthermore, the ubiquity of the HM's network implies that its downstream arm would not be limited by coverage in the same way as potential alternative platforms.

⁷¹⁸ Eircom's MSAN proposals suggest that the useful lifetime of Eircom's legacy FNA network would likely be extended, thereby also extending the lifetime of the necessary CPE.

- 5.357 ComReg accordingly considers it likely that, in response to the pass through of a SSNIP in FACO, a proportion of end users purchasing RFTS from Access Seekers making use of SB-WLR inputs would switch to the RFTS product offered by Eircom's retail arm, thereby mitigating any loss of wholesale revenue.⁷¹⁹ However, similarly, a proportion of end users would likely switch to SPs offering RFTS by means of Managed VoIP. While finely balanced, and limited to areas where broadband is available, this effect suggests that, for certain categories of end user, and where broadband coverage is available, alternative platforms are, in principle, capable of acting as an effective indirect retail constraint on a vertically-integrated HM supplier of FACO.
- 5.358 However, ComReg notes that, as Access Seekers and, therefore, end users, migrate away from RFTS delivered over FNA, demand for FACO will likely continue to decline over the lifetime of this market review.

Summary of indirect constraint assessment

- 5.359 In paragraphs 5.217 to 5.358 above, ComReg has assessed the extent to which a HM supplier of FACO would face a sufficiently strong indirect pricing constraint from RFTS provided over wholesale broadband inputs, CATV, very localised OAO FTTP networks, FWA, and MTS. ComReg is of the view that any indirect constraints arising from FWA, very localised OAO FTTP, and MTS are unlikely to be sufficiently strong to prevent a SSNIP of FACO by the HM. These retail services should not be included in the Relevant FACO Markets.
- 5.360 However, ComReg considers that Managed VoIP RFTS delivered over wholesale NG Broadband inputs, and Managed VoB RFTS delivered over CATV, are likely to exert sufficiently immediate and effective indirect constraints to warrant inclusion in the LL-FACO Markets, in those geographic areas where Virgin Media (in the case of CATV) and Eircom, SIRO or – on a forward-looking basis – NBI (in the case of wholesale NG Broadband inputs) has a network footprint. ComReg considers that RFTS delivered over CATV is unlikely to exert a sufficiently effective indirect constraint to warrant inclusion in the HL-FACO Markets.
- 5.361 The degree of indirect constraint will be considered further in the context of the assessment of competition in the FACO Markets in Section 7, focussing in particular on whether the effectiveness of this constraint is likely to change over a longer time horizon.

⁷¹⁹ ComReg notes that some costs associated with the provision of FACO would no longer be incurred, while some additional retail costs would be incurred.

Access Seeker alternatives to FACO

5.362 In the context of the MGA, if Eircom were to cease offering FACO (that is, SB-WLR and, consequently, WLV, which makes use of SB-WLR inputs), or if, following a SSNIP, Access Seekers no longer purchased FACO from Eircom, one possibility is that, in the absence of sufficient alternatives, Access Seekers would be unable to procure alternative sources of FACO, or to self-supply FACO. However, this assumption may not hold in the presence of NG Broadband networks, as Access Seekers may be able to procure either FACO, or FA inputs elsewhere. ComReg considers which Access Seekers make use of Eircom FACO, and what alternatives are available to those Access Seekers.

Which SPs buy FACO?

5.363 According to the Q4 2020 QKDR, Eircom merchant market FACO (that is, SB-WLR, and WLV, to which SB-WLR is an upstream input) accounts for **44%** of all Eircom FNA access paths, with Eircom self-supply of direct access paths to its retail arm accounting for almost all of the remaining **56%** (with CPS accounting for the remaining <1%). According to the QKDR, as of Q4 2020, Eircom sold 240,557 SB-WLR access paths, and 236,247 WLV access paths, totalling 476,804 access paths.

5.364 Data available to ComReg indicate that **over 99.4%** of merchant market FACO sales, measured by number of lines, are over PSTN and ISDN BRA lines, that is, on the **LL-FACO market**. Just **0.6%** of merchant market FACO sales occur on the **HL-FACO market**.⁷²⁰

SB-WLR

5.365 As set out below, Table 38 and Table 39 outline, as at January 2021, the primary purchasers of SB-WLR from Eircom (measured by lines, rather than access paths) on the LL-FACO and HL-FACO markets. BT accounts for the vast majority [X ██████████ X] of SB-WLR purchases on the LL-FACO market, which it uses as an input to its own provision of wholesale services. Magnet accounts for another [X ██████████ X] of SB-WLR purchases, Digiweb a further [X ██████████ X], while the remaining 10 Access Seekers account for [X ██████████ X] of purchases. Accordingly, BT is, very substantially, the most heavily impacted SP, in a scenario where BT does not or cannot avail of Eircom SB-WLR. This would also have a knock-on effect on Sky, which itself relies heavily on BT inputs for RFTS provision.

5.366 On the HL-FACO market, BT is still the largest purchaser, but its share of purchases is much lower than its share of purchases on the LL-FACO market, at [X ██████████ X], rather than [X ██████████ X]:

⁷²⁰ While ComReg's QKDR reports access path statistics, other relevant market data provided to ComReg on a confidential and commercially sensitive basis provide figures based on the lines per SP, not access paths.

Table 38: Purchases of SB-WLR lines (LL-FACO), January 2021 [REDACTED]

	SB-WLR	
	LL-FACO	VoIP Capability (if any)
Number of lines	[REDACTED] ⁷²¹	
BT	[REDACTED] ⁷²²	White Label VoIP
Magnet	[REDACTED] ⁷²³	Managed VoIP to businesses
Digiweb	[REDACTED] ⁷²⁴	Virtual PBX to business end users
OAOs	[REDACTED] ⁷²⁵	N/A

Non-confidential

⁷²¹ In the range of 90-100%.

⁷²² In the range of 90-100%.

⁷²³ In the range of 0-10%.

⁷²⁴ In the range of 0-10%.

⁷²⁵ In the range of 0-10%.

Table 39: SB-WLR (HL-FACO) Purchases, January 2021 [REDACTED]

	SB-WLR	
	HL-FACO	VoIP Capability (if any)
Number of lines	[REDACTED] ⁷²⁶	
BT	[REDACTED] ⁷²⁷	White Label VoIP
Magnet	[REDACTED] ⁷²⁸	Managed VoIP to business end users
Digiweb	[REDACTED] ⁷²⁹	Virtual PBX to business end users
Virgin Media	[REDACTED] ⁷³⁰	Self-supplies Managed VoB RFTS to residential end users, and SIP Trunking over leased lines to business users
Telcom	[REDACTED] ⁷³¹	Managed VoIP & SIP Trunking to businesses
OAOs	[REDACTED] ⁷³²	N/A

White Label Voice (WLV)

5.367 As set out below, Table 40 and Table 41 outline WLV purchasers from Eircom, as at January 2021. Vodafone accounts for the majority of WLV purchases, which it uses as an input to its delivery of RFTS to its own subscribers:

Table 40: White Label Voice (Low-Level) Purchases, January 2021 [REDACTED]

White Label Voice (Low-Level)		
	Low-Level	VoIP Capability (if any)
Number of lines	[REDACTED] ⁷³³	
Vodafone	[REDACTED] ⁷³⁴	Offers Managed VoB RFTS on its own FVCO platform
Pure Telecom	[REDACTED] ⁷³⁵	Offers Managed VoIP based on wholesale inputs
Three	[REDACTED] ⁷³⁶	Managed VoIP to business customers by agreement with Blueface
IFA Telecom	[REDACTED] ⁷³⁷	[REDACTED]

⁷²⁶ In the range of 0-10%.

⁷²⁷ In the range of 40-50%.

⁷²⁸ In the range of 20-30%.

⁷²⁹ In the range of 0-10%

⁷³⁰ In the range of 0-10%.

⁷³¹ In the range of 0-10%.

⁷³² In the range of 0-10%.

⁷³³ In the range of 90-100%.

⁷³⁴ In the range of 60-70%.

⁷³⁵ In the range of 20-30%.

⁷³⁶ In the range of 10-20%.

⁷³⁷ In the range of 0-10%.

Table 41: Purchases of White Label Voice (High-Level), January 2021 [REDACTED]

White Label Voice		
	High-Level	VoIP Capability (if any)
Number of lines	[REDACTED] ⁷³⁸	
Vodafone	[REDACTED] ⁷³⁹	Offers Managed VoB RFTS on its own FVCO platform
Pure Telecom	[REDACTED] ⁷⁴⁰	Offers Managed VoIP based on wholesale inputs
Three	[REDACTED] ⁷⁴¹	Managed VoIP to business customers by agreement with Blueface
OAOs	[REDACTED] ⁷⁴²	N/A

- 5.368 Vodafone accounts for over [REDACTED] of WLV purchases on both the LL-FACO and HL-FACO markets, with Pure Telecom and Three (making use of Blueface inputs) together accounting for over [REDACTED] of purchases on both markets.
- 5.369 Overall purchasing data on both the HL-FACO and LL-FACO markets indicate, firstly, that a limited number of Access Seekers would be impacted by the withdrawal of, or the levying of a SSNIP of, FACO and, secondly, that – aggregating the data set out in the tables above - [REDACTED] of purchases of lines on the LL-FACO market (which itself accounts for [REDACTED] of FACO purchases) are accounted for by three Access Seekers - BT, at [REDACTED], Vodafone, at [REDACTED], and Pure Telecom, at [REDACTED]. Similarly, [REDACTED] of purchases of lines on the HL-FACO market (which accounts for [REDACTED] of FACO purchases) are accounted for by three Access Seekers - BT, at [REDACTED], Vodafone, at [REDACTED], and Three, at [REDACTED].

What alternatives are available to FACO Access Seekers?

- 5.370 An Access Seeker could procure FACO from alternative sources, or self-supply FACO by:
- (a) Purchasing White Label VoIP, or in the alternative,
 - (b) Procuring or developing an FVCO capability, and
 - (i) Roll out its own network to provide fixed access ('FA'), or

⁷³⁸ In the range of 0-10%.

⁷³⁹ In the range of 60-70%.

⁷⁴⁰ In the range of 0-10%.

⁷⁴¹ In the range of 20-30%.

⁷⁴² In the range of 0-10%.

- (ii) secure FA by purchasing merchant market WLA⁷⁴³ or WCA.⁷⁴⁴

5.371 Virgin Media does not provide, and is unlikely to over the lifetime of this market review, merchant market FA, while, as of May 2021, delivery of retail services over NBI infrastructure has just commenced in Cork and Cavan. Accordingly, where, following a SSNIP, SB-WLR became too expensive for Access Seekers, or Eircom withdrew supply of SB-WLR, an Access Seeker could instead:

- (a) Source White Label VoIP from Eircom or BT, or
- (b) Self-supply FACO for the purpose of providing RFTS to its own end users, over (where available):
 - (i) Eircom WLA and/or WCA,
 - (ii) BT WCA,
 - (iii) SIRO WLA,
 - (iv) on the basis of its own network rollout, or
 - (v) on a forward-looking basis, NBI WLA.

5.372 Network rollout requires an SP to incur very substantial and sunk costs. ComReg considers that smaller Access Seekers which purchase FACO are unlikely to have the RFTS subscriber numbers to warrant rolling out a network, or the financial resources to fund such a level of investment, on anything other than a localised basis. Larger Access Seekers – notably BT and Vodafone – are also unlikely to undertake a programme of network rollout, despite their larger customer numbers and comparatively deeper pockets. ComReg considers that this is likely to be the case due to the facts that, firstly, both Vodafone and BT have already invested in providing RFTS and FACO respectively by purchasing merchant market FA, rather than engaging in network rollout. Secondly, ComReg notes that, to the extent that access to Eircom WLA (LLU and VUA) and, in the Regional WCA Market, Eircom WCA (CG Bitstream and Bitstream Plus) continues to be mandated by means of the 2018 WLA/WCA Decision, FA is guaranteed to Access Seekers on those markets. Accordingly, ComReg considers it unlikely that an Access Seeker would roll out its own network in response to the withdrawal of FACO, or a SSNIP of FACO.

⁷⁴³ Including, as set out in the 2018 WLA/WCA Decision, LLU, Sub-loop unbundling, Line Share and VUA.

⁷⁴⁴ Including, as set out in the 2018 WLA/WCA Decision, Current Generation and Next Generation Bitstream.

- 5.373 Access Seekers benefit from the access and associated obligations placed on Eircom pursuant to the 2018 WLA/WCA Decision in respect of LLU and VUA on the WLA market and CG Bitstream and Bitstream Plus on the Regional WCA Market. That Decision concluded that, on the Urban WCA Market, sufficient competitive constraints existed to render regulation unnecessary.
- 5.374 Accordingly, in response to the withdrawal of, or a SSNIP of, FACO, an Access Seeker could seek to procure FA (VUA or Bitstream Plus) FACO (White Label VoIP) as follows, by purchasing:
- (a) Eircom LLU on a regulated basis;
 - (b) Eircom VUA on a regulated basis;
 - (c) SIRO VUA on a commercial basis;
 - (d) Eircom Bitstream Plus on a regulated basis in the Regional WCA Market;
 - (e) Eircom Bitstream Plus on a commercial basis in the Urban WCA Market;
 - (f) BT Bitstream on a commercial basis;
 - (g) Eircom White Label VoIP on a commercial basis;
 - (h) BT White Label VoIP on a commercial basis; or
 - (i) On a forward-looking basis, NBI VUA on a commercial basis.
- 5.375 In most of the scenarios set out above, it will only be possible to purchase FA or White Label VoIP where wholesale NG Broadband is present. Eircom NG Broadband capable of delivering Managed VoIP, which delivers Eircom and BT wholesale services, passed 1,173 EAs (at any level of coverage), while SIRO is present in 192 EAs, as of Q4 2020.
- 5.376 A special case arises in respect of Eircom LLU, which is delivered over FNA. In principle, even if no other network were present, in response to the withdrawal of, or a SSNIP of, FACO, an Access Seeker could procure LLU from Eircom on a regulated basis, and, if it procured an FVCO platform, self-supply FNA FACO.
- 5.377 ComReg considers, however, that the use of LLU inputs for FACO purposes by Access Seekers is unlikely to be widespread. This is due to the fact that, since the publication of the 2015 FACO Decision, numbers of Eircom LLU lines have declined both absolutely, and compared to sales of Eircom VUA and Bitstream Plus, as Table 42 below indicates. Additionally, LLU and CG Bitstream are both delivered over FNA, and are therefore unable to support the QoS, speed and bandwidth standards typically required to deliver Managed VoIP. This suggests that Access Seekers have a marked preference for purchasing NG Broadband (VUA and Bitstream Plus), rather than CG broadband (LLU and CG Bitstream):

Table 42: Purchases of Eircom WLA and WCA, Q3 2015 – Q4 2020

	2015 Q3	2020 Q4	% change
LLU lines	68,262	17,089	-75%
VUA lines (excl. FTTP VUA)	17,170	220,852	1,186%
WLA lines (LLU and VUA)	85,432	237,941	179%
CG Bitstream	216,941	84,428	-61%
Bitstream Plus (excl. FTTP)	110,106	141,561	29%
WCA lines	327,047	225,989	-31%
CG as % of WLA	80%	7%	-73%
CG as % of WCA	66%	37%	-29%

- 5.378 Accordingly, where premises served by FACO are not passed by SIRO or Eircom FTTx, Access Seekers will be unable to procure White Label VoIP, and will have less opportunity to purchase WLA or WCA. It is therefore more likely that end users at those premises will revert to Eircom retail.
- 5.379 Where premises are passed by Eircom FTTx, Access Seekers can, in principle, procure FA in the form of Eircom WLA or WCA, or BT WCA, or FACO in the form of Eircom or BT White Label VoIP.
- 5.380 Similarly, where premises are passed by SIRO, an Access Seeker will, in principle, have the option of purchasing WLA from SIRO and delivering RFTS, where it has procured or developed a VoIP platform, or where available, BT White Label VoIP delivered using SIRO WLA inputs.

Special case of Eircom White Label VoIP

- 5.381 ComReg concludes that Eircom White Label VoIP is likely to act as a demand-side substitute to the focal product (and other substitute products). However, under a MGA scenario, it is unclear whether Eircom would continue to offer White Label VoIP. White Label VoIP is provided over both FTTP and FTTC. Eircom therefore provides White Label VoIP over a regulated FA input in the case of WLA, and WCA in the Regional WCA Market, and commercially in the Urban WCA Market.
- 5.382 On the one hand, Eircom could hypothetically continue to offer White Label VoIP upon withdrawal of, or a SSNIP of, FACO to induce Access Seekers to migrate to it. On the other hand, if the intention of Eircom's withdrawal of FACO were to force end users to switch back to Eircom retail, then Eircom would likely also withdraw provision of White Label VoIP as, otherwise, Access Seekers would continue to have FA over which RFTS would be provided.

- 5.383 In this respect, it could potentially be counter-intuitive to assume that Eircom would offer White Label VoIP to Access Seekers following the withdrawal of FACO. This is because it could be argued that Eircom only provides White Label VoIP because it is required by regulation to provide FACO to Access Seekers. Thus, absent regulation, under a MGA, it is not clear whether Eircom would provide White Label VoIP, and its incentives to do so may be contingent on what other outside options are available to Access Seekers.
- 5.384 However, this is of largely academic interest, given that, as of Q4 2020, Eircom supply of White Label VoIP to [redacted] [redacted]⁷⁴⁵

Which Access Seekers are capable of procuring alternative FACO inputs?

- 5.385 Where Eircom withdraws FACO, or levies a SSNIP of FACO, but alternative FA is available, an Access Seeker may, in principle, substitute to White Label VoIP, or, if it is willing to procure its own VoIP platform, to WLA or WCA. Given the relative and absolute decline in LLU numbers, an Access Seeker which is unable or unwilling to switch to NG functionality may face greater constraints in its ongoing use of FACO.

Purchasing WLA or WCA

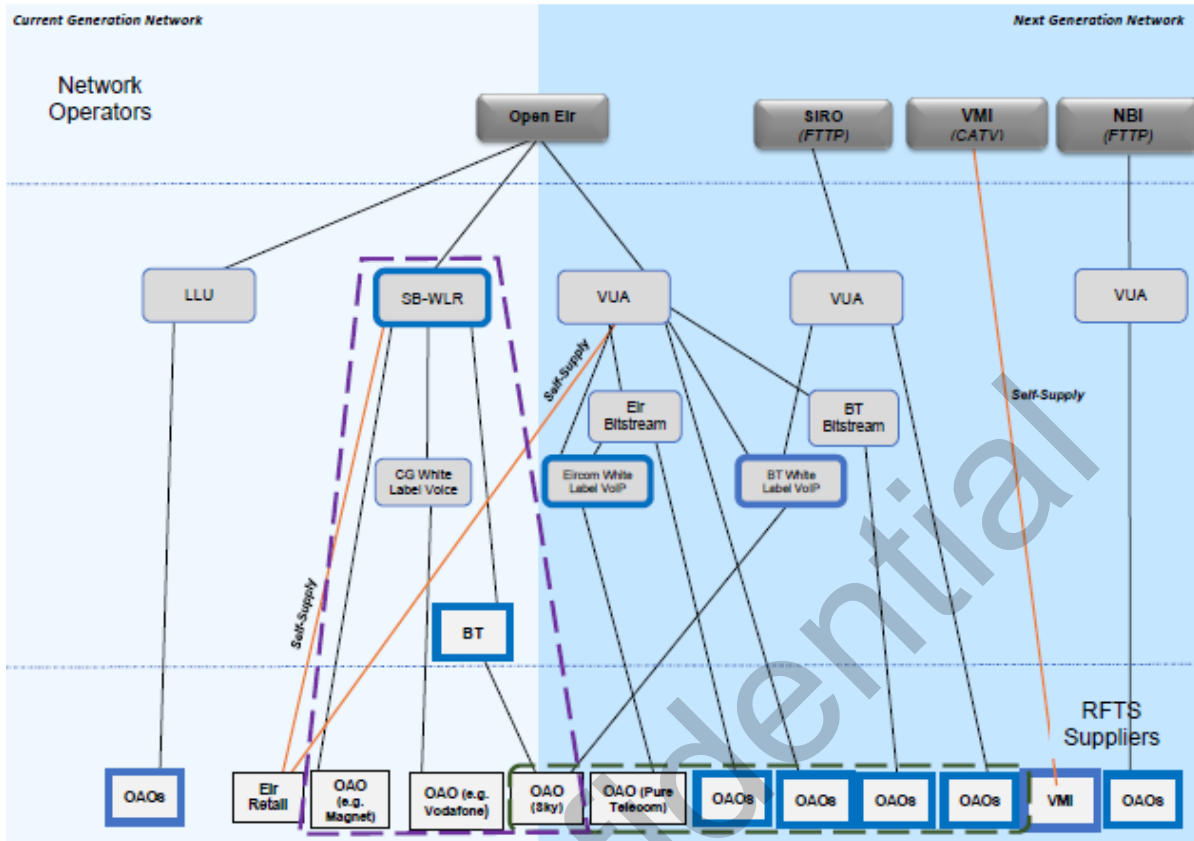
- 5.386 Where an Access Seeker is willing and able to procure or develop a VoIP platform, it may self-supply FACO by purchasing WLA or WCA. Of the 17 Access Seekers currently purchasing SB-WLR or WLV, ComReg research suggests that at least 15 already have some form of VoIP capability. In particular, the largest purchasers – BT and Vodafone – already provide White Label VoIP (in the case of BT) and Managed VoIP RFTS (in the case of Vodafone) using wholesale NG Broadband inputs. A range of smaller Access Seekers are focussed on the provision of RFTS to businesses, while Three already offers Managed VoIP using Blueface inputs.
- 5.387 Accordingly, were Eircom to withdraw, or implement a SSNIP of, FACO, most Access Seekers have already invested in some form of VoIP capability, and would therefore have incurred some level of investment costs and a prior level of technical expertise, in the delivery of wholesale or retail Managed VoIP.

⁷⁴⁵ 0-10,000.

Purchasing White Label VoIP

- 5.388 In the alternative, an Access Seeker could purchase White Label VoIP, thereby avoiding the cost of acquiring a Managed VoIP FVCO capability. In particular, ComReg understands that Sky relies on BT White Label VoIP to deliver its RFTS capability. Were Eircom to withdraw or implement a SSNIP of FACO, it would be open to BT to migrate its Sky custom based on FACO inputs, to its own White Label VoIP platform based on NG Broadband inputs. ComReg also understands that [REDACTED]
[REDACTED]
[REDACTED] [REDACTED]. Table 37, Table 40 and Table 41 above set out existing alternative service provision options offered by Access Seekers currently purchasing Eircom FACO.
- 5.389 ComReg's research, as set out above, suggests that, in response to the withdrawal by Eircom of, or the levying of a SSNIP of, FACO, Access Seekers would – in principle – be capable of, instead, purchasing White Label VoIP (the direct demand-side constraint), or WLA or WCA to self-supply FACO to provide RFTS (the indirect retail constraint). This is based on the fact that most Access Seekers have already invested in some level of VoIP capability, and therefore are already equipped with both the infrastructure and the know-how to migrate from FACO to White Label VoIP or self-supply of FACO over WLA or WCA within a limited time frame, and at minimal disruption to end users. It therefore follows that Access Seekers are, in most cases, likely to be capable of migrating to alternative FACO. Where there are impediments to doing so, these are likely to arise from either:
- (a) The absence of NG Broadband infrastructure passing the RFTS end user's premises, or
 - (b) The end user's unwillingness to switch from RFTS delivered by means of FACO, to RFTS delivered by means of Managed VoIP, for instance due to Managed VoB only being made available bundled together with broadband, where the end user does not require broadband.
- 5.390 In the two foregoing scenarios, end users are more likely to migrate to Eircom retail following the withdrawal of, or the levying of a SSNIP of, FACO. Figure 49 below sets out the various alternative means of procuring wholesale inputs in response to the withdrawal of, or the levying of a SSNIP of, FACO, noting that Virgin Media engages in self-supply only, and NBI has only just commenced network rollout, as of May 2021. Cells outlined in blue represent the stage of the supply chain at which the FVCO component is provided – at the wholesale level in the case of White Label VoIP, and at the retail level in the case of Managed VoIP RFTS:

Figure 49: RFTS wholesale inputs



- 5.391 Pending NBI rollout, Access Seekers with some prior level of VoIP expertise who self-supply FACO using their own VoIP platform may provide RFTS over SIRO WLA, Eircom WLA or WCA, or BT WCA, or in the alternative, over White Label VoIP provided by BT or Eircom, again where Eircom or SIRO broadband networks are available. Aside from 3PlayPlus, ComReg therefore concludes that 13 of the 14 Access Seekers which currently purchase FACO from Eircom would, in principle, be capable of migrating to alternative means of FACO provision, either by means of the White Label VoIP direct demand-side constraint, or the FACO self-supply indirect retail constraint, subject to the presence of wholesale NG Broadband. Below, ComReg sets out the criterion which it uses (wholesale NG Broadband coverage at an EA) alongside other considerations set out in Section 4.1 to determine the competitive conditions which characterise the Relevant FACO Markets.
- 5.392 The products which ComReg considers are likely to fall into the Relevant FACO Markets are as follows (noting that just five SPs account for 94% of RFTS subscriptions, and that Eircom accounts for in excess of 99% of provision of the focal product and the demand-side substitute):

Table 43: SPs present (or capable of being present) on the Relevant FACO Markets

	LL-FACO	HL-FACO
Focal Product	<ul style="list-style-type: none"> Eircom 	<ul style="list-style-type: none"> Eircom
Demand-side substitute	<ul style="list-style-type: none"> Eircom White Label VoIP BT White Label VoIP 	<ul style="list-style-type: none"> Eircom White Label VoIP BT White Label VoIP
Supply-side substitute	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> None
Indirect retail constraint	<p>NGA Broadband platform (Eircom / SIRO)</p> <ul style="list-style-type: none"> Vodafone Pure Telecom Digiweb IFA Telecom <p>CATV broadband platform</p> <ul style="list-style-type: none"> Virgin Media 	<p>NGA Broadband platform (Eircom / SIRO)</p> <ul style="list-style-type: none"> Vodafone Pure Telecom Digiweb Three Minute Buyer Phone Pulse Verizon Colt AirSpeed In2Tel Telcom Magnet Ripplecom Blueface Nova Telecom

Table 44: FACO outside options for SPs, May 2021 [PARTIALLY REDACTED]

SP	FACO purchase	Alternative options
Digiweb	SB-WLR	Offers business VoIP and Broadband bundle
Imagine	SB-WLR	Offers VoIP and Broadband bundle
BT	SB-WLR	Offers WLV already
Virgin Media	SB-WLR	Offers VoIP and LL
Verizon	SB-WLR	Offers business VoIP
Colt	SB-WLR	Offers business VoIP
Magnet	SB-WLR	Offer VoIP, plans to offer business VoIP over SIRO
3PlayPlus	SB-WLR	Unclear
In2tel	SB-WLR	Offers VoIP and SIP
AirSpeed	SB-WLR	Offers SIP VoIP
Telcom	SB-WLR	Offers business VoIP
Phone Pulse	SB-WLR	Offers business VoIP
Vodafone	WLV	Offers VoIP already
Three	WLV	Uses Blueface for SME VoIP (3Connect)
Pure	WLV	Uses Eircom WLV and connects to SIRO via enet
MinuteBuyer	WLV	Offers VoIP
IFA Telecom	WLV	[REDACTED]

Overall Conclusions on Relevant Product Markets

5.393 In paragraphs 5.9 to 5.361 above ComReg has considered the definition of the Relevant FACO Markets from a product perspective and, in so doing has considered direct demand-side, direct supply-side and indirect retail constraints. ComReg's position is that there are two separate product markets, namely the Relevant HL-FACO Market and the Relevant LL-FACO Market (the '**Relevant FACO Markets**') as more particularly described below.

5.394 The Relevant **LL-FACO** Product Market is a wholesale market comprised of an access and a calling component, as described below:

- (a) fixed access ('**FA**') for the provision of voice telephony services by means of
 - i. fixed narrowband access ('**FNA**') (provided by means of PSTN or ISDN BRA); or
 - ii. NG Broadband,together with
- (b) Fixed Voice Call Origination ('**FVCO**'), being calls originated
 - i. In the case of fixed narrowband access ('**FNA**'), at a fixed location of an end user which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the fixed access, or
 - ii. In the case of NG Broadband, at a fixed location of an end user which are conveyed and routed on an end-to-end basis over an IP network to a Managed VoB VoIP platform.

5.395 The Relevant **HL-FACO** Product Market is a wholesale market comprised of an access and a calling component, as described below:

- (a) fixed access ('**FA**') for the provision of voice telephony services by means of
 - i. fixed narrowband access ('**FNA**') (provided by means of ISDN FRA or ISDN PRA); or
 - ii. NGA Broadband,together with
- (b) Fixed Voice Call Origination ('**FVCO**'), being calls originated
 - i. In the case of fixed narrowband access ('**FNA**'), at a fixed location of an end user which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the fixed access, or

- ii. In the case of NGA Broadband, at a fixed location of an end user which are conveyed and routed on an end-to-end basis over an IP network to a Hosted PBX or SIP Trunking VoIP platform
 - (c) FVCO does not distinguish between types of telephone numbers called.
- 5.396 For the avoidance of doubt, both the LL-FACO Market and HL-FACO Market (together referred to as the '**FACO Markets**') also include:
- (a) Eircom's self-supply, including its self-supply via Managed VoIP, and
 - (b) RFTS delivered as Managed VoIP over wholesale NG Broadband inputs (NG WLA and NG WCA).
- 5.397 For the avoidance of doubt, the LL-FACO Market also includes:
- (a) RFTS delivered as Managed VoB over a DOCSIS 3.0/3.1⁷⁴⁶ CATV network.
- 5.398 For the avoidance of doubt, the HL-FACO Market also includes the supply of SIP Trunking and Hosted PBX over NG WLA or NG WCA broadband inputs, but excludes the supply of Managed VoIP (including over SIP Trunking or Hosted PBX) offered over leased lines (WHQA).
- 5.399 As set out in detail above, ComReg's position is that the FACO Markets do not include:
- (a) White Label Voice (WLV), although SB-WLR is an upstream input to WLV;
 - (b) RFTS provided over FWA, or FACO potentially provided over FWA;
 - (c) FACO potentially provided over very localised OAO FTTP networks; or
 - (d) FACO potentially provided over Mobile Telephony Services.

5.2 Relevant FACO Geographic Market Assessment

5.400 The Notice on Market Definition defines the relevant geographic market as:

*"..... an area in which the Undertakings concerned are involved in the supply and demand of the relevant products or services, in which area the conditions of competition are similar or sufficiently homogeneous and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are appreciably different."*⁷⁴⁷

5.401 It further notes⁷⁴⁸ that the EC:

⁷⁴⁶ And future advanced variants of this.

⁷⁴⁷ Notice on Market Definition, paragraph 8.

⁷⁴⁸ *Ibid*, at paragraph 28.

“...will take a preliminary view of the scope of the geographic market on the basis of broad indications as to the distribution of market shares between the parties and their competitors, as well as a preliminary analysis of pricing and price differences at national and Community or EEA level. This initial view is used basically as a working hypothesis to focus the Commission’s enquiries for the purpose of arriving at a precise geographic market definition”.

5.402 In assessing possible geographic variances in competitive conditions, ComReg has also taken utmost account of BEREC’s 2014 Common Position on Geographic Aspects of Market Analysis (the ‘**2014 BEREC Common Position**’).⁷⁴⁹

Context to geographic assessment

5.403 ComReg has identified that products falling into the relevant product markets are capable of being delivered over the following network infrastructures:

- (a) Eircom’s ubiquitous FNA network;
- (b) Eircom’s FTTx (VDSL and FTTP) networks which, as of Q4 2020, pass 1.9 million premises at speeds/quality capable of delivering Managed VoIP;
- (c) Virgin Media’s CATV network which, as of Q4 2020, passes 946,500 premises in the State, mainly in urban areas;⁷⁵⁰
- (d) SIRO’s FTTP network, which is scheduled to pass 450,000 premises upon completion of Phase 1 of its network rollout, and which, according to SIRO, passed approximately 378,000 premises as of Q4 2020;⁷⁵¹ and
- (e) On a forward-looking basis, NBI’s FTTP network, which is scheduled to pass 544,000 premises in the IA over a seven-year rollout period.

5.404 ComReg is of the view that neither SIRO nor NBI fall into the Relevant FACO Product Markets in and of themselves. However, as set out at paragraphs 5.113 to 5.361 above, RFTS-based Managed VoIP delivered by Access Seekers and using WLA or WCA inputs, and White Label VoIP delivered by BT using SIRO (or, on a forward-looking basis, NBI) WLA should be included in the Relevant FACO Product Markets. Accordingly, as their networks roll out, NBI and SIRO will be capable of providing the wholesale NG Broadband path over which Managed VoIP RFTS is offered, which falls into the Relevant FACO Product Market by means of the indirect retail constraint which it generates.

⁷⁴⁹ BEREC ‘Common Position on Geographic Aspects of Market Analysis (definition and remedies)’, BoR (14) 73, June 2014.

⁷⁵⁰ As set out above, ComReg considers that Virgin Media should be included in the LL-FACO Product Market only.

⁷⁵¹ https://esb.ie/docs/default-source/investor-relations-documents/esb-annual-financial-results-2020.pdf?sfvrsn=12f907f0_2

- 5.405 The evidence available to ComReg suggests that Eircom and other SPs are likely to face varying levels of competition in the provision of FACO in different geographic areas, depending *inter alia* on the:
- (a) Direct demand-side constraint arising from the provision of White Label VoIP by BT, using Eircom and SIRO WLA inputs;
 - (b) Indirect retail constraint posed by Virgin Media on its CATV network, where that network is available; and
 - (c) Indirect retail constraint posed by SPs offering RFTS by means of Managed VoIP (Managed VoB in the case of LL-FACO, and Hosted PBX and SIP Trunking in the case of HL-FACO) delivered over SIRO, NBI or Eircom FTTx WLA/WCA, where those networks are available.

FACO geographic assessment conditions

- 5.406 In accordance with the Notice on Market Definition and the 2014 BEREC Common Position, when assessing the geographic scope of relevant product markets, ComReg considers a range of conditions, including whether there are observable and sufficiently homogeneous differences in competitive conditions between duly-defined units of geographic disaggregation, measured by, *inter alia*, the number of competitors present, and the market shares of those competitors.
- 5.407 ComReg therefore assesses the geographic scope of the Relevant FACO Product Markets in accordance with the following conditions:
- (a) Geographic differences in entry conditions over time;
 - (b) Variation in the number and size of potential competitors;
 - (c) Distribution of market shares;
 - (d) Evidence of differentiated pricing strategies or marketing; and
 - (e) Geographic differences in demand characteristics.
- 5.408 ComReg applies the MGA in assessing the geographic scope of the relevant product markets. This assumes a hypothetical scenario in which there is no *ex ante* SMP regulation in the Relevant FACO Product Markets, or in downstream retail markets. However, regulation in other upstream or related markets such as the WLA Market or the Regional WCA Market is considered, where it might impact the FACO geographic assessment, for instance, where an SP supplied products on the Relevant FACO Markets on the basis of its use of WLA and/or WCA inputs.

5.409 As set out in greater detail below, having carried out its assessment of each of the five conditions set out above, ComReg is of the view that market shares are in themselves unlikely to be sufficiently reliable indicators of differences in competitive conditions when assessing the scope of relevant geographic markets. This is due to the potential for market shares to change significantly where, for instance, Access Seekers make use of different network inputs to deliver FACO or RFTS using NG Broadband technologies, and given the likely differences in market shares between circumstances where, on the one hand, market regulation is assumed, and on the other an MGA is adopted. ComReg therefore places less weight on existing market shares. Instead, ComReg considers that NG Broadband network presence is likely to be a key determinant of differences in competitive conditions between EAs.

Identifying the appropriate unit of geographic assessment

5.410 The 2020 Explanatory Note⁷⁵² indicates that, when examining the geographic scope of a market, NRAs should ensure that geographic units:

- (a) Are of an appropriate size (i.e. small enough to avoid significant variations of competitive conditions within each unit, but big enough to avoid a resource intensive and burdensome micro-analysis that could lead to a fragmentation of markets);
- (b) Reflect the network structure of relevant SPs; and
- (c) Have clear and stable boundaries over time.

5.411 The 2014 BEREC Common Position⁷⁵³ further specifies that the relevant geographic unit should, in the case of sub-national markets:

- (a) Be mutually exclusive and less than national;
- (b) The network structure of all relevant SPs and the services sold on the market can be mapped onto the geographic units;
- (c) Have clear and stable boundaries; and
- (d) Be small enough for competitive conditions to be unlikely to vary significantly within the unit, but large enough that the burden SPs and NRAs face with regard to data delivery and analysis is reasonable.

⁷⁵² At page 19.

⁷⁵³ At paragraph 86.

- 5.412 ComReg considers that the appropriate relevant geographic unit for the FACO geographic market assessment is Eircom's Exchange Area ('EA').⁷⁵⁴ Eircom's EA is of a size which is appropriate to allow detailed analysis, yet avoids a burdensome micro-analysis which may not add analytical value. EA boundaries are relatively stable over time and are well understood by SPs who purchase wholesale services based on Eircom's FNA and NG Broadband networks. Furthermore, given that Eircom WLA and WCA can, in principle, be used as an input to the delivery of White Label VoIP by Access Seekers, it simplifies the analysis to use EAs as the relevant geographic unit.⁷⁵⁵ ComReg is also in possession of data regarding NG Broadband network rollout, and can superimpose these network data on the existing Eircom EA boundaries, to allow for these network data to be taken into account in the analysis.⁷⁵⁶
- 5.413 Having set out the context for its geographic assessment, and having identified the EA as the appropriate unit of geographic assessment, ComReg now considers the five geographic conditions set out at paragraph 5.407 above.

Geographic differences in entry conditions over time

- 5.414 In this sub-section, ComReg assesses geographic differences in entry conditions in the Relevant FACO Product Markets over time.
- 5.415 Eircom provides the same FACO products on a wholesale basis to other SPs across its ubiquitous FNA network, pursuant to regulatory obligations imposed under the 2015 FACO Decision.⁷⁵⁷ This suggests, initially, that the FACO markets do not exhibit variation at a sub-national level. However, absent regulation (and on a forward-looking basis) there is likely to be some geographic variation in the provision of FACO in the State. In the **first** instance, this variation likely arises from the variety of wholesale products (including those that can be used as inputs to the provision of such products) made available by Eircom (and others) to Access Seekers. In the **second** instance, this variation arises from the rollout or use of NG Broadband networks (Eircom FTTx, SIRO, on a forward-looking basis, NBI and, on the LL-FACO Market only, Virgin Media) by other SPs which ComReg has concluded fall into the Relevant FACO Product Markets, either on the basis of the direct or indirect constraints which they provide, or which they facilitate by means of the provision of wholesale NG Broadband inputs, where those networks have rolled out.

⁷⁵⁴ An Exchange Area ('EA') is the geographic area served by a particular Eircom exchange. Each location in the State falls within one EA only. The Eircom network consists of 1,202 EAs located nationwide. Generally, EAs tend to cover larger geographic areas where population density is lower, and smaller geographic areas where population density is higher.

⁷⁵⁵ For further details, please see Annex 5 of the 2018 WLA/WCA Decision.

⁷⁵⁶ Further details of this exercise are set out in Annex 8 below.

⁷⁵⁷ In accordance with the MGA, ComReg's consideration of the geographic scope of the Relevant FACO Product Markets assumes no regulation is present in these markets.

- 5.416 Eircom wholesale NG Broadband products suitable for the delivery of Managed VoIP are only available where Eircom has rolled out FTTx. Unlike its ubiquitous FNA network, as of Q4 2020, Eircom's FTTx (VDSL + FTTP) network, passed over 1.9 million premises. This indicates that, as of Q4 2020, 86% of premises are passed by Eircom FTTx.⁷⁵⁸
- 5.417 Eircom provides FACO by means of:
- (a) FNA; and
 - (b) White Label VoIP over standalone VUA or Bitstream Plus.
- 5.418 At the time of the 2015 FACO Decision, Eircom was the sole supplier active on the Relevant FACO Markets. Since January 2019, however, BT has also offered a FACO product, which it sells to [REDACTED] and which is delivered over wholesale NG Broadband inputs purchased from Eircom and SIRO. BT has indicated to ComReg that, as of Q4 2020, it had sold [REDACTED].
- 5.419 The rollout of NG Broadband networks by SIRO and Virgin Media is heavily contingent on premises density (given the need to earn a return on investment). SIRO is currently rolling out its FTTP network to 51 locations. As of May 2021, SIRO's website reported that its network has passed 378,000 premises⁷⁵⁹ and by completion of Phase 1,⁷⁶⁰ it is expected to pass 450,000 premises, a 10% reduction from an earlier target of 500,000 premises. ComReg has noted, however, in its 2018 WLA/WCA Decision that SIRO network rollout has been significantly slower than expected.⁷⁶¹
- 5.420 In respect of the LL-FACO Market only, Virgin Media's network focusses on urban areas with higher population and premises densities and, as noted earlier, predominantly passes residential premises. As of Q4 2020, the Virgin Media network is geographically limited, and passed 946,500 premises, where the premises density has made the rollout of a CATV network economically viable. 46% of these premises are active subscribers to Virgin Media's CATV network.

⁷⁵⁸

https://www.eir.ie/opencms/export/sites/default/.content/pdf/IR/news/eir_Q3_FY20_Results_Press_Release.pdf. It should be noted that end users will not experience uniform levels of service delivery over Eircom FTTx, given variations in parameters such as quality, whether the premises is passed by FTTC or FTTP, and line length.

⁷⁵⁹ www.siro.ie, accessed on 3 May 2021.

⁷⁶⁰ According to a Joint Oireachtas Committee on Communications, Climate Action and Environment debate dated 26 June 2019, SIRO envisaged at that stage that approximately two years of the Phase 1 business plan were left to run – that is to say, by June 2021:
https://www.oireachtas.ie/en/debates/debate/joint_committee_on_communications_climate_action_and_environment/2019-06-26/2/

⁷⁶¹ As set out at paragraph 4.175 of the 2018 WLA/WCA Decision.

- 5.421 NBP aims to bring high-speed broadband to every home in the IA, and explicitly focuses on areas which are not commercially attractive due, for instance, to low premises density and prospectively poor returns on investment. Given that NBI is targeting the provision of NG Broadband services to the IA, its premises coverage is not likely to significantly overlap with NG Broadband provided by other SPs. As of May 2021, retail service on the basis of NBI is available in Cork and Cavan.⁷⁶²
- 5.422 Overall, ComReg considers that Eircom is likely to face some greater degree of constraint on the provision of FACO from the progressive rollout of NG Broadband networks by Virgin Media (on the LL-FACO market only), SIRO, Eircom FTTx,⁷⁶³ and - on a forward-looking basis over the lifetime of this market review - NBI, in areas where those networks are rolled out. These networks will also enable the supply of Managed VoIP services.
- 5.423 Having regard to the definition of the Relevant FACO Product Markets, ComReg is of the view that there is sufficient evidence to suggest that there are likely to be clear differences in geographic entry and expansion conditions in the geographic scope of the FACO markets, and that these differences largely arise from the presence or absence at each EA of:
- (a) The capability to provide, or actual provision of, FACO over SIRO, Eircom FTTx, and - on a forward-looking basis - NBI networks; and
 - (b) The capability to provide, or actual provision of, RFTS by means of Managed VoIP over Virgin Media's CATV network, or SIRO, Eircom FTTx or - on a forward-looking basis - NBI networks.

Respondents' Views – Accounting for NBI on a forward-looking basis

- 5.424 Eircom and its consultants CE both argued that ComReg had failed to analyse the Relevant FACO Markets on a sufficiently forward-looking basis and that, in particular, this was evidenced by the failure to appropriately account for the impact on competition of NBI rollout over the envisaged lifetime of the market review, including the proposed MTA. Eircom noted that the commitment by ComReg to carry out a MTA does not negate the need for ComReg to carry out a full market review which is forward-looking over the entire five-year market review period.

⁷⁶² See Table A9.1 for NBI's projected rollout

⁷⁶³ Where the rollout of Eircom FTTx allows Access Seekers to purchase White Label VoIP, VUA or Bitstream Plus to offer wholesale or retail Managed VoIP which competes with Eircom supply of FACO and RFTS.

5.425 Eircom argued that NBI's design, preparation, and rollout plans over the initial years of the envisaged market review period are far from insignificant, and that ComReg has not clearly justified its omission of NBI from its analysis, particularly given that any ambiguity or uncertainty regarding the potential impact of the NBP award has dissipated with the signing of that contract in November 2019. Eircom further noted that NBI rollout plans suggested that 521 EAs in the Regional WCA Market would be impacted by some level of NBI deployment by the time the MTA is envisaged to be carried out in 2023. CE considered that ComReg's analysis appeared to take an overly cautious approach in assessing the role of NBI in constraining Eircom's ability to behave independently of its customers, and suggested that Eircom had forecasted that 876 EAs accounting for 90% of premises should be competitive by 2023, on the basis of forecasted NBI rollout.

ComReg's Assessment of Respondents' Views

5.426 ComReg notes that, despite Eircom and CE's claims, it has taken a forward-looking approach to its assessment, whilst also being cognisant of the fact that it is required to assess the market as it is currently. Contrary to Eircom's claims, ComReg has not omitted NBI from its analysis. In the 2020 Consultation - and above - ComReg included Managed VoIP RFTS delivered over NBI inputs in the Relevant FACO Product Market. Accordingly, Eircom's argument in respect of ambiguity or uncertainty regarding the impact of the NBP contract award signed in 2019 dissipating is therefore moot. Nevertheless, noting that NBI's rollout, at this point in time, is extremely geographically limited, ComReg is of the view that NBI is not yet capable of posing a sufficiently immediate and effective direct constraint on the focal product (and other substitutes). Accordingly, ComReg has not included NBI when carrying out its geographic assessment. Bearing in mind that ComReg is taking a forward-looking approach to its assessment, both Eircom and CE note that ComReg is due to issue a MTA after a period of 24 months from the date of this Decision has elapsed. As part of the MTA, ComReg may therefore re-assess the capability of NBI to pose a sufficient constraint on the FACO focal product, taking into account its increased rollout at that point. However, given trivial levels of NBI rollout as at Q4 2020,⁷⁶⁴ ComReg considers it unlikely that the inclusion of NBI would have a material impact on the assessment of competitive conditions in the Relevant FACO Markets. ComReg intends to revisit this assessment as part of the MTA which is scheduled to be carried out 24 months after the Effective Date of this Decision.

⁷⁶⁴ NBI indicated to ComReg in April 2021 that [redacted].

- 5.427 ComReg also notes that the consequence of Eircom and CE's argument would be that ComReg should assign EAs to the Urban FACO Markets on the basis of wholesale NG Broadband rollout, including NBI rollout which has not yet occurred. Accordingly, this could lead to a situation whereby ComReg would be deregulating certain EAs with coverage levels below 80%, on the basis of envisaged future NBI rollout reaching the coverage threshold.
- 5.428 ComReg also considers that NBI rollout forecasts may be impacted by variables such as delays arising from the Covid-19 pandemic, and that existing NBI forecasts are therefore not necessarily sufficiently reliable such that they can be factored in appropriately and with sufficient certainty. In this regard, ComReg notes [§< [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] 765 [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] §>] For these reasons, ComReg considers that there is insufficient certainty as regards the timing of NBI's precise premises rollout, such that it would be inappropriate to include it in the mapping exercise at this point in time. ComReg intends to revisit this assessment as part of the MTA.

Variation in the number and size of potential competitors

- 5.429 Eircom is – by far - the largest wholesale SP active on the Relevant FACO Product Markets, while BT is a very recent entrant. As such, there is currently a limited degree of variance in the number of direct wholesale competitors in the Relevant FACO Product Markets across different geographic areas.

⁷⁶⁵ As set out at [§< [REDACTED]
[REDACTED] §>]

- 5.430 Based on announced network deployment plans, competition in the provision of NG Broadband capable of facilitating competition in the provision of FACO will likely vary by EA. In such cases, there may be scope for variation in the number and size of potential competitors. In practice, even if NBI or SIRO had extensive network coverage, they would not in and of themselves fall within the relevant product market if they offered a wholesale NG Broadband fixed access path only, and did not offer functionality including FVCO by means of Managed VoIP, equivalent to FACO.⁷⁶⁶
- 5.431 Competitive conditions between EAs will differ depending on whether, absent regulation, SPs are capable of delivering FACO (or RFTS on the basis of indirect constraints) to a sufficient number of premises at an EA, including Managed VoIP over NG Broadband. Therefore, competitive conditions need to take account of the level of SPs' NG Broadband network coverage in an area (including use of available wholesale NG Broadband inputs – either pursuant to regulation in the WLA/WCA markets, or on a commercial basis). If no minimum NG Broadband network coverage threshold is defined, an EA could be held to exhibit sufficiently different competitive conditions on the basis of trivial network presence.
- 5.432 Eircom faces competition in the provision of FACO in those EAs where BT purchases WLA inputs to provide FACO (and WCA-based broadband using WLA inputs) to [X ██████████ X] As SIRO and NBI network rollout progresses, Access Seekers may also use SIRO or NBI WLA inputs to provide Managed VoIP-based FACO or RFTS. The intensity of competition in the provision of FACO is likely to be lower in the absence, or lower incidence, of SPs present at EAs and supplying or using NG Broadband capable of delivering Managed VoIP above some minimum coverage threshold.

⁷⁶⁶ This condition would, however, likely be satisfied where an Access Seeker made use of SIRO or NBI WLA fixed access inputs and procured its own FVCO platform, as BT has done.

- 5.433 The NBP IA, by design, excludes premises where NG Broadband infrastructure is already present. As such, there should be no overlap between NBI rollout on the one hand, and SIRO, Eircom, or Virgin Media NG premises rollout on the other. This implies that Eircom will only face one wholesale NG WLA-based broadband competitor in the SIRO network footprint (noting that, on the LL-FACO market only, Virgin Media currently does not offer wholesale products to Access Seekers), but Eircom also faces competition from BT which buys WLA from SIRO to offer a downstream WCA service. NBI is unlikely to face competition in the provision of wholesale NG Broadband inputs, but will likely face competition from Eircom, which will be active in the provision of FACO over its FNA network in the IA (and which has indicated its intention, by means of its MSAN proposal, to extend the useful working life of that FNA network). SIRO locations partially overlap with areas where Eircom has commenced rollout of its FTTx network.⁷⁶⁷
- 5.434 As regards the indirect retail constraint arising from an RFTS SP making use of CATV self-supply inputs, or potentially wholesale NG Broadband inputs, ComReg notes, in general, that where SIRO is present, a variety of downstream retail SPs are present, including SPs active nationally, such as Vodafone, and SPs active regionally such as, for example, Rocket Broadband or Carnsore Broadband in Wexford. ComReg research indicates that five SPs making use of SIRO inputs (Sky, Digiweb, Rocket Broadband, Vodafone and enet) offer Managed VoB over SIRO. Enet wholesales SIRO inputs to retail SPs including Kerry Broadband, Digiweb, Pre-pay Power, Ripplecom and Pure Telecom.⁷⁶⁸
- 5.435 Virgin Media self-supply of FACO has been included in the LL-FACO Product Market on the basis that it acts as an indirect constraint on the provision of LL-FACO, and reported 300,000 RFTS subscribers as of Q4 2020,⁷⁶⁹ all of whom purchase RFTS on a bundled basis together with one or more of broadband, TV or mobile telephony. In this respect, Virgin Media noted in its April 2019 IIR response that levels of competition on the RFTS market vary, depending on the presence or absence of '*adequate landline broadband*' which ComReg interprets as referring to broadband delivered to a fixed location.⁷⁷⁰ Virgin Media does not offer merchant market access to Access Seekers on the LL-FACO market.

⁷⁶⁷ As of Q4 2020, approximately [REDACTED] premises are passed by both SIRO and Eircom FTTP, approximately [REDACTED] premises are passed by both SIRO and Eircom FTTC, and approximately [REDACTED] premises are passed by SIRO, Eircom FTTP, and Eircom FTTC.

⁷⁶⁸ <https://siro.ie/news-and-insights/pure-telecom-12-million-euro-deal-enet-siro-gigabit-broadband/>

⁷⁶⁹ See Liberty Global Q4 2020 Fixed Income Release, at p.18.

⁷⁷⁰ Virgin Media response to Question 2.

5.436 ComReg concludes on a forward-looking basis that there is likely to be variation in both the number and size of current and potential competitors on the Relevant FACO Product Markets across different geographic areas, with those variations likely to be greater in those EAs where SPs can supply FACO services using NG Broadband inputs.

Distribution of market shares

5.437 As set out at paragraph 5.401 above, the Notice on Market Definition confirms that NRAs should take a preliminary view of the scope of the geographic market on the basis of the distribution of market shares between undertakings. Moreover, the 2014 BEREC Common Position notes at paragraph 111 that:

“One way to account more explicitly for the relative size of operators would be to look at the variation in local “market” shares across different geographical areas. Ideally this should include not only market shares at a particular point in time but also the development of market shares, particularly where the competitive conditions in the market are going through a period of change. Since the collection of the necessary data is associated with a high administrative burden for operators as well as NRAs, it will usually suffice to consider two points in time to draw inferences about trends in market shares. To the extent that there is evidence of variation in market shares, this could be indicative of geographical variations in competitive conditions.”

5.438 Accordingly, where an NRA measures variations in SP market shares over time in different geographic locations, this may potentially be indicative of a level of geographic variation in competitive conditions sufficient to warrant some level of geographic market differentiation.

5.439 As the sole merchant market provider of FACO until January 2019, Eircom had a 100% market share nationwide, based on the market definition set out in the 2015 FACO Decision, and this market share had been stable over time. Following BT's limited market entry, Eircom's share of the provision of FACO has now declined marginally to [X ██████████ X].⁷⁷¹

5.440 ComReg considers that the Relevant FACO Product Markets include Virgin Media FACO self-supply (on the LL-FACO Product Market only), and Managed VoIP RFTS delivered using Eircom FTTx, SIRO and, prospectively, NBI wholesale NG Broadband inputs. However, at an EA level, market shares can only be assigned to FACO products delivered over these NG Broadband networks, where they are present. ComReg considers the distribution of FACO market shares in the presence of FACO regulation, and then considers how the distribution of these market shares would or could be likely to change in an MGA scenario, were FACO regulation to be removed.

⁷⁷¹ Between 90% and 100%.

Market share distribution in the presence of regulation

Market share data on a national basis

5.441 The data set out at Table 45 below indicate that Eircom and Virgin Media are the two largest RFTS SPs. Given that both Eircom and Virgin Media rely on own-network self-supply for RFTS purposes, this suggests that, based on current market shares and SP use of wholesale inputs from Eircom and other SPs, a maximum of 37%⁷⁷² of RFTS is delivered by SPs which rely on wholesale inputs to deliver RFTS (allowing for the small-scale provision of RFTS self-supply over FWA or very localised FTTx).

Table 45: QKDR RFTS market share figures by subscriptions, Q3 2015 – Q4 2020

	2015		2016		2017		2018		2019		2020	
	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q4	Q1	Q4	
Eircom	40%	39%	39%	38%	38%	38%	39%	39%	39%	39%	39%	40%
Virgin Media	25%	25%	24%	24%	24%	24%	24%	24%	24%	24%	24%	23%
Vodafone	15%	15%	16%	15%	15%	14%	14%	14%	14%	14%	14%	14%
Digiweb	4%	4%	4%	3%	3%	3%	2% ⁷⁷³	-	-	-	-	-
Sky	9%	10%	11%	12%	12%	13%	13%	13%	14%	14%	14%	14%
Pure	2%	2%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%
OAOs	5%	5%	4%	5%	4%	5%	4%	6%	6%	6%	6%	6%

5.442 Similar data emerge when RFTS market shares are assigned on a revenue basis, with the most notable change being the increased market share of business-only SPs (BT, AT&T, and Verizon). Again, given that both Eircom and Virgin Media rely on own-network self-supply for RFTS purposes, this suggests that a maximum of 43% (for the reasons set out at paragraph 5.441 above) of the RFTS market by value is accounted for by SPs which likely rely on FNA or NG Broadband wholesale inputs to deliver RFTS:

⁷⁷² Calculated by subtracting Eircom's 40% and Virgin Media's 23% RFTS market shares, both of which are on a fully self-supply basis, from 100%.

⁷⁷³ Digiweb fell below the 2% market share threshold at which ComReg reports individual SPs in 2019, and its market share is accordingly now included in the aggregate OAO market share.

Table 46: RFTS Market Share by Fixed Line Retail Revenue, Q3 2015 – Q4 2020⁷⁷⁴

	2015		2016		2017		2018		2019		2020	
	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q4	Q1	Q4	
Eircom	46%	45%	45%	44%	42%	42%	41%	41%	40%	40%	39%	
Virgin Media	14%	15%	15%	15%	16%	16%	16%	17%	17%	18%	18%	
Vodafone	13%	13%	12%	14%	14%	13%	14%	13%	14%	14%	14%	
BT	6%	6%	6%	5%	5%	5%	5%	5%	4%	5%	4%	
Verizon	2%	2%	2%	2%	-	-	-	-	-	-	-	
Sky	4%	4%	5%	5%	6%	6%	6%	7%	7%	7%	8%	
AT&T	2%	2%	-	2%	2%	2%	2%	2%	3%	3%	2%	
Digiweb	2%	2%	-	-	-	-	-	-	-	-	-	
Magnet	-	-	3%	-	-	-	-	-	-	-	-	
EU Networks	-	-	-	-	-	-	-	-	2%	-	-	
OAOs	11%	11%	13%	13%	16%	16%	17%	16%	14%	13%	14%	

- 5.443 It should, however, be noted that the 43% of RFTS revenues accounted for by SPs making use of wholesale inputs reflects the existing size of the market in the presence of FACO regulation. The potential size of the market is larger again from an infrastructure perspective, as it includes premises passed by ubiquitous Eircom FNA (and other SPs having sub-national coverage), but not currently purchasing RFTS. Accordingly, current levels of Access Seeker reliance on wholesale inputs to provide RFTS to an existing customer base may not be representative of the extent to which Access Seekers rely on FACO to serve the market. In the following sub-section, ComReg considers likely changes to the market in a MGA scenario.
- 5.444 In respect of the provision of RFTS by means of Managed VoB, ComReg data indicate that, overall, RFTS subscriptions have declined by 9% between Q3 2015 and Q4 2020. Over the same time period, the proportion of RFTS subscriptions accounted for by Managed VoB has risen from 24% to 35%.

⁷⁷⁴ Individual market shares are only reported above 2%. Where an SP's market share is below 2%, it is counted as part of the aggregate OAO market share.

5.445 Of the approximate 25 SPs who have offered Managed VoB RFTS over this time period, Virgin Media, Vodafone and Eircom together account for 90% of Managed VoB subscriptions. At Q3 2015, Virgin Media accounted for [REDACTED] [REDACTED] [REDACTED]⁷⁷⁵ of Managed VoB subscriptions, with no other SP having a market share greater than 2%. By Q4 2020, Virgin Media's share of Managed VoB subscriptions had fallen to [REDACTED] [REDACTED]⁷⁷⁶, due largely to the increase in Imagine's share of Managed VoB subscriptions from [REDACTED] [REDACTED]⁷⁷⁷, the increase in Vodafone's share of Managed VoB subscriptions from [REDACTED] [REDACTED]⁷⁷⁸ and the increase in Eircom's share of Managed VoB subscriptions from [REDACTED] [REDACTED] [REDACTED] [REDACTED]⁷⁷⁹. Accordingly, while Virgin Media still holds the vast majority of Managed VoB subscriptions, [REDACTED] [REDACTED]⁷⁸⁰ of growth in Managed VoB subscriptions arises from Vodafone and Eircom:

Table 47: Managed VoB RFTS subscription shares, Q3 2015 and Q4 2020
[REDACTED]⁷⁸¹

	Q3 2015	Q4 2020	Absolute change
Blueface	[REDACTED]	[REDACTED]	[REDACTED]
Digiweb	[REDACTED]	[REDACTED]	[REDACTED]
Eircom	[REDACTED]	[REDACTED]	[REDACTED]
Imagine	[REDACTED]	[REDACTED]	[REDACTED]
OAOs	[REDACTED]	[REDACTED]	[REDACTED]
Virgin Media	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]
Total	100%	100%	161,229

5.446 Again, given that both Eircom and Virgin Media⁷⁸² rely on own-network self-supply for RFTS purposes in the case of Managed VoB, this suggests that, based on current market shares and SP use of wholesale inputs, a maximum of 19% of Managed VoB RFTS subscriptions are provided by SPs which rely on wholesale inputs to deliver Managed VoB RFTS.

⁷⁷⁵ Between 90% and 100%.

⁷⁷⁶ Between 50% and 60%.

⁷⁷⁷ Between 0% and 10%.

⁷⁷⁸ Between 10% and 20%.

⁷⁷⁹ Between 20% and 30%.

⁷⁸⁰ Between 90% and 100%. – (Imagine increase in Vob subs) + (Vodafone increase in VoB subs) + (Eircom increase in VoB subs) / (sum of total positive increase in VoB subscriptions)*100.

⁷⁸¹ Figures are rounded to the nearest whole number

⁷⁸² As noted Earlier, Virgin Media does not provide any wholesale broadband or FACO services.

Distribution of merchant market purchases of Eircom SB-WLR and WLV

5.447 ComReg now considers purchases of merchant market Eircom SB-WLR and WLV (which makes use of SB-WLR inputs). In a MGA scenario, Eircom would potentially cease the supply of SB-WLR and WLV to Access Seekers (or could continue to supply, but potentially on different commercial terms). If Access Seekers failed to or could not migrate end users to Managed VoIP, these end users would either cease purchasing RFTS, or migrate to an alternative RFTS SP (Eircom, or SPs which did not rely on Eircom SB-WLR or WLV). This scenario is considered in the next sub-section.

Table 48: SB-WLR and WLV purchases (volumes and percentages) from Eircom, Q3 2015 – Q4 2020 [PARTIALLY REDACTED]

SB-WLR + WLV	Sep-15	Sep-16	Sep-17	Sep-18	Sep-19	Jan-20	Dec-20
BT	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
OAOs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Pure Telecom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Three	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	475,432	499,851	495,550	488,434	468,721	463,150	421,281
SB-WLR only	Sep-15	Sep-16	Sep-17	Sep-18	Sep-19	Jan-20	Dec-20
BT	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Magnet	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
OAOs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	344,048	342,839	283,356	242,393	236,917	236,731	213,371
WLV only	Sep-15	Sep-16	Sep-17	Sep-18	Sep-19	Jan-20	Dec-20
IFA Telecom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
MinuteBuyer	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Pure Telecom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Three	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	131,384	157,012	211,194	246,041	231,804	226,419	207,910
SB-WLR + WLV %	Sep-15	Sep-16	Sep-17	Sep-18	Sep-19	Jan-20	Dec-20
BT	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
OAOs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Pure Telecom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Three	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	100%	100%	100%	100%	100%	100%	100%

SB-WLR only %	Sep-15	Sep-16	Sep-17	Sep-18	Sep-19	Jan-20	Dec-20
BT	[< █████]	████	████	████	████	████	████>]
Magnet	[< █]	█	█	█	█	█	█>]
OAOs	[< █]	█	█	█	█	█	█>]
Total	100%	100%	100%	100%	100%	100%	100%
WLV only %							
IFA Telecom	[< █████]	█	█	█	█	█	█>]
MinuteBuyer	[< █]	█	█	█	█	█	█>]
Pure Telecom	[< █████]	████	████	████	████	████	████>]
Three	[< █████]	████	████	████	████	████	████>]
Vodafone	[< █████]	████	████	████	████	████	████>]
Total	100%	100%	100%	100%	100%	100%	100%
SB-WLR % of lines	72%	69%	57%	50%	51%	51%	51%
WLV % of lines	28%	31%	43%	50%	49%	49%	49%

5.448 These tables indicate that, in respect of SB-WLR purchases from Eircom, BT accounts for [< █████>]⁷⁸³ of purchases, Magnet accounts for [< █>]⁷⁸⁴ of purchases, and 12 other SPs collectively account for the remaining [< █>]⁷⁸⁵ of purchases. In respect of WLV (which makes use of upstream SB-WLR inputs), there are only 5 purchasers in total, and Vodafone alone accounts for [< █████>]⁷⁸⁶

5.449 Taking SB-WLR and WLV purchases together, BT and Vodafone together account for over [< █>]⁷⁸⁷ of FACO purchases from Eircom. However, Eircom's self-supply still accounts for the majority of Eircom FNA paths, as Table 49 demonstrates – although the gap between Eircom self-supply and merchant market supply of FACO has narrowed since the publication of the 2015 FACO Decision, largely due to the decline in Eircom self-supply:

⁷⁸³ Between 90% and 100%.

⁷⁸⁴ Between 0% and 10%.

⁷⁸⁵ Between 0% and 10%.

⁷⁸⁶ Between 60% and 70%.

⁷⁸⁷ Between 80% and 90%.

Table 49: Eircom Direct and Indirect Access Paths, Q3 2015 – Q4 2020 [REDACTED]

Access Paths	2015 Q3	2016 Q1	2017 Q1	2018 Q1	2019 Q4	2020 Q4
Eircom direct access paths	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total direct access paths	946,946	907,762	861,186	790,263	682,884	609,779
Carrier Pre-Select	20,159	18,106	14,467	11,607	6,414	5,642
SB-WLR	371,191	377,968	350,543	310,141	267,278	240,557
WLV	175,852	188,827	218,101	256,716	258,837	236,247
Total SB-WLR + WLV	547,043	566,795	568,644	566,857	526,115	476,804
Total Indirect access paths	567,202	584,901	583,111	578,464	532,529	484,738
SB-WLR & WLV as % of Eircom Direct Access	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Market share data, split by Urban and Regional FACO Markets

5.450 ComReg now presents the data set out above split by Urban FACO Markets and Regional FACO Markets, in the presence of regulation, based on the assessment criterion described in detail at paragraphs 5.496 to 5.573 below. Table 50 indicates that, on all four Relevant FACO Markets, Eircom self-supply accounts for a majority of FNA paths, with Vodafone and BT accounting for the highest proportion of Access Seeker purchases. It is notable that the difference in Eircom shares of FNA lines on the Regional and Urban FACO Markets is trivial, at 2% on the LL-FACO markets, and 3% on the HL-FACO markets. Accordingly, when Managed VoIP is not taken into account, there is little difference in Eircom market share across FACO markets.

Table 50: FNA active line purchases % from Eircom, Q4 2019 [REDACTED]⁷⁸⁸

SP	Urban FACO Market		Regional FACO market	
	LL-FACO	HL-FACO	LL-FACO	HL-FACO
BT	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Digiweb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Eircom retail	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Pure Telecom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Virgin Media	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
OAOs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	100%	100%	100%	100%

⁷⁸⁸ As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, more recent data are currently unavailable.

5.451 Taking into account merchant market purchases only, thus excluding Eircom retail self-supply, it is clear that there continues to be little variation across the Relevant FACO Markets, as BT and Vodafone together account for between [REDACTED] of SB-WLR and WLV purchases on all four markets. Accordingly, in the presence of regulation, there are no pronounced differences between the Urban FACO Markets and the Regional FACO Markets in the purchasing patterns of Eircom retail, and, on the merchant market, of BT and Vodafone.

Table 51: Merchant-market SB-WLR and WLV purchases % from Eircom, Q4 2019
[REDACTED]⁷⁸⁹

SP	Urban FACO Market		Regional FACO market	
	LL-FACO	HL-FACO	LL-FACO	HL-FACO
BT	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Digiweb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Pure Telecom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Virgin Media	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
OAOs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	100%	100%	100%	100%

Market share distribution under the MGA, absent regulation

5.452 In an MGA scenario, FACO regulation is no longer present, leading to the assumption that Eircom no longer provides SB-WLR (and therefore WLV, which relies on SB-WLR inputs) on a wholesale basis (although it may wish to do so, potentially under different commercial terms). Therefore, Access Seekers which were reliant on SB-WLR or WLV must migrate to delivery of RFTS by means of Managed VoIP over NG Broadband, in order to retain or grow their end user base. Failure to do so suggests that these end users will migrate to Eircom or, in the alternative, to SPs which were not reliant on SB-WLR or WLV inputs. For the avoidance of doubt, existing Eircom end users could also change supplier where non-Eircom dependent alternative SPs exist. Such SPs would include Virgin Media (on the LL-FACO Product Market only), which operates its own CATV network, any SP which offered Managed VoIP-based RFTS delivered using SIRO (and, prospectively, NBI) WLA, or any SP which offered Managed VoIP-based RFTS delivered using Eircom WLA or WCA (in the regulated Regional WCA Market only). The level of increase in Eircom direct access paths will depend on how successful Access Seekers are at migrating end users previously served by Eircom SB-WLR/WLV to Managed VoIP RFTS delivered over NG Broadband.

⁷⁸⁹ As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, more recent data are currently unavailable.

- 5.453 It is important to note that the market dynamics described in the previous subsection – in the presence of FACO regulation - are unlikely to fully mirror market dynamics in an MGA scenario where FACO regulation is removed. This is because, in the presence of regulation, SPs which have the capability to provide RFTS by means of Managed VoIP self-supply may instead choose to purchase SB-WLR.
- 5.454 For an Access Seeker which does not operate its own network to migrate end users from RFTS delivered using SB-WLR or WLV to Managed VoIP RFTS, certain technical conditions must be satisfied:
- (a) The end user premises must be passed by wholesale NG Broadband capable of delivering Managed VoIP; and
 - (b) The Access Seeker must purchase either
 - i. White Label VoIP or
 - ii. WLA or WCA, and procure or develop a VoIP platform.
- 5.455 Taking condition (a) above, where wholesale NG Broadband is unavailable, an Access Seeker will be unable to migrate end users to Managed VoIP (although that end user may be able to avail of Managed VoIP by switching to an SP which offers Managed VoIP on a self-supply basis only, such as Virgin Media). Of the 421,281⁷⁹⁰ indirect lines delivered by Eircom over FNA in Q4 2020, only those lines serving premises which are also passed by wholesale NG Broadband will be capable of being migrated to Managed VoIP by Access Seekers in an MGA scenario (on the assumption that the Access Seeker has or could procure a Managed VoIP capability).⁷⁹¹ Wholesale NG Broadband rollout at an EA may facilitate the delivery of Managed VoIP to all premises in that EA, regardless of whether those premises are:
- (a) already served by Eircom RFTS delivered over FNA,
 - (b) served by Access Seeker RFTS delivered over SB-WLR or WLV, or
 - (c) if that premises is not currently served by RFTS at all.

⁷⁹⁰ As of Q4 2020, Access Seekers purchase 421,181 FNA lines from Eircom, but 484,738 indirect access paths. This difference is accounted for by the fact that ISDN lines accommodate multiple access paths – 2 in the case of BRA, between 16 and 29 in the case of FRA, and up to 30 in the case of PRA. Thus, in the case of ISDN, the number of access paths exceeds the number of lines. In the case of PSTN, each line delivers a single access path.

⁷⁹¹ Migrations processes would also need to be effective to ensure timely migration of end users' services with minimal disruption.

5.456 As set out at Table 52 below, ComReg has estimated, based on Q4 2019 data, how many premises on the Relevant FACO Markets are passed by FACO (SB-WLR or WLV) lines, but are not passed by wholesale NG Broadband.⁷⁹² In a MGA scenario where Eircom withdrew merchant market provision of SB-WLR and WLV, Access Seekers supplying end users at these premises with RFTS on the basis of SB-WLR/WLV inputs would be unable to retain these end users. This is because these premises are not passed by wholesale NG Broadband and an Access Seeker would accordingly be unable to migrate the end users to Managed VoIP delivered using wholesale NG Broadband inputs. ComReg notes, as per its discussion at paragraph 7.153, that wholesale broadband access delivered over FNA is unlikely to have the necessary speed, bandwidth, capacity and QoS parameters to allow for the delivery of effective Managed VoIP RFTS.

Table 52: Premises served by SB-WLR/WLV & wholesale NG Broadband, Q4 2019⁷⁹³

Premises served by FACO (SB-WLR/WLV) and wholesale NG broadband					
<i>Passed by:</i>	All SB-WLR / WLV	SB-WLR / WLV and NG Broadband	As % of All SB-WLR / WLV lines	SB-WLR / WLV only	As % of All SB-WLR/WLV lines
Urban FACO Market	360,899	345,769	96%	15,130	4%
Regional FACO Market	107,822	65,689	61%	42,133	39%
Total FACO lines	468,721	411,458	88%	57,263	12%

5.457 These Q4 2019 data suggest that, on the Urban FACO Markets, 96% of premises passed by SB-WLR/WLV are also passed by wholesale NG Broadband. In a MGA, Access Seekers are therefore capable – in principle – of migrating their RFTS end users at these premises to Managed VoIP. Thus, only 4% of premises in the Urban FACO Markets currently served by Access Seekers by means of SB-WLR or WLV would be unable to migrate to Managed VoIP, due to the absence of wholesale NG Broadband. RFTS lines delivered over SB-WLR/WLV to premises not served by wholesale NG Broadband account for 1% of all RFTS lines in the Urban FACO Markets, as set out in the 2020 Consultation (noting that a comparison with RFTS lines as of Q4 2020 would incorrectly measure across time periods, and across Relevant FACO Markets of different compositions).

⁷⁹² ComReg calculates premises passed by SB-WLR, WLV and wholesale NG Broadband based on SP returns which indicate whether premises are passed by these networks based either directly on data supplied to ComReg by SPs, or by matching premises identifiers based on Eircodes or ARD IDs.

⁷⁹³ As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, more recent data are currently unavailable.

- 5.458 In comparison, on the Regional FACO Markets, only 61% of premises passed by SB-WLR/WLV are also passed by wholesale NG Broadband available. Therefore, Access Seekers currently serving 39% of premises by means of SB-WLR/WLV on the Regional FACO Markets would be unable to migrate their end users to Managed VoIP, due to the absence of wholesale NG Broadband. RFTS lines delivered over SB-WLR/WLV to premises not served by wholesale NG Broadband account for 14% of all RFTS lines in the Regional FACO Markets, as set out in the 2020 Consultation.
- 5.459 Taking condition (b) above, where wholesale NG Broadband is present at an EA, an SP which currently delivers RFTS using SB-WLR or WLV inputs is more likely to retain those end users if it already offers wholesale or retail Managed VoIP. As set out at Table 48 above, [X █████ X] of SB-WLR and WLV purchases are accounted for by four SPs (BT, Vodafone, Three, and Pure Telecom), as of Q4 2020. Each of these SPs have demonstrated Managed VoIP capabilities (although at a different scale than may be required absent regulation):
- (a) BT offers merchant market White Label VoIP, and [X █████ X] of BT RFTS subscriptions are delivered by means of Managed VoIP at Q4 2020;
 - (b) Vodafone offers Managed VoIP RFTS to its own end users, and [X █████ X] of Vodafone RFTS subscriptions were delivered by means of Managed VoIP at Q4 2020;
 - (c) Three offers Managed VoIP RFTS to business end users, and [X █████ X] of Three RFTS subscriptions were delivered by means of Managed VoIP at Q4 2020; and
 - (d) Pure Telecom purchases White Label VoIP from Eircom and [X █████ X] of Pure Telecom RFTS subscriptions were delivered by means of Managed VoIP at Q4 2020.
- 5.460 Accordingly, the four SPs which account for the overwhelming majority of SB-WLR and WLV purchases from Eircom have all already invested in Managed VoIP capability and, on the assumption of an effective and efficient Eircom bulk migration capability,⁷⁹⁴ would presumptively be able to migrate their end users to Managed VoIP in an MGA, where NG Broadband was available.

⁷⁹⁴ Bulk Migration allows an Access Seeker to have multiple migrations facilitated via a single request. Respondents' views on Eircom's existing bulk migration facility are addressed at length at Section 11 below.

- 5.461 In the MGA, market share distributions are accordingly likely to shift, as end users which are not passed by wholesale NG Broadband, and which purchased RFTS from Access Seekers which relied on SB-WLR or WLV must migrate to Eircom under the assumption Eircom withdraws access to SB-WR (or Virgin Media if available), if they wish to retain RFTS. This shift in market shares in an MGA scenario suggests the presence of differences in competitive conditions between EAs where Eircom has a high RFTS market share due to the absence of NG Broadband networks, and EAs where end users are able to purchase Managed VoIP RFTS from SPs other than Eircom, in response to the withdrawal of SB-WLR and WLV.
- 5.462 However, this conclusion is subject to an important caveat. The premises analysis at Table 52 above reflects only the capacity, in a MGA scenario, of Access Seekers to retain the RFTS end users they serve by means of SB-WLR or WLV, by migrating them to Managed VoIP, using wholesale NG Broadband inputs. It does not take account of the presence of Virgin Media's CATV network, which offers Managed VoIP, but on a self-supply basis only. Therefore, in response to a MGA, Access Seekers may lose their end users if they are unable to migrate them to Managed VoIP on the basis of wholesale NG Broadband inputs. However, it does not necessarily follow that all those Access Seeker end users will migrate to Eircom FNA RFTS. Some end users may simply cease purchasing RFTS altogether, while, in cases where premises are passed by Virgin Media CATV, the end user may retain RFTS by switching to Virgin Media.

Respondents' Views

- 5.463 BT suggested that the evidence from the FACO geographic market definition exercise – specifically, the market share distribution under the MGA, absent regulation - indicated that Eircom holds SMP on all relevant geographic markets, and argued that the only merit of defining separate geographic markets was to identify the potential for NG Broadband to exercise a competitive constraint on Eircom. BT argued that this constraint has not been effective and that, absent regulation, Eircom's RFTS market share would grow by well in excess of the 5% predicted in the 2020 Consultation.

ComReg's Assessment of Respondents' Views

5.464 ComReg notes that its SMP Assessment is set out in Section 7 of the 2020 Consultation and of this Decision, and also notes that its geographic market assessment is carried out for the sole purpose of determining the geographic scope of the market, and not yet determining the presence (or absence) of SMP. The issue of SMP is therefore addressed, as appropriate, at Section 7 below. ComReg further notes that, having assessed the geographic scope of the market, it is satisfied that competitive dynamics are sufficiently heterogenous, to warrant the designation of sub-geographic markets, namely the Regional FACO Markets and the Urban FACO Markets. Although more appropriately addressed in Section 7, ComReg also notes that NG Broadband used and capable of being used to provide Managed VoIP poses an effective constraint on the FACO focal product, which is reflected in ComReg's choice of an 80% cumulative wholesale NG Broadband coverage in determining the boundaries between the Regional FACO Markets and the Urban FACO Markets. ComReg notes BT has not provided any evidence to substantiate its claim that Eircom's RFTS share would grow "*well in excess of the 5% predicted in the 2020 Consultation*", however, ComReg notes that while Managed VoIP has, grown by circa 43% (as at Q4 2020) since the 2015 FACO Decision, FNA RFTS subscriptions have decreased by circa 28%.⁷⁹⁵ This is indicative of a move towards NG FACO. This suggests that the presence of NG Broadband services, which provide an alternative to Eircom SB-WLR, facilitate SPs, based on purchases of VUA and Bitstream Plus, to provide Managed VoIP services to end users. Given this possibility, ComReg is satisfied that NG Broadband used and capable of being used to provide Managed VoIP provides a sufficient constraint on the focal product to mitigate the risk of anti-competitive behaviour by the SMP SP in the Urban FACO Markets, to the detriment of Access Seekers, and end users.

Evidence of differentiated pricing or marketing strategies

5.465 ComReg has assessed whether there is evidence of differentiated pricing or marketing that might indicate the presence of different regional and/or local competitive conditions, in particular, geographically differentiated FACO pricing at the wholesale level or RFTS pricing at the retail level.⁷⁹⁶ Variation in product quality between geographic areas (which may infer effective price differences), or variation in the marketing of FACO products may also be suggestive of localised competitive pressures within a market.

⁷⁹⁵ See Table 2

⁷⁹⁶ As noted by the European Commission in Case UK/2007/0733.

- 5.466 ComReg has addressed differentiated pricing for RFTS at paragraphs 4.472 to 4.478 above, and concluded, taking account of all the evidence available to it, that there are no grounds to conclude that SPs active on the RFTS market differentiate their pricing or marketing strategies on a geographic basis.
- 5.467 ComReg notes, however, that SPs may vary RFTS prices, bundling and marketing schemes depending on the network technology available in an area. In addition, RFTS is marketed nationally by most SPs, with local marketing campaigns following the rollout of new broadband services (e.g. FTTx or CATV networks). However, such marketing typically concentrates on the provision of RFTS on a bundled basis, together with broadband, rather than standalone RFTS. In such instances, the separate broadband and RFTS components of the bundled price may not be visible to the end users.
- 5.468 At the wholesale level, neither Eircom nor BT vary their wholesale prices for FACO or White Label VoIP according to geographic location. FACO is provided by Eircom on a national basis, albeit in the presence of regulation, and is priced on a uniform basis nationwide (noting that existing SMP price control obligations place restrictions on Eircom wholesale pricing which, absent regulation, would otherwise likely not be in place).⁷⁹⁷
- 5.469 Geographic differences in pricing likely arise, rather, on the basis of the availability of different access technologies. This is driven by the rollout of NG Broadband to EAs. For example, where Eircom FTTx has not yet been rolled out, Eircom VUA is unavailable, and Access Seekers wishing to offer RFTS using Eircom fixed access must purchase SB-WLR or WLV. This differentiation in pricing is, accordingly, likely driven by the availability of wholesale NG Broadband inputs which could be used to deliver FACO by means of White Label VoIP, or RFTS by means of Managed VoIP.

⁷⁹⁷ ComReg notes that, at present, Eircom's pricing of the WLR component of FACO is subject to a price control obligation of Cost Orientation based on the higher of:

(i) Eircom's Actual Costs Adjusted for Efficiencies for the provision of SB-WLR nationally with the BU-LRAIC+ costs applied to the active equipment, or

(ii) BU-LRAIC+ costs for Non-reusable Assets and active equipment and Eircom's Indexed RAB for Reusable Assets for the provision of SB-WLR in the Modified LEA - a 'retail minus' obligation.

The FVCO element of Eircom's SB-WLR product is subject to a price control obligation of cost orientation based on a Top-Down Forward-Looking LRAIC+ model.

- 5.470 ComReg understands that SIRO, Eircom and Virgin Media price their products (wholesale NG Broadband access in the case of SIRO and Eircom, and RFTS in the case of Virgin Media) on a national basis, in those areas where their networks have rolled out. Neither SIRO nor Virgin Media vary product offerings or prices by geographic area. On a forward-looking basis, and on the basis of its non-discrimination obligations, NBI is obliged to offer wholesale products for sale at a uniform price across the IA. Similarly, ComReg's research indicates that Access Seekers providing RFTS on the basis of SB-WLR or WLV do not tend to vary product offerings or prices by geographic area.
- 5.471 Accordingly, and on the basis of the evidence available to it, ComReg has insufficient evidence to conclude that the provision of FACO is characterised by differentiated pricing or marketing strategies across different sub-national geographic areas.

Geographic differences in demand characteristics

- 5.472 Demand for FACO arises from Access Seekers who do not own or operate an access network, or who do not own or operate an access network with widespread coverage, but who wish to provide RFTS on a national basis.⁷⁹⁸ ComReg is not aware of any Access Seeker which purchases FACO from Eircom in order to provide RFTS on a regional or local basis only. Access Seekers purchasing FACO from Eircom thus benefit from national coverage which permits them to offer RFTS nationally, using Eircom wholesale inputs.
- 5.473 Similarly, ComReg is aware that certain SPs offer RFTS by means of Managed VoIP using SIRO and Eircom NG Broadband inputs. In these instances, ComReg is of the view that Access Seekers likely intend to provide RFTS with national, rather than regional reach. Accordingly, ComReg considers that Access Seeker demand for FACO is likely to be national, rather than regional or local, in scope. Although this demand can be capable of being fulfilled by combining the access to Wholesale NG Broadband provided by several SPs, provided these SP have sizeable coverage, contracting with smaller SPs for wholesale NG BB access may not be feasible given cost of involved (such as multiple interconnectivity, economies of scale and scope). This demand from Access Seekers who do not own or operate their own networks can be fulfilled by means of purchases of FACO delivered over FNA (SB-WLR) or NG Broadband (White Label VoIP), or self-supply of RFTS by means of Managed VoIP on the basis of purchases of WLA or WCA offered over NG Broadband, or a combination of the two.

⁷⁹⁸ As of Q4 2020, Eircom's largest SB-WLR customers are BT, and Magnet [REDACTED] [REDACTED].

5.474 Accordingly, and on the basis of the evidence available to it, ComReg has insufficient evidence to conclude that the provision of FACO is characterised by geographic differences in demand characteristics across different sub-national geographic areas, noting *inter alia* that Access Seekers may purchase inputs, or self-supply, from more than one SP.

Are there sufficient grounds for geographic differentiation?

5.475 ComReg has assessed the five geographic assessment conditions considered above. Three of these conditions (geographic differences in entry conditions over time, variation in the number and size of potential competitors, and distribution of market shares) indicate the likely presence of sufficiently different, yet stable, competitive conditions between geographic areas, while two (evidence of differentiated pricing or marketing strategies, and geographic differences in demand characteristics) do not. Accordingly, on balance, and acknowledging the comparative importance of the presence (or absence) of NG Broadband network coverage at an EA for the provision of FACO, overall, the evidence available to ComReg suggests that there are sufficient grounds to conclude that competitive conditions on the Relevant FACO Product Markets are moving from a situation of relative uniformity, based on ongoing demand for FACO delivered over Eircom FNA, to a situation of differentiation across the State, driven by the rollout of NG Broadband which permits the delivery of both White Label VoIP and Managed VoIP RFTS by SPs operating their own networks (Eircom and, on the LL-FACO market only, Virgin Media), and by Access Seekers purchasing the following wholesale inputs:

- (a) **From Eircom:** WLA, WCA (both of which can be used to self-supply Managed VoIP) or White Label VoIP (to the extent that, in an MGA scenario, Eircom would continue to offer White Label VoIP);
- (b) **From BT:** WCA (which can be used to self-supply Managed VoIP) or White Label VoIP;
- (c) **From SIRO:** WLA (which can be used to self-supply Managed VoIP); and
- (d) **From NBI:** WLA (which, on a forward-looking basis, can be used to self-supply Managed VoIP).

- 5.476 Over the lifetime of this market review, ComReg expects NG Broadband rollout to continue.⁷⁹⁹ Demand is accordingly likely to shift away from FACO delivered over FNA, to delivery of wholesale and retail Managed VoIP delivered over wholesale NG Broadband inputs (although, as set out at paragraph 5.35 above, Eircom's MSAN proposal may be capable of extending the useful lifetime of the PSTN (and ISDN FRA and PRA) network, and therefore continuing to offer FNA FACO in the medium to long-term). This suggests that it may not, on a forward-looking basis, be appropriate to define a single national geographic market, given that competitive conditions are unlikely to be sufficiently homogenous nationally, owing to declining demand for FACO delivered over FNA, and increased rollout of NG Broadband facilitating the delivery of wholesale and retail Managed VoIP. It follows that there appear to be grounds for distinguishing competitive conditions on a geographic basis. In particular, it may be appropriate to characterise sub-national geographic markets characterised by sufficient differences in competitive conditions across different geographic areas.
- 5.477 Having concluded that there are likely grounds to move away from a national FACO geographic market, and towards defining sub-national FACO geographic markets, and that the appropriate unit of geographic assessment is the Eircom EA, ComReg sets out the criterion which it applies to measure any sufficient differences in competitive conditions between EAs which would justify defining two or more sub-national geographic markets, rather than a single geographic market.
- 5.478 Given that no network will likely have coverage as ubiquitous as Eircom's FNA network, ComReg's analysis overlays Eircom and other network footprints onto the Eircom EAs, where sufficient data are available. This allows ComReg to consider network presence and coverage of the various SPs within a discrete unit of geographic assessment.

Respondents' Views – geographic differentiation of remedies

- 5.479 Eircom argued that ComReg should recognise the potential for differentiated remedies, lowering the NG Broadband coverage threshold, and removing undue regulatory obligations on individual premises, which are already subject to different competitive conditions, for instance, where FTTH rollout follows ribbon development which extends beyond an EA boundary.

⁷⁹⁹ Eircom's FTTP rollout is likely to upgrade or replace existing FTTC and copper networks.

- 5.480 Eircom noted in particular that the 2018 SMP Guidelines allow for the possibility of geographical differentiation at the remedies stage, if regional differences are found, but are not considered sufficient to support different geographic markets or SMP findings. In particular, the Guidelines stress that the stability of the differentiation is the key to distinguishing between a geographical segmentation at market definition level and remedy segmentation.
- 5.481 Eircom argued that the rollout of NBP means that the differing competitive conditions in the Regional FACO Markets cannot be considered to be stable over the period of the market review, and that ComReg's proposal to carry out a MTA recognises this fact. Eircom also noted that there is precedent from other NRA decisions for taking differentiated approaches to geographic assessment, noting in particular the Spanish NRA Market 3A decision, the French NRA Market 3A review, and the Slovenian NRA Market 3B decision.
- 5.482 Eircom therefore suggested that ComReg should assess EAs with NG Broadband coverage below 60% on a household-by-household basis, in order to address the issue of further NG Broadband rollout, and to allow for the differentiation of remedies on a geographic basis, where appropriate. This would, in Eircom's view, address minor differences in competitive conditions, and expedite deregulation. While recognising that a household-level assessment may not be suitable for the market as a whole, Eircom argued that, where EAs have a small count of overall premises, it provides a more granular approach, which has the advantage of better distinguishing different competitive options, compared to larger units of measurement.

ComReg's Assessment of Respondents' Views

- 5.483 ComReg does not consider that prospective NBI rollout is indicative that differing competitive conditions in the Regional FACO Markets cannot be considered stable over the period of this market review. ComReg considered each of the five geographic assessment conditions in paragraphs 5.344 to 5.402 of the 2020 Consultation, where it concluded on a preliminary basis that three geographic assessment conditions (geographic differences in entry conditions over time, variation in number and size of potential competitors, and the distribution of SP market shares at an EA over time) were indicative of sufficient differences in competitive conditions between EAs. Although NBI will roll out over a seven-year period, with the possibility of a shorter five-year rollout period, (see paragraph 7.347), ComReg has a relative amount of certainty over the boundaries of NBI rollout. Indeed, Eircom stated in paragraph 113 of its Submission that it considers *“any ambiguity or uncertainty regarding the potential impact of the NBP award has dissipated.”* ComReg notes that the IA is in those areas of the State where it is not commercially viable for other operators to roll out. ComReg understands that the majority of its network is likely to roll out in the Regional FACO Markets, with its only likely competitor being Eircom's FNA network. With this level of awareness of the limits of NBI rollout, supported by its analysis of the geographic assessment conditions, ComReg is satisfied that competitive conditions will remain relatively predictable. ComReg intends that, any changes to competitive conditions in the Regional FACO Markets will be captured as part of the MTA.
- 5.484 ComReg further notes that it is inappropriate to alter the unit of geographic assessment, as suggested by Eircom, as it would result in an entirely inconsistent and skewed analysis. In accordance with the 2020 Explanatory Note and the 2014 BEREK Common Position, paragraphs 5.410 to 5.412 note the conditions to which it should have regard when selecting the appropriate geographic unit for assessment. These include, but are not limited to, the selection of a unit which has *“clear and stable boundaries”* over time, *“reflect the network structure of relevant Service Providers”*, and most notably *“be small enough for competitive conditions to be unlikely to vary significantly within the unit, but large enough that the burden operators and NRAs face with regard to data delivery and analysis is reasonable.”*
- 5.485 ComReg notes that, while Eircom's EAs fulfil each of these requirements, individual premises do not. ComReg is satisfied that carrying out its assessment at the premises level is simply not appropriate or feasible, given the granularity of data which would be required, and which may not be available. Aside from issues with the level of granularity, most notably, that the boundaries are not clear and stable over time given the frequency at which new premises are built. For these reasons, ComReg considers that it is more appropriate to use EAs as the unit of geographic assessment.

- 5.486 ComReg disagrees with Eircom's suggestion that, having designated the EA as its unit of geographic assessment, it should then assess EAs with NG Broadband coverage below 60% on a household-by-household basis. ComReg identifies one unit for geographic assessment to be carried out in order to effectively delineate separate geographic markets, where appropriate. ComReg notes that it would be inconsistent to then, after having designated separate geographic markets, switch its unit of assessment to anything other than the EA. Should ComReg switch to premises level data, but only for those EAs with less than 60% coverage, this would result in some premises being deregulated in the Regional FACO Markets which are served by NG Broadband, while the small number of premises in the Urban FACO Market which are not served by NG Broadband, would remain deregulated. This would result in inconsistencies and inaccuracies in its assessment, as it would require ComReg to apply one assessment methodology at EAs with wholesale NG Broadband coverage above 60%, and an entirely separate assessment methodology at EAs with wholesale NG Broadband coverage below 60%.
- 5.487 Eircom has alluded to ARCEP proposals in respect of copper switch-off and suggests that these proposals are indicative of NRA geographic assessment at the premises level. ARCEP published its final decision on WLA in December 2020.⁸⁰⁰ On the basis of the final decision, ComReg considers that Eircom has mischaracterised ARCEP's approach to mandating copper switch-off, and that the reference to premises should, rather, be read as part of a broader suite of assessments carried out by ARCEP, specifically at Article 10 of its final decision. For these reasons, ComReg disagrees that ARCEP's proposals give firm support to the contention that it is appropriate to carry out geographic assessment at the premises level, without regard to additional factors.
- 5.488 Finally, ComReg notes that Eircom has argued that geographic differentiation of remedies would be possible in circumstances where a differentiated approach to geographic assessment were applied. Given that ComReg does not propose to implement such a differentiated approach at the stage of geographic market definition, the differentiation of remedies on that basis then becomes moot.

Respondents' Views – geographic market exhibits national characteristics

- 5.489 CE argued that national level market dynamics warrant the definition of a national FACO geographic market, noting that the geographic definition of the wholesale FACO market should take into account the conditions prevailing in the downstream RFTS market.

⁸⁰⁰ Décision n° 2020-1446 de l'Autorité de régulation des communications électroniques, des postes et de la distribution de la presse en date du 15 décembre 2020 portant sur la définition du marché pertinent de fourniture en gros d'accès local en position déterminée, sur la désignation d'un opérateur exerçant une influence significative sur ce marché et sur les obligations imposées à cet opérateur à ce titre. Available online at https://www.arcep.fr/uploads/tx_gsavis/20-1446.pdf

- 5.490 CE concurred with ComReg's proposed definition of a national RFTS geographic market and noted that POs tend to price both RFTS and upstream wholesale products on a national basis. CE therefore argued that, since Eircom prices FACO on a national basis, any profits gained through a price increase on the Regional FACO Market would be constrained by competition and CBP at the national level. CBP cannot, in CE's view, be assessed for small regional EAs in a vacuum since competition and negotiations take place at a national level.
- 5.491 CE argued that, even if Eircom were to increase prices in the Regional FACO Market, this would only be for a limited period of time, since NBI's rollout targets the Regional FACO Market. CE also added that the USO would prevent Eircom from charging prices above the competitive level. According to the 2016 USO Decision, Eircom is required, where requested, to provide RFTS at a geographically averaged price (GAP).⁸⁰¹ This implies that Eircom cannot charge more to end users who live in remote rural areas.

ComReg's Assessment of Respondents' Views

- 5.492 CE argues that it is appropriate to define a national FACO geographic market, taking into account prevailing conditions on the RFTS markets, which are national in scope, and also constraints arising on Eircom from national-level pricing on the FACO market, and the USO on the RFTS markets. Finally, CE argues that NBI will constrain Eircom from increasing prices on the Regional FACO Market, following rollout.
- 5.493 ComReg accounts for conditions on the RFTS Market in defining the Relevant FACO Markets by assessing relevant indirect retail constraints on the provision of FACO arising from the RFTS markets. In that regard, ComReg takes account of the constraint on the provision of FACO generated by Managed VoIP RFTS delivered over wholesale NG Broadband inputs, and Managed VoB RFTS delivered over CATV, in those geographic areas where Virgin Media (in the case of CATV) and Eircom, SIRO or - on a forward-looking basis - NBI (in the case of wholesale NG Broadband inputs) has a network footprint. Thus, while the RFTS market is determined to be national in scope, ComReg considers that the FACO market is not national in scope and there is a notable, and relative difference in competitive conditions in those areas where SPs have the ability to provide Managed VoIP via self-supplied NG BB or wholesale NG Broadband, compared with those areas in the State where SPs do not have this capability.

⁸⁰¹ As set out at footnote 515 above, ComReg is currently consulting on an updated USO requirement.

- 5.494 In respect of NBI, ComReg notes that, as rollout occurs, NBI may potentially contribute to an increase in competitive conditions in the Regional FACO Markets. Given current rollout, NBI is not yet, in ComReg's view, capable of exercising such a competitive constraint. ComReg intends, however, to reassess differences in competitive conditions in the Regional FACO Market as part of its MTA, and this assessment may consider NBI wholesale NG Broadband rollout at that stage.
- 5.495 In respect of national-level constraints on FACO pricing, ComReg notes CBP is assessed at the competition analysis stage, not as part of the geographic market definition exercise. In any case, as set out at paragraph 7.407 below, ComReg considers that there is insufficient evidence of Eircom being constrained by CBP on the Regional FACO Markets. ComReg also notes that Eircom prices FACO on a national basis in the presence of national-level regulation. Absent regulation, Eircom would have the freedom to set different prices in the Urban FACO Markets and the Regional FACO Markets in response, respectively, to competitive pressures arising from direct and indirect constraints, and its regulatory obligations. Additionally, despite the USO present at the retail level, Eircom could raise prices of FACO above the competitive level, absent regulation, at the wholesale level.

How should geographic differences in competitive conditions on the Relevant FACO Product Markets be distinguished?

- 5.496 ComReg considers that, under the MGA, the barrier to entry to providing products falling within the Relevant FACO Product Markets is likely to be a function of the level of NG Broadband availability in an EA. Under the MGA, Access Seekers will only be able to provide Managed VoIP on a wholesale or retail basis where they can secure access to NG Broadband (either WLA and/or WCA) capable of delivering Managed VoIP. Only SPs present in an EA, and capable of delivering products falling within the Relevant FACO Product Markets are likely to be capable of generating sufficiently differing conditions of competition across EAs.
- 5.497 ComReg also notes that, under the MGA, it is permissible to take into account regulatory obligations imposed on Eircom in the WLA market (on a national basis), and on the Regional WCA Market, as these obligations exist absent regulation of the FACO markets. These obligations require, *inter alia*, that Eircom must grant access to WLA and WCA (on the Regional WCA Market only). Thus, even if Eircom ceased offering FACO, as it would likely do under the MGA, it would be obliged to continue offering WLA and (on the Regional WCA Market) WCA. Under the MGA ComReg must also take into account commercial provision of WLA services by SIRO and, on a forward-looking basis, NBI.

- 5.498 As set out in the SMP Explanatory Note, an assessment based on the number of SPs present on an EA would, on its own, be insufficient, and other factors, should be taken into account:

“As regards the definition of sub-national markets, a geographic delineation based solely on the number of operators present in a given geographic unit (for example a local exchange area) is not by itself sufficiently detailed or robust to identify real differences in competitive conditions for the purposes of market definition. In assessing whether conditions of competition within a geographic area are similar or sufficiently homogeneous, additional structural and behavioural evidence is necessary. Such relevant evidence includes the number and size of potential competitors, the distribution of market shares and their evolution over time. In addition, evidence of differentiated retail or wholesale pricing which might apply could help to indicate different regional or local competitive pressure. It is also considered appropriate to look at the pricing of both the incumbent and alternative operators and its evolution over time in the relevant areas as well as other related competitive aspects, which may result from relevant competitive variations between geographic areas (nature of demand, differences in commercial offers, marketing strategies etc.).”⁸⁰²

- 5.499 Having regard to the geographic assessment conditions above, particularly SP ability to self-supply FACO using NG Broadband inputs, ComReg concludes that sufficient geographic differences in competitive conditions between EAs are most likely to arise due to the presence, or absence, in an EA of SPs capable of delivering products falling within the Relevant FACO Product Markets. To distinguish differences in competitive conditions across EAs, ComReg takes account of the presence of SPs that, absent regulation in the Relevant FACO Product Markets, are either:

- (a) At the wholesale level, capable of providing FACO or White Label VoIP, or
- (b) At the retail level, capable of delivering FACO on a self-supply basis to deliver RFTS.

⁸⁰² At page 20.

- 5.500 ComReg applies a single criterion, rather than a cumulative set of criteria, in the case of FACO. ComReg does so on the basis that the key criterion in distinguishing competitive conditions between EAs is the presence (or absence) of NG Broadband capable of facilitating the supply by SPs of products falling within the Relevant FACO Product Markets, and serving an appreciable number of premises at an EA. This conclusion is supported by ComReg's assessment above of the likely geographic differences in entry conditions over time, variation in number and size of potential competitors, and distribution of market share criteria, all three of which suggest, having regard to these factors, that differences in competitive conditions between EAs are driven by NG Broadband capable of delivering Managed VoIP.
- 5.501 In assessing any differences in competitive conditions between EAs, ComReg takes account of the fact that SP presence at an EA is facilitated by NG Broadband. To do so, ComReg sets an EA NG Broadband coverage threshold which it considers is sufficient to clearly identify any such differences in competitive conditions.
- 5.502 Where an SP can access NG Broadband inputs at an EA which allow it to provide FACO or RFTS by means of Managed VoIP to an appreciable number of premises at an EA, ComReg considers that this provides evidence for the three geographic assessment criteria (geographic differences in entry conditions over time, variation in number and size of potential competitors, and the distribution of SP market shares at an EA over time) which it concluded were indicative of sufficient differences in competitive conditions between EAs.
- 5.503 Accordingly, where NG Broadband is present at an EA, and capable of passing (that is, capable of being connected with service at the standard connection fee) and delivering products falling within the Relevant FACO Product Markets (that is, White Label VoIP, or Managed VoIP-based RFTS) to a sufficient number of premises at an EA, this is the necessary condition to distinguish differences in competitive conditions between EAs.
- 5.504 ComReg considered a range of coverage levels in determining what the appropriate coverage level is to indicate differences in competitive conditions between EAs. In selecting an appropriate coverage level, ComReg was cognisant of the fact that setting a lower coverage level would lead to EAs being designated as exhibiting different competitive conditions, even where a non-trivial level of premises at those EAs were not passed by NG Broadband. Similarly, ComReg considered that requiring coverage levels at 100%, or close to 100%, would fail, on a forward-looking basis, to take account of the differences in conditions of competition arising from the presence at high, but not ubiquitous, levels of coverage at an EA of NG Broadband.

5.505 ComReg considers that a (cumulative) coverage level of **80%** is likely to offer a sufficient level of scale for an SP to be capable of providing service to a customer base which is large enough to generate a competitive constraint at an EA. At coverage levels below 80%, it is ComReg's view that a large enough cohort of premises in an EA would be unable to access Managed VoIP over NG Broadband, such that competitive conditions at that EA would be insufficiently different from a scenario where NG Broadband was not present.

Respondents' Views – 80% wholesale NG Broadband threshold

5.506 Numerous respondents offered views on the appropriateness of the 80% wholesale NG Broadband threshold.

5.507 **Vodafone** expressed concerns that the 80% threshold is too low and appears to be an arbitrary threshold. Given that 100% NG coverage may not be achieved in an all EAs, Vodafone suggested that the appropriate wholesale NG Broadband coverage threshold should be 95%.

5.508 Vodafone sought confirmation that the number of non-contestable lines, estimated at 15,130 in the 2020 Consultation, represents the total number of existing Urban FACO lines that cannot be served by an Access Seeker that purchases WLA/WCA from Eircom (i.e. whether or not they can be served by Virgin Media). Vodafone also sought clarity on how ComReg had characterised FACO lines that theoretically could be non-contestable in the footprint of the Urban FACO Markets.

5.509 **BT** expressed concern that the 80% threshold figure could change significantly by the time the final Decision was published, which would create huge regulatory uncertainty. BT's concern was heightened by changes that occurred in other market reviews between the 2020 Consultation phase and the publication of the final Decision.

5.510 BT also argued that ComReg had largely failed to address what would happen to premises that are not passed by NG Broadband, but which fall into the Urban FACO Markets, and argued that deregulation in the Urban WCA Market (2018 WLA/WCA Decision) effectively created significant price increases (through the removal of discounts) in wholesale broadband rates.

5.511 BT considered that ComReg needs to protect the interest of end users in the Urban FACO Markets not passed by NG Broadband, and suggested that, as a minimum, a 'fair and reasonable environment' condition should protect this group. BT considered that ComReg had failed to protect the interests of these end users and, in so doing, was not acting in accordance with the intention or implementation of the Communications Regulation Act 2002 (as amended).

5.512 **ALTO** expressed concern that the 80% threshold appeared to have been chosen with little justification and urged ComReg to conduct further analysis on the impact of deregulation on end users within the Urban FACO Markets which are not passed by wholesale NG Broadband.

- 5.513 **CE** noted that ComReg had not recognised that the Regional FACO Market may include premises within an EA that are passed by wholesale NG Broadband. CE therefore argued that it is likely that a significant number of premises already passed by NG Broadband will continue to be regulated.
- 5.514 CE argued that ComReg has not articulated the economic basis for the 80% coverage threshold, nor did the 2020 Consultation include a clear sensitivity analysis with respect to this assumption. CE noted that other NRAs have applied lower thresholds, and that it would be beneficial for ComReg to investigate those approaches.
- 5.515 In CE's view, a coverage threshold should be forward-looking in nature and ComReg should consider how the 80% threshold assumption will affect SP incentives to invest and upgrade customers to VoIP (or any alternative technologies). The higher the threshold percentage, the larger the share of the market that remains under strict regulation and, hence, the more attractive it is to continue using regulated legacy products. In a market where entry barriers can be - and have been - overcome, too high a threshold carries the risk of discouraging migration to more advanced technologies.
- 5.516 CE therefore advised that, at the minimum, ComReg should revisit and disclose its assumptions underlying its finding of sub-national markets, given its view that a markedly lower number of households fall into the Urban FACO Markets, than the actual number of premises passed by NGA.
- 5.517 **Eircom** considered that the 80% coverage criterion was overly conservative and would lead to numerous EAs being incorrectly classified as "non-competitive". Eircom also suggested that, compared to other NRAs' choices of coverage criterion, the 80% threshold proposed is an outlier and gave examples of lower thresholds on other markets at Table 5 of its Submission.
- 5.518 Eircom also noted that, in its comments on ComReg's notified measures for the WHQA market (Case IE/2019/2214), the Commission specifically noted the proposed coverage threshold of 75% and urged ComReg "*in its next market review, to review the methodological approach to the choice of criteria and thresholds, to better reflect NRAs' regulatory practice, the common position of BEREC, and technological and market developments*" in order to "*ensure the timely, **accurate** and relevant delineation of sub-national markets (i.e., competitive and uncompetitive areas)*" [emphasis added by Eircom].

- 5.519 Eircom argued that the choice of an 80% threshold was based on ensuring sufficient competition within an EA. This fails to consider the national RFTS market, and that wholesale competitive forces nationally provide far greater leverage, negotiation and CBP than could ever be exerted successfully at the wholesale level in small individual EAs. Eircom therefore considered that ComReg is treating each EA as an individual market which in itself creates a market so small that it lends itself to a *de facto* SMP designation. Eircom therefore considers that ComReg should more accurately represent the CBP in the FACO market on small individual “markets” / exchanges.
- 5.520 Finally, Eircom considers that ComReg should reduce the 80% threshold to 60% of NG Broadband coverage, including those premises capable of being served by Virgin Media and Imagine within an EA.

ComReg’s Assessment of Respondents’ Views

- 5.521 ComReg notes that Vodafone has provided no quantitative evidence to substantiate its argument that the 80% coverage threshold is too low, nor has it provided any further information in support of its contention that the criterion should be 95%. ComReg acknowledges Vodafone’s assertion that the 80% coverage criterion is indeed a “*necessary condition to distinguish the differences in competitive conditions between EAs*”. ComReg also notes that a cumulative threshold figure of 95% would require ComReg to assume that all those EAs with coverage less than 95%, that is to say from 0% to 94% would have sufficiently homogenous competitive conditions, such that these EAs could specifically be differentiated, as a collective sharing similar conditions of competition, from those EAs with 95% to 100% cumulative NG wholesale broadband coverage. ComReg does not consider this to accurately represent how differences in conditions of competition should be represented. The question to be addressed is at what level of wholesale NG Broadband coverage suggested there are sufficient and stable differences in competition between different geographic areas.

5.522 In respect of Vodafone’s query on the estimated 15,130 non-contestable lines in the 2020 Consultation, ComReg confirms that this represents the total number of existing Urban FACO lines that cannot be served by an Access Seeker that purchases WLA/WCA from Eircom at these EAs. These non-contestable lines represent premises which may or may not be served by Virgin Media. ComReg notes that Virgin Media’s network presence is not included in this part of the assessment given they are not active on the wholesale markets. ComReg further notes that although it chose 80% as the cumulative coverage threshold, on a national basis, the true figure is significantly lower than 20% of customers without viable alternatives in the Urban FACO Markets. ComReg notes, in Table 53 below, that of the 407 EAs in the Urban FACO Markets, 58% have wholesale NG Broadband coverage of 90% or above, while 40% have coverage of 95% or above. Therefore, although theoretically 20% of lines in the Urban FACO Market could be non-contestable, this is clearly not the case.⁸⁰³

Table 53: Urban FACO Markets – Percentage Coverage of NG Broadband

Number of EAs	% of EAs	% coverage
407	80%+	100%
235	90%+	58%
161	95%+	40%

5.523 ComReg notes that contrary to BT’s assertion, the 80% coverage criterion is absolutely not *“a line in the sand that keeps moving”*. A change to the 80% coverage criterion could only happen once, following consultation, as a result of well-reasoned arguments made by Respondents and ComReg’s consideration of them. The purpose of consultation is to seek views and ComReg must be open to making changes having considered Respondents’ views. Having considered respondents’ views on the 2020 Consultation, as set out elsewhere in this Decision. ComReg chose the 80% coverage criterion with the view of it being reflective of actual, or prospective differences, in conditions of competition between different exchange areas. Having considered all of the Respondents’ views, ComReg does not consider that it has grounds to alter this view.

5.524 In terms of BT’s concern’s regarding the increase in prices in the Urban WCA Market, ComReg discusses this issue at paragraphs 4.31 to 4.33 of the WCA MTA Consultation. ComReg concluded in this assessment that Eircom’s pricing behaviour - in this particular instance - was not necessarily indicative of Eircom’s capacity to exert market power, rather its differential pricing strategy reflected a commercial decision to incentivise Access Seekers to migrate to NG from CG technology.

⁸⁰³ ComReg’s calculations indicate that 26% EAs in the Urban FACO Markets have coverage levels below 81%.

- 5.525 ComReg's intention in choosing the 80% coverage criterion (along with the consideration of other factors set out) was to select a criterion which allowed it to effectively identify whether separate geographic markets exist, that is to say whether separate markets exist for which there are sufficiently homogenous and stable competitive conditions within market to warrant their grouping, but which are sufficiently different from one another. ComReg also notes that any coverage threshold below 100% will inherently give rise to issues. Some premises in the Regional FACO Market would inevitably have access to alternative suppliers of NG Broadband, while some premises in the Urban FACO Market, inevitably, will not. This is the nature of having to choose a specific geographic unit to carry out its geographic market assessment. Moreover, ComReg notes that, unless it used the individual premises as a geographic unit, which would in ComReg's view be an inappropriate unit on which to base its analysis, it is simply unavoidable that there would be cases where some premises would be passed by NG Broadband in the Regional FACO Market, and others in the Urban FACO Market which would not, regardless of which level of coverage it chooses.
- 5.526 ComReg notes that, contrary to CE's claims, its assessment is forward-looking in nature. In this regard, ComReg notes at Section 11 below its intention to carry out a MTA after a period of 24 months from the Effective Date of this Decision. The MTA will allow ComReg to reconsider whether EAs in the Regional FACO Markets exhibit sufficiently similar competitive conditions to the Urban FACO Markets by reapplying the five geographic assessment conditions set out in this Decision and, if appropriate, reapplying the 80% coverage criterion at EAs constituting the Regional FACO Markets.
- 5.527 ComReg additionally notes CE's concerns that too high a coverage threshold can discourage migration to more advanced technologies. As of Q4 2020, and as discussed in Section 7 below, the 80% cumulative wholesale NG Broadband coverage criterion will result in 69% of the market (measured by premises) facing deregulation. Therefore, given this volume of deregulation, which is premised on the basis of wholesale NG broadband coverage (among other factors), and ComReg's decision to carry out a MTA, ComReg is not clear on how its assessment discourages migration to more advanced technologies. Ultimately, arising from this Decision, ComReg has decided that the Regional FACO Markets are not effectively competitive and in view of identified competition problems Eircom's obligations to provide access to SB-WLR will be maintained in these markets only. Given SPs will have to increase their use of Managed VoIP over wholesale NG Broadband in order to serve customers in the Urban FACO Markets (under an assumption that Eircom decides not to provide SB-WLR on a commercial basis), this provides an incentive to migrate customers. ComReg also notes that despite Eircom having a Managed VoIP capability, that the majority of its RFTS services continue to be delivered over its own copper based FNA network.

- 5.528 With reference to Eircom and CE's claims regarding the coverage thresholds of other NRAs, ComReg notes that it has considered the criteria used by other NRAs but notes that Table 5 of Eircom's submission concerns the WLA, WCA and WHQA markets. In addition, as per Table 10 of The BEREC Report,⁸⁰⁴ although each of the NRA's, referred to by Eircom, applies a lower coverage criterion, they also apply multiple other criteria for the delineation of geographic markets, while ComReg has applied only one. While Eircom further references the Commission's comments on the WHQA market (Case IE/2019/2214), ComReg notes that it has, in fact, again decreased the number of criteria delineating the geographic scope of the FACO markets by setting only one coverage criterion, instead of the two outlined in paragraph 5.247 of the 2020 WHQA Decision (which related to both a minimum number of competing networks and a coverage threshold). In any event, each market must be considered on its own merits.
- 5.529 Contrary to Eircom's assertion, set out in paragraph 5.512, where Eircom argued that ComReg is treating each EA as an individual market which in itself creates a market so small that it lends itself to a *de facto* SMP designation, ComReg notes that it has, in total, proposed to deregulate 407 EAs, accounting for 69% of all premises in the market. ComReg also notes that Eircom has provided no evidence, or additional information to substantiate its argument that 60% is a more appropriate threshold for NG Broadband coverage other than that it is a lower number.
- 5.530 In this regard, ComReg reiterates that, in seeking to distinguish differences in competitive conditions between EAs by means of a coverage threshold, there are no bright lines between manifestly correct thresholds and manifestly incorrect thresholds. Rather, ComReg aims to strike an appropriate balance by identifying that different conditions of competition at EAs are anchored in the ability of Access Seekers to supply Managed VoIP using wholesale NG Broadband inputs to a sufficiently sizeable proportion of premises at that EA (and having regard to the RFTS market definition which found the market to be national – thus suggesting that SPs need to be able to service a very high proportion of households to compete effectively).

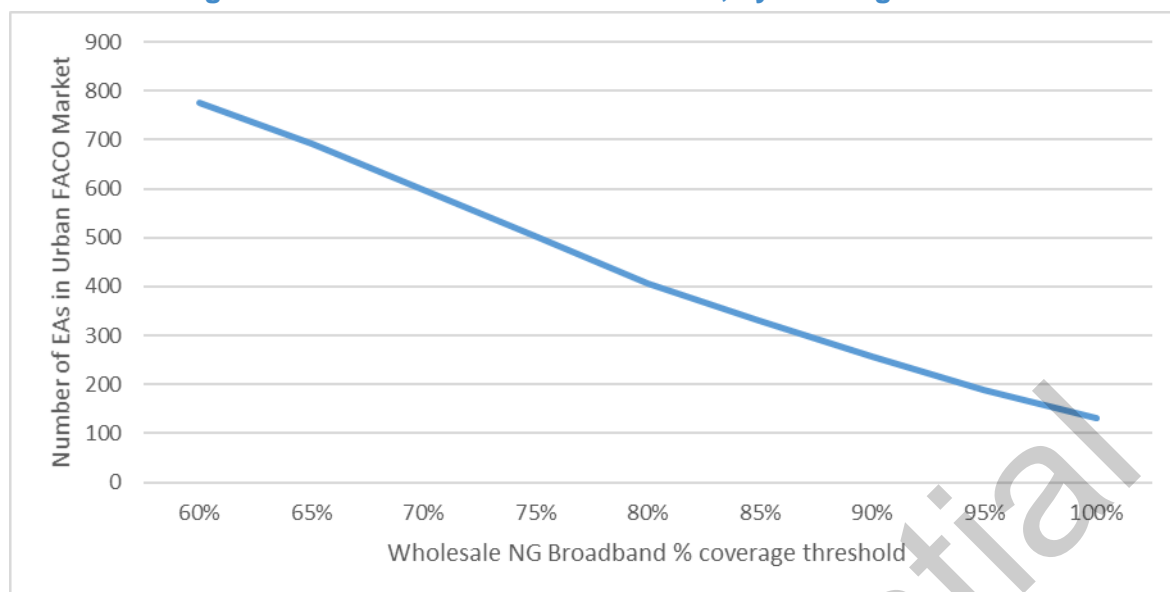
⁸⁰⁴BEREC Report on the application of the Common Position on geographic aspects of market analysis. See https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/8308-berec-report-on-the-application-of-the-common-position-on-geographic-aspects-of-market-analysis

- 5.531 Accordingly, at very high coverage threshold levels, fewer EAs will be assigned to the Urban FACO Markets (and, as described in detail at Section 7 below, will be deregulated), but more premises in those EAs will be passed by wholesale NG Broadband. As the threshold coverage level decreases, more EAs will be assigned to the Urban FACO Market, but fewer premises in those EAs will be passed by wholesale NG Broadband, leading to increased numbers of premises not served by wholesale NG Broadband, and also not being afforded the protections arising from regulation of the FACO market.
- 5.532 ComReg has therefore assessed how many EAs would be deregulated if various wholesale NG Broadband coverage thresholds were applied. As set out at Table 55 and Figure 50 below, the number of EAs in the Urban FACO Market declines linearly as the threshold percentage increases. This means that, on average, and between candidate threshold levels of 100% and 60%, for a 1% increase in the wholesale NG Broadband coverage threshold, the number of EAs in the Urban FACO Market declines by 2.1%. Given the absence of a kink in the curve, there appears to be no obvious inflection point at which the threshold should be set.

Table 54: EAs in Urban FACO Markets, by coverage threshold

Coverage threshold	EAs	% decrease in EAs between 5% coverage increments
60%	776	
65%	692	11%
70%	597	14%
75%	502	16%
80%	407	19%
85%	329	19%
90%	258	22%
95%	188	27%
100%	131	30%

Figure 50: EAs in Urban FACO Markets, by coverage threshold



- 5.533 ComReg further refutes Eircom's assertion that it has failed to consider the national RFTS market and that wholesale competitive forces nationally provide far greater leverage, negotiation and CBP than could ever be exerted successfully at the wholesale level in small individual EAs. ComReg notes in the 2015 FACO Decision that Eircom, prior to a cost-based price control, successfully increased the price of SB-WLR, thus suggesting it had freedom to price prior to regulation, without being inhibited by CBP at the wholesale level. ComReg additionally notes that the RFTS market is ultimately impacted by SPs' ability to provide Managed VoIP. Although RFTS has been defined as national in geographic scope, Managed VoIP has only been identified as a constraint in these markets where there is NG network presence. This is not the case nationally, therefore in the upstream markets, ComReg cannot rely on NG Broadband to provide a national level constraint, as it is not relied upon to provide a national level constraint even in the downstream retail markets.
- 5.534 Finally, given Eircom asserts in its Response that ComReg should assess those EA's with less than 60% coverage, on a premises-by-premises basis, ComReg is unclear how its analysis at the EA level is facilitating the creation of a market so small that would lead to *de facto* SMP designation.

Wholesale and self-supply NG Broadband on the LL-FACO Market

- 5.535 An important distinction arises at this point between NG Broadband delivered by a network operator on a wholesale basis, and on a self-supply basis only on the LL-FACO market.⁸⁰⁵ Where RFTS at an EA is – or could be – delivered by means other than Eircom FACO, this suggests the presence of different competitive conditions, arising from the presence of SPs capable of delivering products included in the Relevant FACO Product Markets. The ability of SPs to do so is most heavily reliant on the presence of wholesale NG Broadband networks from which Access Seekers can purchase inputs allowing them to deliver wholesale or retail Managed VoIP.
- 5.536 The importance of the presence of wholesale NG Broadband networks in facilitating Access Seekers delivering Managed VoIP implies that the presence of NG Broadband networks which do not offer wholesale products to Access Seekers is unlikely to generate sufficiently different competitive conditions from a scenario where no NG Broadband is available at an EA, or where NG Broadband is available, but below the 80% threshold. As set out in the product market assessment above, Virgin Media falls into the LL-FACO market on the basis of the indirect retail constraint which it generates on FACO dimensioned to the needs of smaller end users, but is excluded from the HL-FACO market on the basis that it generates an insufficient retail constraint on FACO dimensioned to the needs of larger end users, given its focus on service to residential premises.
- 5.537 Virgin Media is active on the LL-FACO Market on a self-supply basis only. Accordingly, ComReg considers that Virgin Media presence at an EA is, on its own or in the absence of 80% wholesale NG Broadband coverage, unlikely to generate sufficiently different competitive conditions in the provision of LL-FACO. This is because, in a scenario where, for example, only Eircom FNA and Virgin Media were present at an EA, there would be no possibility of an Access Seeker offering Managed VoIP on the basis of wholesale inputs at that EA. In an MGA scenario, this EA would effectively be akin to a duopoly.

⁸⁰⁵ ComReg has not identified any SPs active on the HL-FACO market on the basis of the provision of FACO exclusively on a self-supply basis.

Respondents' Views – consideration of Virgin Media (and Imagine)

- 5.538 Eircom argued that, by assuming that Virgin Media's presence is unlikely to generate a sufficiently effective competitive constraint on the Relevant FACO Markets, ComReg had prejudged the outcome of the market review. Eircom suggested that ComReg has not conducted the necessary analysis to rely on a hypothetical scenario where an entire EA is only served by Eircom FNA and Virgin Media and extrapolate this scenario to an assumed duopoly. The same principles apply in respect of Imagine FWA network investment. Eircom added that, if Virgin Media's network is capable of delivering products falling into the relevant product markets, then it should be included in the assessment.
- 5.539 For this duopoly concern to hold, Eircom argued that there must currently be no or very limited NG Broadband services available, and the current NG Broadband coverage equilibrium would also need to remain fixed over the market review period, but that this is not the case, given announced Eircom and NBI rollout plans.
- 5.540 Instead, Eircom suggested it was more likely that, after removing overlapping coverage in an EA, the competitive constraint provided by Virgin Media would be particularly relevant for individual households and those EAs which almost met the 80% coverage threshold. Eircom also noted that ComReg had not provided evidence in support of its view that Eircom's and SIRO's networks would likely collectively largely overlap Virgin Media's network coverage.
- 5.541 Eircom also argued that ComReg's decision to include Virgin Media as an indirect retail constraint in the LL-FACO product market, but to exclude it from the geographic assessment exercise for wholesale NG Broadband was flawed for two reasons:
- (a) Premises already passed by NG Broadband automatically face different competitive choices through the availability of Managed VoIP, irrespective of further coverage of NG Broadband in those EAs. Accordingly, up to 79% of consumers (as defined by ComReg) in each EA can already act independently of any action taken by Eircom at the wholesale level in the FACO market; and
 - (b) The exclusion of Virgin Media means that the assessment cannot properly determine whether Eircom could offset the losses from any exclusionary conduct at the wholesale level, at the RFTS level.

ComReg's Assessment of Respondents' Views

- 5.542 ComReg notes that Eircom's assertions regarding Virgin Media and Imagine's presence are more appropriately addressed in Section 7, nonetheless, given these assertions were contained in response to Question 5, ComReg addresses them below.

- 5.543 ComReg refutes Eircom's assertion that its approach to the consideration of Virgin Media's and Imagine's presence in distinguishing conditions of competition in its geographic market assessment lead to the market review outcome being prejudged.
- 5.544 Virgin Media's self-supply of FACO allows for the delivery of Managed VoB RFTS to its own downstream retail arm only, to residential end users in particular. In comparison, wholesale NG Broadband is capable of facilitating the delivery of wholesale or retail Managed VoIP by multiple Access Seekers, thereby altering the number of competitors at an EA. Accordingly, in assessing differences in competitive conditions on the LL-FACO market at EAs, ComReg considers it appropriate to give more weight to the presence of wholesale NG Broadband, due to its greater capability to reduce barriers to entry for Access Seekers at an EA, compared to Virgin Media, and increase the number of potential competitors.
- 5.545 In respect of Eircom's concerns about ComReg's duopoly assumptions, the key point identified by ComReg in its analysis was that, where, for instance, only Eircom FNA and Virgin Media were present at an EA, it would not be possible for Access Seekers to offer Managed VoIP on the basis of wholesale inputs. In contrast, where wholesale NG Broadband is available at an EA, ComReg considers that this is likely to generate different competitive conditions. Contrary to Eircom's interpretation, ComReg has not made the argument that the Regional LL-FACO Market is characterised by the presence of Eircom FNA-Virgin Media duopolies, as it is not necessary to do so for the purposes of its analysis.
- 5.546 Eircom argues that ComReg's reasoning is seriously flawed, in that it includes Virgin Media's presence in the LL-FACO geographic market, but then excludes it from the assessment of 80% wholesale NG Broadband coverage. ComReg includes Virgin Media provision of Managed VoB in its definition of the Relevant LL-FACO Product Market on the basis of the indirect retail constraint which it places on the focal product (but excludes it from the Relevant HL-FACO Product Market).

- 5.547 ComReg carried out its geographic market assessment in accordance with five conditions (Geographic differences in entry conditions over time; Variation in the number and size of potential competitors; Distribution of market shares; Evidence of differentiated pricing strategies or marketing; and Geographic differences in demand characteristics). Virgin Media was assessed under the first four of these conditions. Virgin Media was not assessed under the final Geographic differences in demand characteristics condition, on the grounds that it does not offer a merchant market product for which there may be Access Seeker demand. On the basis of the evidence available to it, ComReg's view is that there was sufficient evidence to warrant defining sub-national markets driven, *inter alia*, by Virgin Media rollout on the LL-FACO market as well as differing competitive conditions arising from SPs to provide Managed VoIP via wholesale NG Broadband.
- 5.548 Having applied a set of criteria (and taking account of Virgin Media in doing so) to determine whether it is appropriate to define sub-national markets, it was then necessary to apply a condition or conditions which would allow for geographic differences in competitive conditions to be accurately distinguished. In other market reviews, ComReg has applied multiple conditions (for example, the geographic assessment criteria applied to the WCA market in the 2018 WLA/WCA Decision). The particular condition which ComReg identified in the current instance was the 80% wholesale NG Broadband coverage condition, bearing in mind the greater capacity of wholesale NG Broadband to promote greater differing competitive conditions at EAs, compared to Virgin Media CATV self-supply only. ComReg accordingly considers that there is no discrepancy between taking account of Virgin Media when determining whether it is appropriate to designate sub-national geographic markets, and applying a condition which does not take account of Virgin Media, to identify the extent of differences in competitive conditions and ultimately the boundary between these geographic markets.
- 5.549 ComReg notes, with respect to Eircom's argument that up to 79% of consumers in each EA can already act independently of any action taken by Eircom at the wholesale level in the FACO market due to the unacknowledged presence of Virgin Media, that Virgin Media on its own or in the absence of 80% wholesale NG Broadband coverage, is unlikely to generate sufficiently different competitive conditions in the provision of LL-FACO. As discussed in paragraph 5.537, this is because, in a scenario where, for example, only Eircom FNA and Virgin Media were present at EA, there would be no possibility of an Access Seeker offering Managed VoIP on the basis of wholesale inputs at that EA. The rationale for and the application of the 80% coverage criterion is further discussed below.

Applying the 80% coverage criterion

- 5.550 The 80% coverage criterion is therefore satisfied where wholesale NG Broadband capable of delivering Managed VoIP is present and passes at least 80% of premises at an EA. An Access Seeker may be present at an EA on the basis of its purchases of wholesale NG Broadband delivered over one or more networks present at that EA. ComReg takes account of the unique coverage (that is, removing any overlap between NG Broadband networks operated by different SPs) of the Access Seeker, having regard to the availability of wholesale NG Broadband at an EA. Accordingly, the 80% coverage threshold can be satisfied by summing the coverage of all wholesale NG Broadband networks at an EA, and does not require that a single NG Broadband network has coverage of at least 80%. For example, an EA would satisfy the 80% coverage criterion under the following illustrative examples:
- (a) **On the HL-FACO Market or the LL-FACO Market:** where SIRO (passing 30% of premises) and Eircom FTTx (passing 55% of premises) were present at an EA, and these coverage footprints did not overlap (total coverage of 85%);
 - (b) **On the LL-FACO Market only:** where SIRO (passing 40% of premises), Eircom FTTx (passing 70% of premises), and Virgin Media (passing 50% of premises) were present at an EA, and all three networks overlapped to some degree, but at least 80% of premises were passed by a combination of either SIRO or Eircom FTTx wholesale NG Broadband; and
 - (c) **On the HL-FACO Market or the LL-FACO Market:** where Eircom FTTx was present at an EA and passed 85% of premises.
- 5.551 Where the coverage of NG Broadband networks overlaps, the analysis avoids double-counting premises which benefit from the coverage overlap.
- 5.552 While ComReg includes Virgin Media's presence in the geographic market assessment (given that it poses an indirect retail constraint on the LL-FACO Market), it is not a sufficient condition in and of itself in the geographic market assessment and is not included for the purpose of the assessment of wholesale NG Broadband coverage, given that Access Seekers cannot buy wholesale services from Virgin Media and could not therefore self-supply Managed VoIP on this basis on the LL-FACO market. In any event, given the networks of both Eircom and SIRO are likely to collectively largely overlap Virgin Media's network coverage, it does not materially impact the 80% wholesale NG Broadband coverage condition.

Alterations to the 80% wholesale NG Broadband coverage model

- 5.553 Prior to considering Respondents' views on the application of the 80% wholesale NG Broadband coverage criterion, ComReg wishes to draw the attention of interested parties to the fact that it has modified the calculation methodology which it uses to count premises passed by wholesale NG Broadband at an EA. This modification arises, in the first instance, from a change to one of the underlying assumptions governing the model and, in the second instance, due to a number of calculation refinements designed to correct inconsistencies and reduce the risk of duplication of counts.
- 5.554 **First**, it is first worth noting that network data provided by Eircom are capable of identifying premises using a number of methodologies, including latitudinal and longitudinal coordinates, a proprietary Eircom geolocation system known as Address Reference Database identification key ('**ARD ID**'), and Eircodes, which are capable of generating two separate premises identifiers, delivery points, and postal addresses. SIRO records premises passed by Eircode. ComReg understands Eircom assigns an ARD ID to premises passed by VDSL or FTTH. However, a proportion⁸⁰⁶ of these premises are not mapped to an Eircode. This gives rise to the risk of inconsistencies between premises passed, depending on which methodology is applied. In particular, ComReg cannot determine whether these lines pass premises which are already passed by SIRO, which assigns premises using Eircodes rather ARD IDs. ComReg has refined its methodology to minimise the risk of such inconsistencies when determining overlaps between SIRO FTTH, Eircom FTTH, and Eircom VDSL.
- 5.555 **Second**, at the time of the 2020 Consultation, the starting point for ComReg's assessment was lines. However, given that multiple lines may serve a single premises, this gave rise to the risk that coverage would be over-estimated, where lines were counted as a percentage of premises in an EA. Accordingly, ComReg now uses premises passed rather than lines to minimise the risk of overestimation.

⁸⁰⁶ [REDACTED].

- 5.556 **Third**, ComReg must take the most reasonable approach possible to counting Eircom lines that are not mapped to an Eircode. At the time of the 2020 Consultation, which was based on Q4 2019 data, ComReg's model assumed that Eircom VDSL or FTTH lines not mapped to an Eircode served additional premises not already served by Eircom VDSL, Eircom FTTH, or SIRO. At the time, this was not an unreasonable assumption. However, in the intervening period, and particularly with the rollout of Ireland's Fibre Network by Eircom, this assumption is no longer tenable, given clear evidence at EAs of greater overlap, in particular, of Eircom FTTH with Eircom VDSL. ComReg has accordingly moved to assessing such overlaps by assessing ARD IDs, rather than by drawing assumptions in the case of lines not mapped to Eircodes. This has had two effects. The first effect is that actual measured Eircom FTTH/Eircom VDSL overlap has deflated the number of premises passed by wholesale NG Broadband, compared to an assumption where Eircom FTTH or VDSL lines mapped by an ARD ID but not an Eircode served new, additional premises. The second effect is that there are now some instances of premises being triply overlapped by Eircom FTTH, Eircom VDSL and SIRO.
- 5.557 ComReg also notes that the 2020 Consultation was based on Q4 2019 data, while this Decision is based on Q4 2020 data. On a national basis, there has been an approximate 1.6% increase in premises numbers over that one year period, as measured in the datasets in ComReg's possession, with a non-trivial amount of deviation from that average increase at an EA level. Where, at EA level, NG Broadband rollout has not kept pace with increases in premises numbers, the higher premises denominator will, all other things being equal, have the effect of deflating the coverage level at that EA.

Respondents' Views – assessment of overlapping coverage

- 5.558 Eircom queried how ComReg accounted for overlapping coverage to avoid double-counting in its assessment. Eircom argued that its analysis may point to issues with how ComReg has calculated overlapping coverage, resulting in some EAs being incorrectly assigned to the Regional FACO Market.
- 5.559 Following queries from Eircom, which ComReg published as Information Notices for the information of all interested parties, Eircom's understanding was that, to calculate unique NG Broadband premises, ComReg identified the network coverage at each individual premise and, where a premise has overlapping coverage from Eircom FTTC or FTTH and/or SIRO FTTH, the additional instance(s) of network coverage is removed so that the premise is only counted once as having been passed by any NG Broadband network. Eircom therefore assumed that ComReg did not calculate net premises by removing the total premises passed figure for each subsequent network presence in an EA from the largest premises passed figure, or by removing all overlapped premises from the premises passed figure. Eircom averred that these approaches would logically lead to a lower premises passed figure than is the case in reality.

- 5.560 Eircom's Submission included a partial analysis of its network coverage which sampled EAs where it has no overlapping FTTC and FTTH coverage, as set out at Table 3 of its Submission. Eircom also looked at EAs where its own non-overlapping network coverage is close to or above the 80% wholesale NG Broadband coverage threshold. From its sample, Eircom identified three EAs (Ashmount (ASM), Nutgrove (NEP) and Togher (TOG)) assigned in the 2020 Consultation to the Regional FACO Market where its non-overlapping FTTC coverage exceeds 80% and where, to its knowledge, there has been no SIRO rollout, such that there should be no instances of Eircom and SIRO network overlap. Eircom accordingly argued that these EAs should be in the Urban FACO Market, given that they appear, in Eircom's view, to pass the 80% coverage threshold.
- 5.561 Eircom also assessed premises numbers within EAs which, it claimed, identified two issues. Firstly, Eircom found only three EAs in the Regional FACO Market (Belcamp (BLP), Crown Alley (CRA), and Ballydowd (LCN)) that had an address count greater than 3,500 premises, as set out at Table 4 of its Submission. In each case the address count is significantly above 3,500 premises, which led Eircom to consider that these EAs may have been erroneously assigned to the Regional FACO Market.
- 5.562 The second issue related to how ComReg and SPs determine the total premises in each EA. Eircom argued that this is relevant where there is a low number of total premises in an EA and small variations could determine whether the EA in question passes or fails the coverage criterion. Eircom gave the example of Kilkerrin (KEN), which has a total of 264 premises. Eircom's non-overlapping FTTH coverage is 213 premises and Eircom understood that there is no SIRO coverage in this EA. On the basis of open eir data, the NG Broadband coverage is 80.7%. However, the total premises figure used by ComReg is 270, resulting in NG Broadband coverage of 79.9% and the EA being assigned to the Regional FACO market.
- 5.563 Eircom therefore requested that ComReg clarify how total premises are determined and how overlapping coverage is treated to avoid undercounting the number of premises passed. Eircom further suggested that ComReg should consider a multi-stage process to identify and rectify any potential issues by EA.

ComReg's Assessment of Respondents' Views

- 5.564 Eircom has raised a number of concerns relating to how ComReg calculated overlapping coverage for the purposes of the 80% wholesale NG Broadband threshold. These concerns are based on a number of assumptions which Eircom made, given that ComReg's calculations are based, in part, on information which is confidential and commercially sensitive to the individual SPs that provided it. ComReg addresses each of these concerns in turn below.

Eircom non-overlapping NG coverage exceeds 80%

- 5.565 Eircom argued that at least 3 EAs ((Ashmount (ASM), Nutgrove (NEP) and Togher (TOG)) are incorrectly assigned to the Regional FACO Market, as Eircom data suggest that its non-overlapping FTTC coverage exceeds 80% in each case. FTTC coverage is capable of satisfying the coverage criterion where it is offered on a wholesale basis.
- 5.566 As set out at paragraphs 5.553 to 5.557 above, ComReg has updated its geographic market, based on Q4 2020 data, rather than the Q4 2019 data on which the 2020 Consultation was based, and has also updated its assessment methodology. These updates indicate that ASM and TOG now pass the 80% wholesale NG Broadband threshold, and are therefore assigned to the Urban WCA Market. NEP still does not pass the 80% wholesale NG Broadband criterion, and therefore continues to be assigned to the Regional FACO Market. Data provided to ComReg by Eircom indicate a cumulative coverage level, accounting for overlaps, of [redacted] at NEP.⁸⁰⁷

Regional FACO Market EAs with premises count over 3,500

- 5.567 Eircom noted that three of the 744 Regional FACO Market EAs ((Belcamp (BLP), Crown Alley (CRA), and Ballydowd (LCN)) had premises counts significantly in excess of 3,500, and therefore queried whether these EAs should instead have been assigned to the Urban FACO Market.
- 5.568 ComReg notes that it is not the number of premises in an EA which is relevant to its geographic assessment, rather it is the consideration and application of the overall criteria, including whether the EA meets the 80% coverage criterion. As noted above, ComReg has updated its geographic market analysis in advance of the publication of its Decision, based on Q4 2020 data, rather than the Q4 2019 data on which the 2020 Consultation was based. This data update indicates that BLP now passes the 80% wholesale NG Broadband threshold, and is therefore assigned to the Urban FACO Market. CRA and LCN still do not pass the 80% wholesale NG Broadband criterion, and therefore continue to be assigned to the Regional FACO Market. Data available to ComReg indicate a cumulative coverage level, accounting for overlaps, of [redacted] at CRA, and [redacted] at LCN.⁸⁰⁸
- 5.569 In respect of Kilkerrin (KEN), data provided to ComReg by Eircom indicate a coverage level of [redacted].⁸⁰⁹

⁸⁰⁷ ComReg data suggest that the number of premises at NEP is [redacted]. Based on this figures, and Eircom VDSL and FTTH coverage data (supplied to ComReg by Eircom), as at Q4 2020, Eircom has in the range of 40% to 50% coverage at NEP.

⁸⁰⁸ In the range of 60-70%.

⁸⁰⁹ In the range of 70-80%.

⁸¹⁰ In the range of 70-80%.

Discrepancies in identification of total premises

- 5.570 Eircom suggested that discrepancies may arise between how ComReg and SPs determine total premises at an EA, and that this may lead to EAs with small premises counts marginally passing or failing the 80% coverage criterion, depending on which premises count methodology is used.
- 5.571 As set out at footnote 1031 of the 2020 Consultation, ComReg uses Eircode data to estimate the total number of premises by EA, based on 'postal addresses' as defined by Eircode in its Address Database Product Guide. This is the same methodology which ComReg applied to count premises in the 2018 WLA/WCA Decision (which relates, among other things, to Wholesale NG Broadband access). ComReg has therefore applied a consistent approach across market reviews to how it counts premises at an EA. ComReg does not consider that it is appropriate to count premises in a particular manner with the express intention of ensuring that a higher number of EAs pass the 80% wholesale NG Broadband threshold. ComReg is further of the view that counting premises on the basis of postal addresses is both justified and appropriate, given it is a unit which is observable in the market, thus facilitating transparent results.

Conclusion on network coverage criterion

- 5.572 To distinguish competitive conditions between EAs, an SP using NG Broadband to offer products falling within the Relevant FACO Product Markets must have a minimum coverage level within the EA, based on the total non-overlapping coverage of all wholesale NG Broadband networks used (or capable of being used) by that SP to deliver the product in question.
- 5.573 ComReg considers that, absent regulation, wholesale NG Broadband used to deliver products which fall within the Relevant FACO Product Markets must be capable of reaching at least 80% of premises in that EA. ComReg has applied this criterion in its assessment, the results of which are set out at Annex: 11 and Annex: 12 below.

Respondents' Views - NGA coverage is more widespread than ComReg suggests

- 5.574 CE suggested that the size of the Urban FACO Markets proposed by ComReg does not reflect market developments. CE firstly noted that significant network investment by Eircom, Virgin Media, and SIRO has occurred over the past five years, and further investment is planned by operators including NBI. CE then argued that ComReg's conclusions on the size of the (competitive) Urban FACO Market are:
- (a) Not based on transparent assumptions, and
 - (b) Not consistent with coverage evidence - specifically, the 2020 DESI Report, which reports 96% NGA coverage in Ireland (compared to an EU average of 86%).

ComReg's Assessment of Respondents' Views

- 5.575 ComReg is not clear what CE is alluding to when it suggests that the conclusions about the size of the (competitive) Urban FACO Market are not based on transparent assumptions, as CE did not further substantiate this claim. ComReg notes, however that it has, alongside the other identified factors considered, applied a single transparent criterion (80% wholesale NG Broadband coverage) which it identified for the reasons set out at sub-section 5.2.9 of the 2020 Consultation.
- 5.576 As regards coverage evidence, CE refers to the 2020 DESI Report, which reports 96% NGA coverage in Ireland, and contrasts this unfavourably with the proposal to deregulate 74% of the FACO market, measured by premises. ComReg notes that it is not entirely correct to draw a like-for-like comparison between the DESI Report assessment and the FACO geographic market assessment. In the first instance, the DESI definition of NG coverage includes CATV, which is excluded from the 80% wholesale NG Broadband coverage criterion. Thus, the DESI Report coverage figure is greater than the ComReg figure because it includes an additional network technology.
- 5.577 In addition, the FACO assessment is carried out at the Exchange Area level, rather than at the premises level, for the reasons set out at paragraphs 5.484 to 5.486, and in accordance with the guidance set out in the 2014 BEREC Common Position and the 2020 Explanatory Note. Assessing the market at a higher level of aggregation than the premises will be very likely to produce different figures to a premises-level assessment. Moreover, the 80% coverage criterion will lead to some EAs being deregulated despite the presence of premises which are not passed by NG Broadband, and some EAs continuing to be regulated, despite the presence of some premises which are passed by NG Broadband. This is an unavoidable consequence and is, indeed, the logical corollary of distinguishing geographic markets on the basis of any wholesale NG Broadband coverage level below 100%.

Conclusion on Geographic Definition of FACO Markets

- 5.578 ComReg's position is that it is appropriate to define separate sub-national geographic FACO Markets. The relevant geographic market characterised by sufficient and stable competitive conditions is referred to as the **Urban FACO Market**, while the relevant geographic market characterised by relatively less stable competitive conditions is referred to as the **Regional FACO Market**. ComReg has applied the 80% coverage criterion to determine whether an EA falls into the Urban FACO Market or the Regional FACO Market. Given that two separate LL and HL FACO product markets have been defined, this implies the presence of four Relevant FACO Markets in total.
- 5.579 On the basis of this assessment, ComReg concludes that:

- (a) The Urban FACO Market consists of the 407 EAs listed at Annex: 12 which are characterised by the presence of NG Broadband with cumulative network coverage of at least 80% at an EA; and
- (b) The Regional FACO Market consists of the 795 EAs listed at Annex: 12 which are characterised by the absence of NG Broadband, or the presence of NG Broadband, but with cumulative network coverage of less than 80% at an EA. These are those EAs in which RFTS is currently predominantly delivered over FNA by Eircom on a self-supply basis, or by Access Seekers purchasing SB-WLR and WLV from Eircom, and in which, in an MGA scenario, Eircom would likely increase its market share, having either withdrawn the supply of SB-WLR and WLV, or altered the commercial supply terms of those products to the disadvantage of Access Seekers (and, therefore, their end users), in order to induce switching of RFTS end users from Access Seekers to itself.

5.580 As set out below, the Urban FACO Markets consist of just 34% of EAs, but 69% of all premises in the State.

Table 55: Differences in competitive conditions between the Urban FACO Markets and the regional FACO Markets, absent regulation (%), Q4 2020

FACO Market	EAs		Premises		RFTS lines		SB-WLR lines ⁸¹¹	
	n	%	n	%	n	%	n	%
Urban	407	34%	1,573,582	69%	1,076,521	74%	672,364	72%
Regional	795	66%	699,724	31%	376,165	26%	260,082	28%
Total	1,202	100%	2,273,306	100%	1,452,686	100%	932,446	100%

5.3 Overall Conclusions on Definition of the FACO Markets

- 5.581 In paragraphs 5.7 to 5.399, ComReg analysed the FACO Markets from a product perspective and set out its view that it is appropriate to define two separate LL-FACO and HL-FACO Product Markets, both of which encompass FA and FVCO as described therein.
- 5.582 In paragraphs 5.400 to 5.578, ComReg analysed the FACO Markets from a geographic perspective and set out its view that there are grounds for distinguishing two separate geographic markets, the Urban FACO Market, and the Regional FACO Market.
- 5.583 The LL-FACO and HL-FACO Markets are, from product and geographic perspectives, referred to as the '**Relevant FACO Markets**'. ComReg accordingly defines a total of four such Relevant FACO Markets:

⁸¹¹ Includes Eircom self-supply lines

- (a) the Urban LL-FACO Market, comprised of the 407 Exchange Areas where the 80% coverage criterion is met;
- (b) the Regional LL-FACO Market, comprised of the 795 Exchange Areas where the 80% coverage criterion has not been met;
- (c) the Urban HL-FACO Market, comprised of the 407 Exchange Areas where the 80% coverage criterion is met; and
- (d) the Regional HL-FACO Market, comprised of the 795 Exchange Areas where the 80% coverage criterion has not been met.

5.584 The EAs constituting the Relevant FACO Markets are set out at Annex: 12 below.

Non-confidential

6 RFTS Competition Analysis – 3CT

6.1 Three Criteria Test for Relevant RFTS Markets

Overview

- 6.1 ComReg notes that the 2014 Recommendation does not include the RFVA or RFTS markets on its list of markets deemed susceptible to *ex ante* regulation. Accordingly, at EU level, there is no presumption in favour of continuing to regulate these markets. ComReg must therefore determine whether, in light of national circumstances, the RFTS markets defined at Section 4 continue to warrant regulation. The 3CT set out in the 2020 Explanatory Note, and reiterated at Article 67(1) of the EECC,⁸¹² is the mechanism which allows for this assessment to be carried out in a structured and objective way.
- 6.2 Neither the 2014 Recommendation nor the 2020 Recommendation include the RFVA or RFTS markets on the list of markets deemed susceptible to *ex ante* regulation. Since, at EU level, there is no presumption in favour of regulating these markets, ComReg must therefore determine whether, in light of national circumstances, the Relevant RFTS Markets defined at Section 4 warrant regulation. The Three Criteria Test ('3CT') set out in Article 67(1) of the EECC and described in the 2020 Explanatory Note⁸¹³ is the mechanism which allows for this assessment to be carried out in a structured and objective way.
- 6.3 The 3CT sets out the criteria that must be cumulatively satisfied in order to determine that a relevant market should be, or should continue to be, subject to *ex ante* regulation. The three criteria are:
- (a) the presence of high and non-transitory barriers to entry (paragraphs 6.13 to 6.93 below);
 - (b) a market structure which does not tend towards effective competition within the relevant time horizon (paragraphs 6.94 to 6.165 below); and
 - (c) the insufficiency of competition law alone to adequately address the market failure(s) concerned (paragraphs 6.166 to 6.178 below).
- 6.4 ComReg's Relevant RFTS Markets 3CT findings are set out in paragraphs 6.179 to 6.184 below.

⁸¹² DIRECTIVE (EU) 2018/1972 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2018 establishing the European Electronic Communications Code (the 'EECC').

⁸¹³ Explanatory Note to Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code.

- 6.5 Four of the five Respondents to the 2020 Consultation offered views on ComReg's preliminary findings in respect of the Relevant RTS Markets 3CT. **ALTO** agreed with ComReg's preliminary conclusions, subject to the availability of ubiquitous upstream FACO supply for Access Seekers. **Eircom** also agreed with ComReg's preliminary conclusions, on the basis that there is limited differentiation between products included in the Relevant RFTS Markets and products excluded from the Relevant RFTS Markets (mobile telephony, Unmanaged VoIP), and that market dynamics are favourable, with expansion by existing competitors by means, for instance, of bundled offers, a clear possibility.
- 6.6 **BT** disagreed with ComReg's preliminary conclusions in respect of the 3CT. **Vodafone** did not offer a detailed position, although it broadly concurred with ComReg's preliminary 3CT findings.
- 6.7 ComReg considers Respondents' views in paragraphs 6.87 to 6.93 and paragraph 6.172 below.
- 6.8 If the 3CT passes, that is to say, if all the three criteria are satisfied, then competition is unlikely to be working well on the market in question, and *ex ante* regulation is, in principle, warranted. It is then necessary to carry out a competition assessment, to determine whether the market is characterised by the presence of SMP.
- 6.9 If, on the other hand, at least one of the 3CT criteria fails, this suggests that competition is working well, and that *ex ante* regulation is not required and, in any event, cannot be imposed by law. In such instances, the market in question should be deregulated.
- 6.10 The following sub-sections consider each of the 3CT criteria, in order to determine whether it is, in principle, appropriate to regulate each of the three Relevant RFTS Markets.
- 6.11 Before moving to carry out the 3CT to determine the appropriateness of regulation in the Relevant RFTS Markets, ComReg notes that the MGA assumes hypothetical scenario in which there is no *ex ante* SMP regulation in any of the candidate Relevant RFTS Markets but that regulation is present in upstream markets including FACO, but also, where appropriate, WLA and WCA. In the case of RFTS, ComReg accordingly assumes that regulation, as appropriate, in the upstream FACO, WLA, and WCA markets is in place. However, as set out at Section 10 below, ComReg is deregulating the Urban FACO Markets, such that FACO regulation will not apply on a national basis. ComReg therefore revisits the RFTS 3CT findings set out in this section again in Section 8, having regard to deregulation of the Urban FACO Markets.

6.12 As noted in paragraphs 4.429 to 4.494 above, ComReg considered the possibility of sub-geographic RFTS markets (Standalone LL-RFTS, Bundled LL-RFTS and HL-RFTS, respectively). However, ComReg's position is that, having regard to the detailed assessment of differences in competitive conditions between geographic areas, the presence or absence of sub-geographic RFTS markets is unlikely to be material to the regulatory outcome for the Relevant RFTS Markets.

Criterion 1: The presence of high and non-transitory barriers to entry

6.13 The 2020 Explanatory Note and Article 67(1)(a) of the EECR identify that high, non-transitory barriers to entry may be either structural, legal or regulatory in nature:

- (a) **Structural barriers to entry** arise where technology or network characteristics (e.g. cost structure, level of demand) create asymmetric conditions between SPs. Examples include the presence of absolute cost advantages, substantial economies of scale or scope, capacity constraints, and high sunk costs; and
- (b) **Legal or regulatory barriers** result from legislative, administrative or other state measures that directly affect the relevant market. Examples include legal requirements related to the necessary permissions to roll out infrastructure (e.g. planning permission for civil works, or the need to obtain rights of way to roll out a network over private property).

Structural barriers to entry

6.14 Barriers to entry generally comprise any disadvantage that a new entrant faces when entering a market, where incumbents do not face such barriers. According to the 2020 Explanatory Note:⁸¹⁴

“... high structural barriers may be found to exist when the market is characterised by absolute cost advantages, substantial economies of scale and/or economies of scope, capacity constraints, and high sunk cost.”

6.15 ComReg assesses structural barriers to entry to the Relevant RFTS Markets under four main headings:

- (a) Overall size of the incumbent and control of infrastructure that is not easily replicated (paragraphs 6.16 to 6.47);
- (b) Sunk costs (paragraphs 6.49 to 6.62);
- (c) Economies of scale, scope and density (paragraphs 6.64 to 6.72); and
- (d) Vertical integration (paragraphs 6.73 to 6.79).

⁸¹⁴ 2020 Explanatory Note, page 12.

Overall size of the incumbent and control of infrastructure that is not easily replicated

- 6.16 The SMP Guidelines cite control of infrastructure not easily duplicated as a key criterion for assessing whether SMP is present on a market.⁸¹⁵
- 6.17 Ownership of significant infrastructure may confer an absolute cost advantage on the incumbent, and the cost and time involved in SPs replicating the infrastructure in question may pose a significant barrier to entry. In addition, it may be possible for the owner of the infrastructure in question to leverage its market power into horizontally or vertically related markets.
- 6.18 Eircom controls a ubiquitous PSTN network that cannot be easily replicated by its retail competitors,⁸¹⁶ and it is the only SP with national RFTS coverage on its own PSTN network. Eircom maintains a substantial subscriber base and offers a wide product portfolio (including RFTS, broadband, TV and mobile voice), which, when combined, allows it to exploit greater economies of scale and scope in the provision of RFTS than could be replicated by a potential entrant.
- 6.19 Eircom is the largest supplier of RFTS,⁸¹⁷ benefitting from extensive network coverage, subscriber base size and product portfolio, thereby giving it the ability to exploit greater economies of scale and scope in the provision of services, including RFTS. The market shares of the largest SPs in the three defined RFTS markets, measured by subscriptions as at Q4 2020, are as follows:
- (a) **Standalone LL-RFTS market:** Eircom holds a 47% market share measured in subscriptions, with Pure Telecom and Vodafone holding the next highest market shares (see Figure 54 below);
 - (b) **Bundled LL-RFTS market:** Eircom holds a 40% market share measured in subscriptions, facing competition from Sky, Virgin Media and Vodafone (see Figure 55 below); and
 - (c) **HL-RFTS market:** Eircom holds an 26% market share measured in subscriptions, facing competition from Goldfish (32%), Vodafone and Digiweb (see Figure 56 below).
- 6.20 Thus, while Eircom is the largest SP in terms of network, products and subscriber base, it faces some competition in each of the three duly-defined RFTS markets, and is not the largest SP on some RFTS markets.

⁸¹⁵ Paragraph 58 of the SMP Guidelines.

⁸¹⁶ However, it is not strictly necessary to replicate Eircom's network in order to pose a potential competitive constraint in the Relevant RFTS Markets.

⁸¹⁷ As of Q4 2020, there were [x] voice lines across the three Relevant RFTS Markets, of which [x] are provided by Eircom's retail arm.

- 6.21 Eircom is the largest SP in the upstream Relevant FACO Markets, and provides close to 100% of upstream wholesale inputs (including SB-WLR, WLV, and White Label VoIP) for RFTS.
- 6.22 Potential entry by an SP to the Relevant RFTS Markets would entail one or more of the following actions:
- (a) Building an independent network to offer RFTS;
 - (b) Purchasing upstream FACO or WLA/WCA inputs to self-supply Managed VoIP; or
 - (c) Adapting an existing network to provide RFTS.
- 6.23 Undertaking any of the above would involve degrees of entry barriers, and the effectiveness of any of these approaches could have a varying impact in posing a competitive constraint in the Relevant RFTS Markets.

LL-RFTS Markets

- 6.24 In terms of LL-RFTS, it may not be feasible for any other SP to replicate Eircom's FNA network in its entirety, and it would likely be inefficient to do so. However, ComReg notes the deployment of NG Broadband networks by OAOs to facilitate the provision of services similar to FNA RFTS, i.e. Managed VoB. The revenue driver for deployment of these alternative networks by SPs such as Virgin Media and SIRO is the opportunity to directly or indirectly offer bundles of broadband and other services including RFTS. The commercial incentive to invest in such networks is not based on the capacity to earn revenues on the supply of Standalone LL-RFTS.⁸¹⁸ While NG Broadband networks likely provide some degree of competitive constraint on the Bundled LL-RFTS market (within their footprint, and for end users that have purchased broadband as part of bundled offers), they are unlikely to replicate Eircom's ubiquitous FNA network.
- 6.25 It is, however, possible for an SP to enter the Standalone or Bundled LL-RFTS markets without replicating Eircom's FNA network infrastructure by procuring upstream wholesale inputs on either a commercial or a regulated basis. In particular, SPs wishing to enter or expand in the Standalone or Bundled LL-RFTS markets can do so by purchasing SB-WLR from Eircom and using it as an input to provide RFTS. While the obligation placed on Eircom by means of the 2015 FACO Decision to offer SB-WLR partially alleviates barriers to entry to the supply of LL-RFTS associated with replicating physical infrastructure, SB-WLR does not offer competing SPs the same degree of commercial flexibility afforded by operating an independent network. Eircom also offers an end-to-end wholesale voice product – WLV – which allows SPs to interconnect with Eircom further up the network than is required to purchase SB-WLR.

⁸¹⁸ As indicated in ComReg's April 2019 IIRs.

- 6.26 WLA/WCA inputs can also be used to facilitate entry or expansion into the LL-RFTS markets by means of Managed VoB. While, in principle, WLA or WCA can support the provision of both standalone and bundled LL-RFTS (through the delivery of Managed VoB over POTS-based or standalone broadband), in practice these inputs are not typically used to supply standalone RFTS, likely due to the cost of these inputs vis-à-vis the margins earned on standalone RFTS. Where the end user demands a bundle consisting of both broadband and RFTS, SPs can viably use WLA/WCA inputs to meet this demand, as is the case with, for example, Vodafone and Sky. Purchasing WLA/WCA inputs nonetheless requires significant investment in terms of connecting to EAs or Aggregation Nodes.⁸¹⁹ As a result, SPs tend to interconnect at EAs or Aggregation Nodes in more densely populated areas, to justify the level of investment involved. WCA inputs can be purchased from Eircom without the need for deep interconnection, while WLA inputs require deeper interconnection at numerous EAs or Aggregation Nodes.
- 6.27 In the alternative, SPs intent on providing RFTS could purchase services from BT. In the WCA market, the main SPs are Eircom (which provides ubiquitous coverage) and BT (which offers close to [X ■■■ X] coverage, as at Q4 2020), with the latter purchasing WLA inputs from Eircom and SIRO to provide WCA. An Access Seeker could avoid the costs of interconnection at EAs/Aggregation Nodes for the purpose of supplying WLA-based RFTS by purchasing WCA from either BT or Eircom, which provide broadband, WLV and White Label VoIP. For example, Sky is active in the provision of RFTS by virtue of agreements with BT for broadband and voice services.
- 6.28 Eircom continues to be the largest RFTS SP by virtue of a sizeable wholesale and retail arm, extensive network footprint, subscriber base size and product portfolio, thereby giving it the ability to exploit economies of scale and scope in the provision of services. However, since the publication of the 2014 RFVA Decision, Eircom's market share has declined generally across the Relevant RFTS Markets, with the exception of the Bundled LL-RFTS market which has been steady, as illustrated in Table 56 below.

Table 56: Eircom RFTS Market Shares by subscriptions, Q3 2014 - Q4 2020⁸²⁰

RFTS market	RFVA Decision Q3 2014	Q4 2019	Q4 2020
Standalone LL-RFTS	64%	49%	47%
Bundled LL-RFTS	43%	39%	40%
HL-RFTS	53%	27%	27%
Overall RFTS	47%	40%	41%

⁸¹⁹ An Aggregation Node is the point of interconnection for the purposes of purchasing Eircom wholesale broadband products including WLA and WCA.

⁸²⁰ ComReg QKDR data; see also Figures 7, 8 and 9 of the 2014 RFVA Decision. Market shares are considered in more detail below at paragraph 6.97.

- 6.29 This suggests that Eircom faces greater competitive constraints in its provision of RFTS, with its market share falling from close to 55% at the time of the 2012 RFVA Consultation and 47% at the time of the 2014 RFVA Decision, to 41% as of Q4 2020.⁸²¹ Market shares for Q4 2020 are in the presence of upstream FACO regulation; as noted in paragraph 6.11, ComReg is deregulating the upstream Urban FACO Markets (as defined in paragraphs 5.578 to 5.580) and this may have implications for market shares in the downstream Relevant RFTS Markets. ComReg considers this point in paragraph 6.114 below.
- 6.30 For Standalone LL-RFTS, FACO regulation allows SPs to purchase SB-WLR and provide standalone RFTS, while WLA/WCA broadband inputs can, in principle, also be used to do so. Virgin Media and SIRO are equally capable of providing or being used to provide Managed VoB on a standalone basis, with SIRO providing wholesale FTTP to Access Seekers which can, in turn, support Managed VoB. Eircom also sells White Label VoIP for RFTS on a commercial basis which is purchased by some SPs, conditional on the end user having a broadband connection.
- 6.31 Despite reduced barriers to entry, ComReg notes that commercial incentives to enter the Standalone LL-RFTS market are limited, as greater margins can be earned on bundles of RFTS, broadband or other services.⁸²² Thus, limited new entry is less likely to be a function of any barriers to entry, but rather SPs being reluctant to actively sell standalone LL-RFTS. As indicated at Table 12 above, this segment of the market constitutes just 17% of total RFTS subscriptions, as at Q4 2020.
- 6.32 ComReg notes that, in July 2019, Eircom informed ComReg of plans to phase out ISDN BRA by no longer offering new orders for this product. As indicated in correspondence and meetings in September and October 2019, Eircom wishes to decommission its ISDN BRA network due, in part, to the production of ISDN BRA chips ceasing in 2015. Eircom accordingly proposes an end of sale date for ISDN BRAs of 1 January 2021, and an end of support date of 31 December 2024. In an Information Notice on its website published in December 2020, ComReg indicated that, on 7 October 2020, it had refused Eircom's request to withdraw access to ISDN BRA services on the basis that Eircom had not demonstrated to ComReg's satisfaction that it is no longer feasible for Eircom to meet access requests for ISDN BRA services, as mandated in the 2015 FACO Decision.⁸²³ ComReg's position on ISDN BRA is outlined in greater detail from paragraph 10.90 below.

⁸²¹ ComReg QKDR data.

⁸²² ComReg bilateral meetings with SPs, October 2018.

⁸²³ Information Notice - Eircom's request to withdraw access to Integrated Services Digital Network (ISDN) Basic Rate Access (BRA), Reference: ComReg 20/118, Date: 09/12/2020.

HL-RFTS Market

- 6.33 As with the two Relevant LL-RFTS Markets, ComReg assesses whether entry and expansion in the Relevant HL-RFTS Market is likely to such an extent as to suggest that the barriers to entry into the market are low. The threat of market entry, where it is credible, probable and timely, can be a disciplining factor on the behaviour of SPs on the Relevant HL-RFTS Market.
- 6.34 SB-WLR allows SPs to offer RFTS over ISDN FRA or ISDN PRA without any significant physical investment, such as replicating Eircom's FNA network. However, SB-WLR does not offer competing SPs in the HL-RFTS market the same degree of commercial flexibility afforded by operating an independent network. Regulated SB-WLR prices ensure that new entrants to the HL-RFTS market obtain the same price as Eircom's own downstream retail arm, thereby providing a level playing field. Some SPs continue to rely on SB-WLR inputs to operate in the HL-RFTS market; however, the volumes of SB-WLR for ISDN FRA and ISDN PRA are declining (Figure 52). As of Q4 2019, ISDN FRA and ISDN PRA delivered by means of purchasing SB-WLR account for only 12% and 7% of total ISDN FRA and ISDN PRA respectively, as illustrated in Table 57. Higher volumes of wholesale ISDN FRA and ISDN PRA are purchased in the form of WLW, an unregulated product (but which uses regulated FACO inputs), while 56% and 75% of total ISDN FRA and ISDN PRA respectively are provided by Eircom retail and other direct supply.

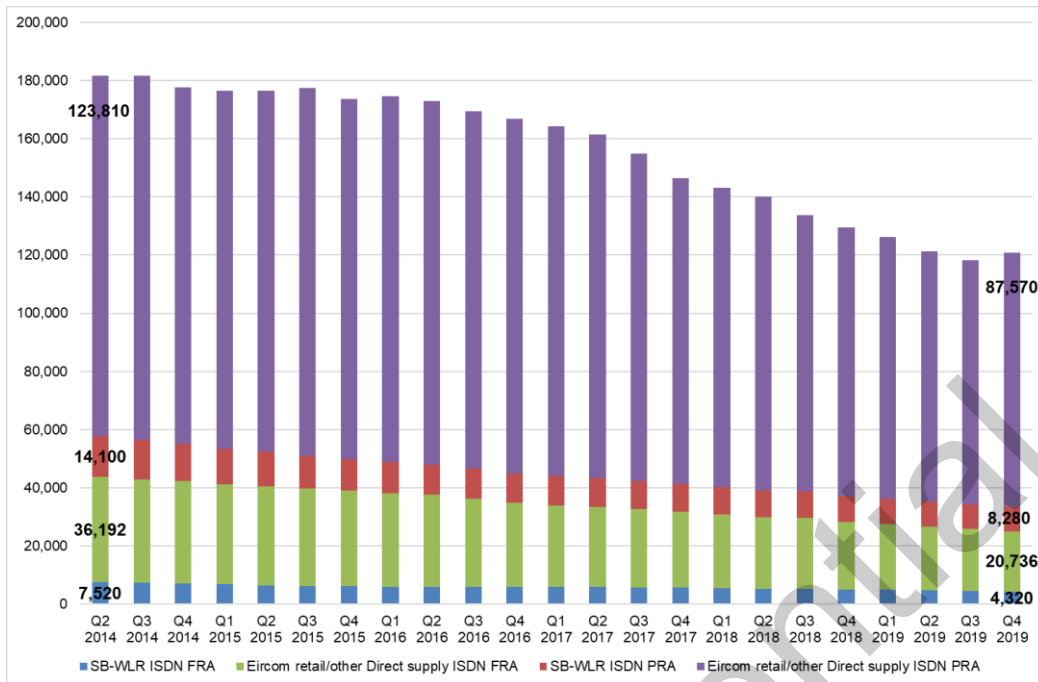
Table 57: ISDN FRA and ISDN PRA paths, Q4 2019⁸²⁴

	Eircom retail / other direct supply	SB-WLR	WLW	CPS	Total
ISDN FRA	56%	12%	30%	3%	37,216
ISDN PRA	76%	7%	15%	1%	114,540

- 6.35 Figure 51 below shows the breakdown of ISDN FRA and ISDN PRA in terms of SB-WLR and Eircom retail. ISDN FRA and ISDN PRA purchased at the wholesale level through SB-WLR account for a small proportion of total ISDN FRA and PRA.

⁸²⁴ As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, more recent data are currently unavailable.

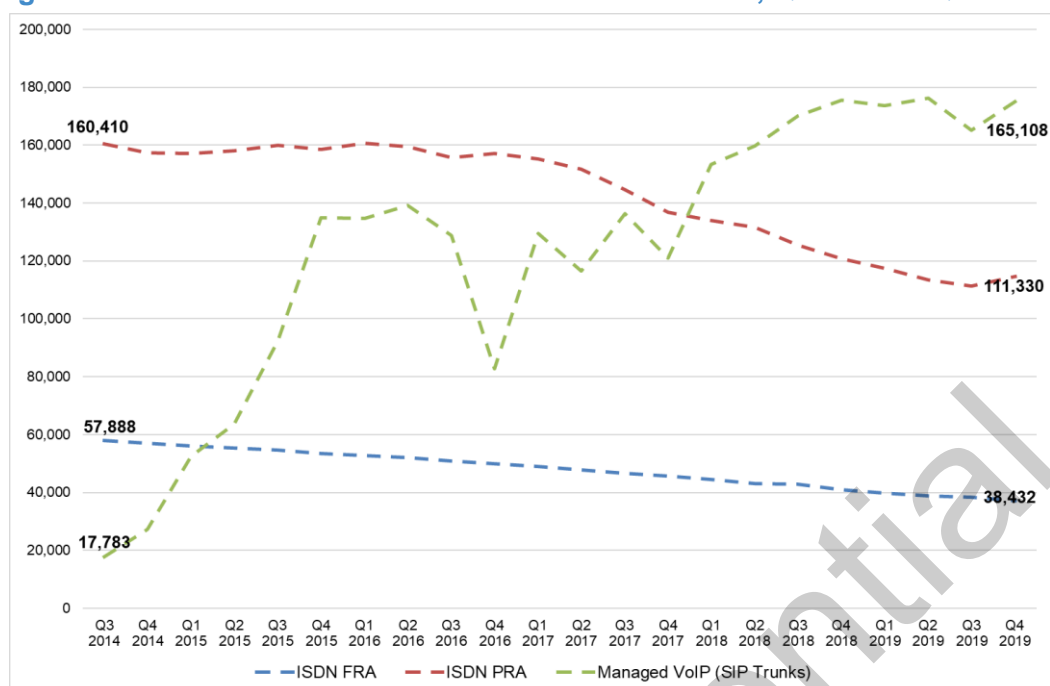
Figure 51: ISDN FRA and ISDN PRA access paths, Q3 2014 to Q4 2019⁸²⁵



6.36 Aside from SB-WLR, WLA/WCA broadband inputs allow SPs to provide Managed VoIP (including SIP Trunk or Hosted PBX) comparable to HL-RFTS delivered over ISDN FRA and ISDN PRA.

6.37 Although it may not be feasible – or desirable - for an SP supplying HL-RFTS to replicate Eircom’s ubiquitous network on any significant scale, a proportion of the supply of HL-RFTS is over alternative infrastructure (i.e. Managed VoIP) independent of Eircom FACO, as illustrated in Figure 52 below.

⁸²⁵ As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, more recent data are currently unavailable.

Figure 52: Number of Access Paths in HL-RFTS Market, Q3 2014 to Q4 2019⁸²⁶

6.38 While alternative broadband infrastructure is capable of facilitating the delivery of a direct demand-side constraint to HL-RFTS, its coverage does not replicate Eircom’s ubiquitous network. However, alternative broadband infrastructure poses a competitive constraint in the HL-RFTS market. SPs have indicated to ComReg that, in greenfield sites, or where contracts are due for renewal, businesses may take the opportunity to invest in IP-based solutions (i.e. Managed VoIP) for RFTS.⁸²⁷ Hence, entry to the HL-RFTS market could come from any of:

- (a) SPs selling broadband and RFTS via Managed VoIP;
- (b) Other infrastructure or technologies (e.g. other IP-based solutions such as fibre-based SIP Trunking or Hosted PBX); and
- (c) Fixed-mobile integrated products and/or networks.

Conclusion on overall size of Undertaking and control of infrastructure that is not easily replicated

6.39 ComReg’s position is that, on balance, barriers to entry, in terms of the size of Undertakings and control of infrastructure not easily replicated, in the provision of RFTS (on all three Relevant RFTS Markets) have gradually been eroded since the last market review.

⁸²⁶ As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, more recent data are currently unavailable.

⁸²⁷ ComReg bilateral meetings with SPs, October 2018.

- 6.40 In the case of Standalone LL-RFTS, FACO regulation allows SPs to purchase SB-WLR and provide RFTS on a standalone basis, while WLA/WCA broadband inputs can also be used to provide standalone RFTS. Alternative networks such as Virgin Media and SIRO are equally capable of providing Managed VoIP on a standalone basis, with SIRO providing wholesale FTTP to Access Seekers which can, in turn, support Managed VoB. It is envisioned that NBI will also be able to provide Managed VoIP. However, the network does not currently have a material level of roll-out. Eircom also sells White Label VoIP for RFTS on a commercial basis which is purchased by some SPs, conditional on the end user having a broadband connection.
- 6.41 Despite these reduced barriers to entry, ComReg notes that commercial incentives to enter the Standalone LL-RFTS market are limited, as greater margins can be earned on bundles of RFTS and broadband and other services.⁸²⁸ Thus, limited new entry is less likely to be a function of any barriers to entry, but rather SPs being reluctant to actively sell Standalone LL-RFTS.
- 6.42 In the case of Bundled LL-RFTS, SPs can enter the market using FACO or WLA/WCA market inputs and provide, *inter alia*, broadband and RFTS, the latter either over POTS or Managed VoB. This suggests that, while Eircom is the largest SP, and controls infrastructure not easily replicable in terms of network coverage, this is not necessarily an impediment to new entry.
- 6.43 In addition, Virgin Media's CATV network also poses a direct constraint on Eircom in the provision of Bundled LL-RFTS, while SIRO's FTTP network is likely to facilitate a degree of demand-side constraint on Eircom in the provision of Bundled LL-RFTS through SPs that purchase wholesale access from SIRO.
- 6.44 For HL-RFTS, SPs can enter the market by purchasing:
- (a) SB-WLR or WLV delivered over ISDN FRA and ISDN PRA;
 - (b) WLA/WCA market inputs to provide Managed VoIP (including, but not limited to, SIP Trunking and Hosted PBX) for voice channels equivalent to ISDN FRA and ISDN PRA; or
 - (c) White Label VoIP from Eircom or BT on a commercial basis.
- 6.45 SIRO's FTTP network is likely to facilitate some degree of competitive constraint in the provision of HL-RFTS through SPs that purchase wholesale services from SIRO. The latter holds true for the HL-RFTS market, insofar as SIRO's FTTP can be leveraged to provide Managed VoIP.
- 6.46 As with the Bundled LL-RFTS market, this suggests that, while Eircom controls infrastructure not easily replicable in terms of network coverage, this does not represent an insurmountable impediment to new entry to the HL-RFTS market.

⁸²⁸ ComReg bilateral meetings with SPs, October 2018.

- 6.47 ComReg notes also that BT provides a number of wholesale services to Access Seekers including FACO and WCA on a commercial basis, providing an alternative to Eircom provision of wholesale inputs which can be used to provide both LL-RFTS and HL-RFTS (see paragraph 7.35).

Sunk costs

- 6.48 No Respondents offered specific views on sunk costs.
- 6.49 Sunk costs are costs incurred that cannot be recovered if an entrant decides to, or is forced to, exit the market. The existence of sunk costs does not automatically imply that entry barriers are high. A certain level of sunk costs arises in entering most markets, and the incumbent may also have had to incur a similar level of sunk costs before it entered the Relevant RFTS Markets.
- 6.50 However, in some circumstances, it is more difficult for new entrants to break into a market than it was for the first firm (or subsequent firms) to enter. Such circumstances create a decisional asymmetry, where an incumbent has already incurred and recovered sunk costs, but a new entrant has not. In general, higher sunk costs discourage market entry.⁸²⁹

LL-RFTS Markets

- 6.51 Eircom operates a ubiquitous FNA network that supports the provision of LL-RFTS on a national basis. A significant portion of the sunk costs incurred in the initial construction of the PSTN network (including the associated duct, pole and other assets) are likely to be amortised by now. In rolling out its FTTx network upgrade (which supports Managed VoIP), Eircom is, nevertheless, likely to incur some additional sunk costs.
- 6.52 The degree of sunk costs associated with entry into the Standalone or Bundled LL-RFTS markets depends on the entry approach and the extent to which the potential entrant already has infrastructure in place (whether its own or through access to another SP's infrastructure) that can be harnessed to provide standalone or bundled LL-RFTS. The following paragraphs give an overview of the sunk costs of entry associated with the options at paragraph 6.22 above.

⁸²⁹ OECD, Barriers to Entry, (DAF/COMP(2005)42), 2006, Paris.

Building an independent network to provide RFTS

6.53 Building an independent network requires significant financial investment and time. The proportion of expenditure on, for example, trenches, ducts and overground/underground plant is likely to be particularly high and sunk when deploying an access network. While a potential entrant may not need to replicate Eircom's entire FNA network, the extent of geographic coverage is likely, in ComReg's view, to be an important factor for SPs. Thus, there is a trade-off between a smaller network rollout which would likely involve lower sunk costs and a potentially lower base of potential RFTS end users, and a larger network rollout which would likely involve higher sunk costs but a potentially higher base of potential RFTS end users. A more extensive network would, all other things being equal, also potentially have a greater impact on competition in the Relevant RFTS Markets, but would also incur higher sunk costs which could deter entry.

Adapting an existing network to provide RFTS

6.54 The sunk costs involved in entering the Relevant RFTS Markets may be somewhat reduced if the potential entrant has an existing network in place. For example, SPs operating in adjacent markets, such as for retail fixed broadband or mobile telephony may be able to leverage an existing network with some (lower) levels of sunk cost to provide RFTS.

6.55 However, an entrant using an existing network would still likely incur sunk costs associated with developing and marketing an RFTS product and putting in place the necessary order handling, product management and billing systems.

Using wholesale inputs to provide RFTS

6.56 In purchasing wholesale FACO inputs including SB-WLR and WLV, SPs incur some sunk costs, such as interconnection costs and establishing Operational Support Systems ('**OSS**') and/or Business Support Systems ('**BSS**').

6.57 A purchaser of wholesale NG Broadband inputs such as WLA/WCA that does not currently supply RFTS could also enter the Relevant RFTS Markets by investing in a Managed VoB calling platform, assuming OSS and BSS are in place. ComReg's view is that this entry approach would nonetheless require some non-trivial level of upfront investment.

HL-RFTS Market

- 6.58 As with the LL-RFTS markets, SPs can enter the HL-RFTS market by building independent networks, adapting existing networks, or using wholesale inputs. This indicates that the significant sunk costs associated with the direct supply of HL-RFTS are not, in all cases, prohibitive. However, upfront investment required in order to develop and provide a Managed VoIP offering equivalent to ISDN FRA or ISDN PRA (through purchasing WLA/WCA broadband inputs) directly to an end user may be considerable and, as such, may be more likely for large contracts with other services including data/connectivity. The latter could, for example, warrant the use of leased line inputs.
- 6.59 Costs are also associated with enabling ISDN FRA and ISDN PRA functionality, Managed VoIP functionality, providing capacity to support the installed base of lines and undertaking OSS updates, and so on. Thus, SPs face some level of sunk costs involved in both market entry, and market expansion (by means of network extension) within the footprint of the HL-RFTS market. However, these sunk costs are likely to be lower in areas where NG Broadband (either own-use or through the use of WLA/WCA) is available.

Conclusion on sunk costs

- 6.60 Overall, ComReg's position is that sunk costs are likely to undermine entry and/or expansion into the Relevant RFTS Markets for SPs that do not currently operate a network, or have not invested in infrastructure for purchasing wholesale FACO or broadband inputs. Where SPs already maintain or have upstream access to an existing network for providing retail broadband services, the incremental cost of providing RFTS (either on a standalone basis or bundled with broadband) may be low, thereby facilitating entry into the Relevant RFTS Markets. For SPs that already purchase wholesale inputs such as WLA/WCA, the incremental cost of offering RFTS (if they do not already do so) is also likely to be low.
- 6.61 It should be noted, however, that SPs may have limited commercial incentives to provide Standalone LL-RFTS, as the margins earned on these services are likely lower than the margins earned on Bundled LL-RFTS. Technically, entry is nonetheless possible. End user demand for Standalone LL-RFTS is in decline and, as noted in paragraph 4.107, end users show a clear preference for Bundled LL-RFTS. Thus, while entry barriers have declined, SPs have, in recent years, shifted focus from Standalone LL-RFTS to Bundled LL-RFTS.
- 6.62 ComReg's position is that sunk costs are unlikely to generate sufficiently significant barriers to entry (in those areas where NG Broadband enables the provision of RFTS). The availability of wholesale inputs (including upstream FACO inputs, and WLA/WCA broadband inputs which can be used to supply Managed VoIP) means that an SP does not need to replicate Eircom's narrowband and/or NG Broadband network in order to enter the Relevant RFTS Markets.

Economies of scale, economies of scope and economies of density

- 6.63 No Respondents offered specific views on economies of scale, scope and density.
- 6.64 Economies of scale, scope and density refer to potential advantages that larger SPs may enjoy over smaller SPs. **Economies of scale** generally refer to the cost advantages which a large-scale SP may have over a smaller SP, where the marginal cost of production decreases as the quantity of output produced increases. **Economies of scope** refer to the potential efficiencies that may be gained by a firm jointly producing a range of goods and services, for example, where an FTTx network is used to provide RFTS, TV and broadband. **Economies of density** refer to potential efficiencies associated with supplying customers who are geographically concentrated.
- 6.65 Economies of scale, scope and density can be achieved in the provision of RFTS as the cost of supply per customer decreases in line with the number of customers supplied. Economies of scale and scope could act as a barrier to entry in the Relevant RFTS Markets because Eircom has a greater customer base (comprised of its self-supply of RFTS to its retail arm, and Access Seekers purchasing FACO from its wholesale arm) than any other SP.
- 6.66 ComReg's position is that the Relevant RFTS Markets are characterised by economies of scale, scope and density. This is because a large proportion of the costs of building and maintaining a telecommunications network is fixed. Therefore, the average cost per subscriber of providing services falls as the number of customers served by the network increases. Economies of scale and density will, therefore, be achieved where an SP can serve as many subscribers as possible from its investment in a given part of the network, e.g. an exchange/MPoP⁸³⁰ (or equivalent). That also means that the ability of an SP to offer a viable service may depend on its ability to acquire a large number of RFTS customers at local and national level.
- 6.67 Economies of scope are evident in respect of Bundled LL-RFTS, as the access path is used for the provision of both voice and broadband. For a new entrant, the upfront investment in network coverage (by means of own build or using WLA/WCA inputs) will lead to economies of scope if the entrant can leverage an access path to provide Bundled LL-RFTS. This also applies to rolling out a broadband network, as the access path can be used to provide Managed VoIP RFTS. As discussed in paragraphs 4.77 to 4.107, there is an increasing trend towards the provision of Bundled LL-RFTS, but some 17% of end users continue to purchase Standalone LL-RFTS over the Eircom network.

⁸³⁰ Metropolitan Point of Presence ('MPoP') refers to the point of inter-connection between the access and core networks of an Undertaking.

- 6.68 ComReg notes that competitors to Eircom in the LL-RFTS markets such as Vodafone, Virgin Media, Sky and Pure Telecom offer a variety of retail services. Such SPs already, or have the potential to, benefit from economies of scale and scope by growing retail end user numbers, including through cross-selling and bundling products. However, apart from Virgin Media self-supply, this has been largely enabled through regulated access to FACO and WLA/WCA products. The availability of SB-WLR lowers the barriers to entry posed by economies of scale, because it allows SPs to enter the Relevant RFTS Markets without incurring significant fixed costs. This means that entrants are better able to scale their business appropriately for their customer base and grow their business incrementally in line with the growth of their customer base.
- 6.69 Similarly, in the HL-RFTS market, SPs can achieve economies of scale when they sell ISDN FRA and ISDN PRA products to high numbers of subscribers (i.e. end users that demand multiple ISDN FRAs or ISDN PRAs). In the case of Managed VoIP, economies of scope can be achieved if the RFVA component (i.e. broadband/IP access path) can be used to also provide data connectivity services to business end users. Economies of scale can also be achieved through provision of SLAs with voice plans and other features, such as video conferencing, messaging platforms and advanced calling features.⁸³¹
- 6.70 SPs intending to compete with Eircom, Vodafone and other HL-RFTS SPs will likely have to offer these ancillary services to win large business contracts, which could impede market entry. ComReg considers that competition for HL-RFTS is a function of the quality of the RFTS offered and the range of ancillary services that businesses demand, such as SLAs. The 2019 SME Market Research indicated that few businesses purchase ISDN for access to RFTS (15%),⁸³² with ISDN BRA being the most prevalent at 54%.⁸³³

⁸³¹ <https://business.eir.ie/product/voice-and-collaboration/>.

<https://n.vodafone.ie/business/products-and-solutions/unified-communications/one-net-business.html>.

⁸³² Slide 16 of the 2019 SME Market Research.

⁸³³ Slide 18 of the 2019 SME Market Research.

6.71 In respect of the Relevant RFTS Markets, economies of density are evident from the uneven deployment of competing networks across Ireland. As discussed in paragraphs 3.120 and 3.121, SIRO's FTTP network and Virgin Media's CATV network have subnational footprints, predominantly in areas with higher premises density. As noted in paragraphs 3.122 to 3.124, NBI is expected to provide high speed broadband to premises in the IA that are not currently served on a commercial basis. ComReg considers that the high sunk costs associated with entry and expansion (e.g. extending the footprint of a network, rather than infilling within the existing network footprint, will require relatively more investment) in the Relevant RFTS Markets act to exacerbate the effects of economies of scale, scope and density, which can act as a barrier to entry and expansion. These sunk costs can be spread across a greater customer base when the premises density is high. Accordingly, the magnitude of the barrier to entry is likely to differ between urban and rural areas.

Conclusion on economies of scale, scope and density

6.72 Overall, there is evidence to suggest that economies of scale, scope, and density are relevant factors for consideration in terms of their potential to pose a barrier to entry for new entrants intending to compete in the provision of RFTS. Eircom has benefited from economies of scale, scope and density in the provision of RFTS, and these are likely to result in some barriers to entry for other SPs that may seek to enter the Relevant RFTS Markets. However, for SPs already present in related markets (such as broadband, TV or leased line services), the extent of entry barriers posed by economies of scale, scope and density is less likely to discourage entry.

Vertical Integration

6.73 A vertically-integrated SP enjoys significant efficiencies arising from its presence in upstream and downstream markets. Such efficiencies may also be passed on to end users in the form of more competitive prices, lower transaction costs and/or enhanced product quality. However, vertical integration may also constitute a barrier to entry where the presence of a firm at multiple levels of the production or distribution chain raises the costs of new entry, for example, where prospective new entrants perceive the need to enter multiple markets simultaneously to pose a viable competitive constraint on the vertically-integrated SP. Vertical integration can also pose an entry barrier where it increases the possibility of the integrated SP foreclosing competition at one or more levels in the value chain, the threat of which could, in turn, discourage new entry.

- 6.74 As well as being the largest FACO supplier, Eircom is also a significant provider of RFTS, broadband and other services to its own retail end users. Eircom's market share in the Standalone LL-RFTS market is 47%, 40% in the Bundled LL-RFTS market (and 27% in the HL-RFTS market when measured in subscriptions (Table 56). Eircom therefore has an incentive to increase the costs of retail competitors which purchase wholesale inputs from it, and thereby foreclose its retail competitors from the Relevant RFTS Markets. This is currently prevented in practice by regulation of wholesale prices.
- 6.75 Virgin Media is also vertically-integrated in that it provides retail services on its CATV network by self-supplying to itself at the wholesale level. Virgin Media does not offer FACO on a merchant market basis. Other than Virgin Media, Eircom's competitors are not, for the most part, vertically-integrated. For example, Vodafone and Sky provide RFTS and retail broadband using wholesale inputs provided by Eircom, BT and SIRO. Thus, Eircom is the only vertically-integrated SP that is active at both the wholesale and retail levels, on both a self-supply and a merchant market basis, at any level of scale.
- 6.76 However, ComReg does not consider Eircom's vertically-integrated structure to pose a significant barrier to entry for Standalone or Bundled LL-RFTS, as Access Seekers can purchase regulated wholesale inputs (SB-WLR, WLA, and WCA (which is regulated only on the Regional WCA Market)) to provide LL-RFTS (see paragraph 6.11 above). In addition, were Eircom to leverage its vertically-integrated structure by reducing the price of Standalone LL-RFTS through cross-subsidisation with Bundled LL-RFTS, ComReg considers that, while this could, in principle, deter entry to the Standalone LL-RFTS market, SPs have limited incentives to enter the Standalone LL-RFTS market.
- 6.77 In relation to the HL-RFTS market, some vertically-integrated SPs operate independently of Eircom and are less exposed to Eircom's wholesale pricing strategy. These include Goldfish, Colt⁸³⁴ and Magnet,⁸³⁵ which provide Managed VoIP HL-RFTS. However, these SPs are limited in scale and geographic reach compared to Eircom. As with Standalone and Bundled LL-RFTS, there is potential for Eircom, as a vertically-integrated SP, to take measures in the upstream wholesale FACO market to harm competition in the downstream HL-RFTS market by engaging in anticompetitive conduct that harms entrants (e.g. margin squeeze). However, as noted above in paragraph 6.74, wholesale prices (including FACO/WLA/WCA, where available on a regulated basis) are regulated by ComReg.

⁸³⁴ <https://www.colt.net/product/sip-trunking/>.

⁸³⁵ <https://www.magnet.ie/business/business-type/enterprise/sip-trunking/>.

Conclusion on vertical integration

- 6.78 Having regard to the above, ComReg considers that Eircom's vertically-integrated structure could afford it a favourable position in the Relevant RFTS Markets and increase barriers to entry by, for example, requiring an entrant to enter multiple vertically-related markets concurrently.
- 6.79 However, the availability of regulated wholesale inputs in the Regional FACO, WLA, and Regional WCA markets (see paragraph 6.11) means that, where an SP intends to enter the Relevant RFTS Markets, vertical integration does not unduly raises barriers to entry in the Relevant RFTS Markets, as Eircom is prevented by means of regulation from leveraging its vertically-integrated position to raise barriers to entry. ComReg notes also that BT and SIRO provide a number of wholesale services to Access Seekers, including FACO and WCA on a commercial basis, providing an alternative to Eircom for wholesale inputs to the Relevant RFTS Markets (see paragraph 7.35) in the Urban WCA Market and the Urban FACO Market.

Legal, regulatory and administrative barriers to entry

- 6.80 Unlike the structural barriers to entry discussed above, legal, regulatory and administrative barriers to entry are derived not from economic conditions, but rather from interventions by statutory bodies which have a direct impact on a firm's ability to enter a new market. Pursuant to the 2020 Explanatory Note, which sets out the guidelines for the 3CT, the aforementioned barriers must be assessed in respect of the relevant market, in a MGA scenario, in order to determine whether the specified market requires *ex ante* regulation.
- 6.81 In Section 7 below, ComReg assesses legal, regulatory and administrative barriers to entry in relation to the Relevant FACO Markets. ComReg holds the view that legal, regulatory and administrative barriers to entry are broadly similar for both the Relevant RFTS Markets and the Relevant FACO Markets. For example, the administrative barriers to entry for RFTS and FACO broadly overlap, including the need for a T2 Road Opening Licence for constructing a new network and the notification to ComReg of the intention to enter an electronic communications market. As there is a significant overlap in the discussion, the discussion at paragraphs 7.140 to 7.159 in respect of these barriers to entry applies, *mutatis mutandis*, to the Relevant RFTS Markets.

Conclusions on barriers to entry

- 6.82 ComReg finds that the Relevant RFTS Markets are, having regard to the regulatory outcome on the Relevant FACO Markets in Section 7, not characterised by the presence of high and non-transitory barriers to entry. In particular,

- (a) While a new entrant would find it difficult to replicate Eircom's legacy FNA network, noting, in particular, the ubiquity of that network, Virgin Media has a significant presence in providing RFTS, and other OAOs, including Vodafone, Sky and Pure Telecom are also active in the provision of RFTS. This is facilitated through a combination of upstream regulation in the FACO, WLA and WCA markets, and investment in alternative networks (Virgin Media, SIRO);
- (b) While Eircom likely benefits from economies of scale, scope and density in the provision of RFTS, it has not done so to an extent that they constitute high and non-transitory barriers to entry to the Relevant RFTS Markets;
- (c) While entry to the Relevant RFTS Markets requires a new entrant to incur some level of sunk costs, many SPs purchase wholesale NG Broadband inputs for the provision of bundles comprising RFTS and broadband, such that sunk costs can be spread across multi-product offerings. Sunk costs associated with entry are likely to be mitigated for SPs with extensive wholesale NG Broadband infrastructure already in place and for SPs already present in related markets such as broadband or mobile voice; and
- (d) While Eircom is vertically-integrated and controls an important upstream input to RFTS (FACO), the evidence does not indicate that this poses a barrier to entry, as SPs provide RFTS via Managed VoIP to end users where NG Broadband networks are available, including through the use of upstream WLA/WCA inputs.

6.83 ComReg notes that, at the retail level, for business end users that require only the call origination component of RFTS (i.e. RFVC), obtaining a Managed VoIP service is relatively easy, if the end user already has a broadband connection in place (i.e. RFVA). SPs in this space include Blueface⁸³⁶ and Goldfish.⁸³⁷

6.84 ComReg notes that there may be limited commercial incentives to enter the Standalone LL-RFTS market, as the margins earned on these services are lower than the margins on Bundled LL-RFTS. Thus, while entry barriers have been somewhat eroded through appropriate wholesale regulation, SPs have, in recent years, shifted their focus from the provision of Standalone LL-RFTS to the provision of Bundled LL-RFTS.

⁸³⁶ <https://www.blueface.com/voip/>.

⁸³⁷ <https://www.goldfish.ie/6832/all/1/Business-VoIP-Packages.aspx>.

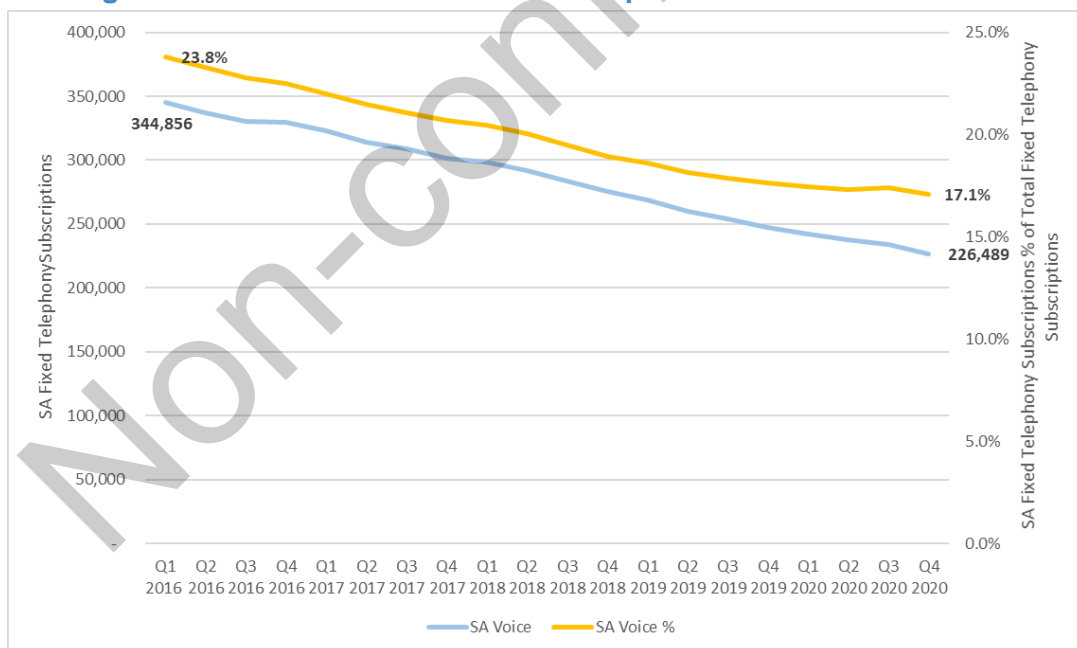
Respondents' Views

- 6.85 **BT** observed that, absent regulation, ComReg's Decision would likely bring about the end of standalone RFTS, as the commercial viability of using high speed broadband to simply provide a standalone voice service seemed challenging.
- 6.86 **ALTO** asserted that high, non-transitory barriers to entry are present in the market, noting particularly the lack of a fit for purpose bulk transfer facility. However ALTO also stated that RFTS market structures in the footprint of the Urban FACO Markets enable commercial operators to compete for business.

ComReg's Assessment of Respondents' Views and Position

6.87 In response to BT's point, ComReg notes that the standalone LL-RFTS market although currently regulated, is declining. As shown below, customer numbers in this market fall by approximately 8,000 customers per quarter (2014 to 2020). While the market for standalone LL-RFTS continues to decline, those purchasing double, triple and quadruple play subscriptions including RFTS continues to increase as a percentage of overall RFTS subscriptions, with those purchasing RFTS as part of a bundle increasing from 76% of all those who purchase RFTS in Q1 of 2016 to 83% of all those who purchase RFTS in Q4 2020.⁸³⁸

Figure 53: Standalone LL-RFTS subscriptions Q1 2016 to Q4 2020⁸³⁹



⁸³⁸ ComReg QKDR data.

⁸³⁹ ComReg QKDR data.

- 6.88 ComReg does not agree that deregulating the market for RFTS will bring about the end of standalone voice being available, but rather considers that many factors are at play in driving the decline in this market. On BT's point about providing standalone RFTS over high-speed broadband, ComReg notes that it is a commercial decision for SPs in the market, and that there is nothing technically precluding SPs from delivering standalone RFTS in this manner (i.e. Managed VoIP).
- 6.89 It is ComReg's understanding that BT provides a very small percentage of Standalone LL-RFTS. Based on information provided to ComReg BT/Sky has a [X ██████████ X] market share of the total standalone voice market.
- 6.90 ComReg also notes that certain SPs provide standalone voice at the same cost or more than their bundles including phone. For example, eir offers an 'Off-Peak Landline' product for €39.99 a month.⁸⁴⁰ This compares to eir's broadband and landline package which includes all that is offered in their 'Off-Peak Landline' product plus unlimited broadband for €29.99.⁸⁴¹ Therefore, ComReg believes standalone voice can be sold economically, although there are pricing differentials.
- 6.91 ComReg reviewed barriers to entry in paragraphs 6.10 to 6.80 of the 2020 Consultation, with the preliminary view that barriers to entry to the RFTS markets have been eroded since the 2014 RFVA Decision. With regard to bulk migration facilities, ComReg discusses this further in Section 11. ComReg interprets ALTO's point around RFTS market structures in the footprint of the Urban FACO Market to mean that the presence of backhaul allows SPs to compete for end users. ComReg agrees with ALTO's point and also notes the differences between urban and less-urban areas was considered in detail when ComReg looked at the upstream FACO geographic market definition.
- 6.92 For this reason, new entry into the Standalone LL-RFTS market may not be significant, while entry into the Bundled LL-RFTS market may be more likely, driven by RFTS being bundled with broadband. Ongoing rollout of NG Broadband will likely see the number of end users in the Standalone LL-RFTS market continue to decline and, in any event, barriers to offering Standalone LL-RFTS (whether based on regulated access to FACO or otherwise) have fallen since the 2014 RFVA Decision. This again, is reflected in an increasing number of end users purchasing RFTS as part of a bundle. For the HL-RFTS market, incentives to enter are again likely driven by opportunities to provide business data/connectivity services alongside RFTS.

⁸⁴⁰ <https://www.eir.ie/phone/> Accessed 4 March 2021.

⁸⁴¹ Ibid.

6.93 At least one of the 3CT criteria must fail in order for the presumption in favour of *ex ante* regulation to be lifted.⁸⁴² Since ComReg's analysis indicates that the first criterion has failed for the Relevant RFTS Markets, the presumption can be lifted, and, in principle, there are grounds to withdraw *ex ante* regulation of the three Relevant RFTS Markets. It is therefore not strictly necessary to proceed to assess the second and third criteria. However, in the interests of analytical completeness, ComReg assesses the remaining two criteria.

Criterion 2: Is the market tending towards effective competition within the relevant time horizon?

6.94 The second criterion to be assessed is whether the Relevant RFTS Markets are likely to tend towards effective competition over the lifetime of this market review.⁸⁴³ By definition, it is necessary to carry out the assessment of the second criterion on a dynamic and forward-looking basis.

6.95 In this respect, ComReg has examined whether:

- (a) There are observable trends towards effective competition (see paragraphs 6.96 to 6.130 below);
- (b) SPs other than Eircom are in a position to enter the RFTS market to the extent that they would be able to effectively compete with the incumbent (see paragraphs 6.131 to 6.154 below); and
- (c) Any expected or foreseeable technological and economic developments are likely to impact on competition within the time period of the market review (see paragraphs 6.155 to 6.159 below).

Whether there are observable trends towards effective competition

6.96 ComReg's assessment considers levels of existing competition, noting that the 3CT contains many of the factors considered in an SMP analysis. In this subsection, ComReg considers the relative strength of existing competitors, market shares, and pricing, in assessing levels of existing competition.

Market shares

6.97 A number of SPs provide RFTS across all of the Relevant RFTS Markets, with market shares reported in Figure 9 above. Eircom is the only SP with a ubiquitous FNA network.

6.98 Approximately 25 SPs currently provide RFTS. The largest competitors to Eircom are Virgin Media, Sky, Vodafone, Pure Telecom and Digiweb.

⁸⁴² See page 6 of the 2020 Explanatory Note: "However, the Recommendation does not prevent NRAs from analysing markets which differ from those identified in this Recommendation but that are regulated within the territory of their jurisdiction based on previous market analyses, or other markets, if they have sufficient grounds, because of national circumstances, to consider that those specific markets meet the three criteria used for identifying markets susceptible to *ex ante* regulation"

⁸⁴³ A market may tend towards effective competition not only by means of new entry into the RFTS Markets, but also by the deployment of alternative infrastructures by Access Seekers that would allow them to offer RFTS.

- 6.99 Eircom and Virgin Media operate independent networks, while BT (Sky) and Digiweb purchase SB-WLR, and Vodafone and Pure Telecom purchase WLV. Approximately 13 other SPs purchase SB-WLR and WLV and compete in the provision of RFTS on a local basis, such as IFA Telecom⁸⁴⁴ and Telcom.⁸⁴⁵
- 6.100 There are various ways of computing market shares in the Relevant RFTS Markets. These include number of subscriptions (an account with an SP could have multiple services, all under a single subscription), number of voice lines, number of access paths (voice channels – see Table 1 above) and revenue. In the 2014 RFVA Decision, ComReg measured market shares in the then-Standalone and Bundled RFVA markets using subscription data, noting that, in each case, small numbers of ISDN FRA and ISDN PRA may be included, but that this did not materially affect market shares.⁸⁴⁶ For the HL-RFVA market, ComReg measured market shares using access lines. Given data availability, ComReg below presents market shares based on subscriptions and access lines, both of which indicate similar trends.
- 6.101 The market shares presented below are in the presence of upstream FACO regulation. As noted in paragraph 6.11, ComReg is deregulating the upstream Urban FACO Market (as defined in paragraphs 5.578 to 5.579) and this has implications for the interpretation of market shares in the Relevant RFTS Markets. ComReg considers this point in paragraph 6.114 below.
- 6.102 Table 58 below outlines the market shares in the Standalone LL-RFTS Market, measured by lines (and any equivalent Managed VoB lines). Eircom has the highest market share at [X ██████████ X]⁸⁴⁷ followed by Vodafone and Pure Telecom.

Table 58: Standalone LL-RFTS Market Shares (PSTN and ISDN BRA access lines and VoIP equivalent lines) Q4 2019-Q4 2020⁸⁴⁸ [X REDACTED X]

SP	Lines Q4 2020	Q4 2019	Q4 2020 ⁸⁴⁹
Eircom	██████████	██████	██████
Digiweb	██████	██████	██████
Pure Telecom	██████████	██████	██████
Sky	██████████	██████	██████
Virgin Media	██████	██████	██████
Vodafone	██████████	██████	██████

⁸⁴⁴ <https://ifamemberservices.ie/ifa-telecom/>

⁸⁴⁵ <https://www.telcom.ie/>

⁸⁴⁶ See Figures 7, 8 and 9 of the 2014 RFVA Decision.

⁸⁴⁷ 60-70%.

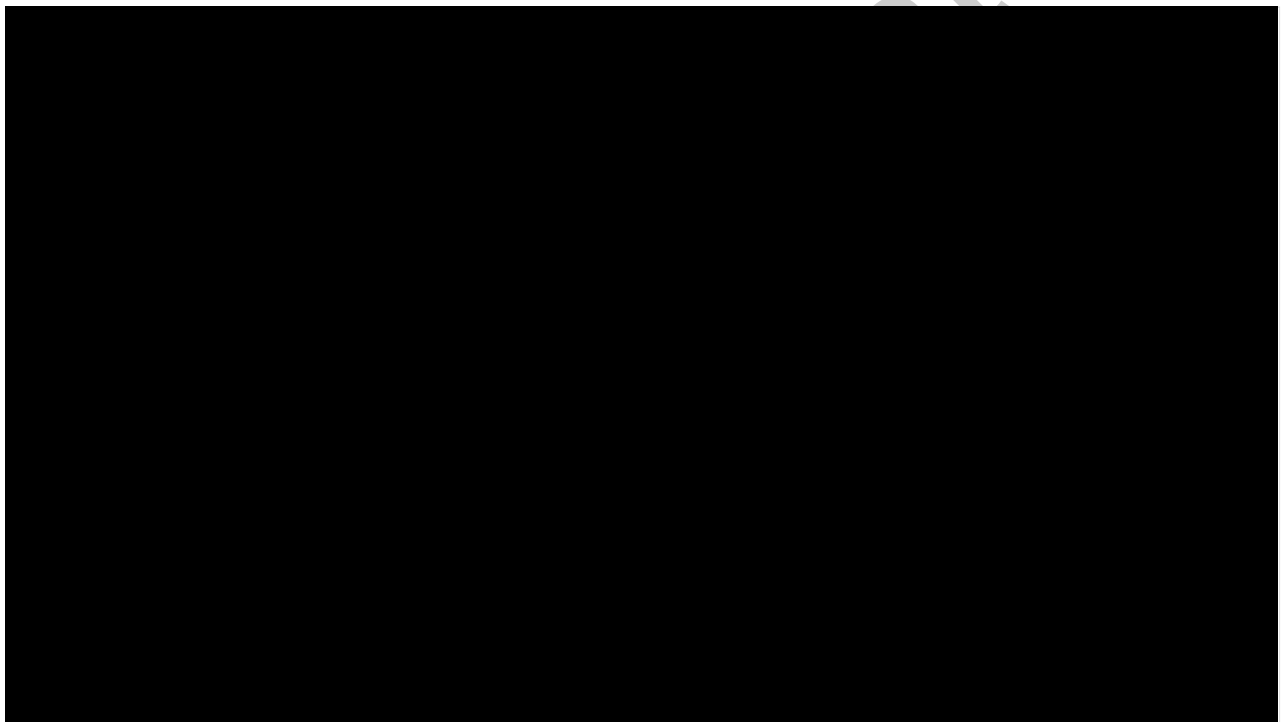
⁸⁴⁸ ComReg QKDR data.

⁸⁴⁹ As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, ComReg believes this data to be incomplete.

Other	██████	███	███
Total	██████	███	███

6.103 Figure 54 below presents Standalone LL-RFTS market shares since the 2014 RFVA Decision measured by subscriptions. ComReg notes, as with the 2014 RFVA Decision, and, as discussed above in paragraph 6.100, that standalone fixed voice subscription data include subscribers purchasing ISDN FRA and PRA lines. However, as the number of these subscriptions is relatively small, they do not materially affect the analysis of market shares in the Standalone LL-RFTS Market. Eircom's market share, measured by subscriptions is [REDACTED] ██████████⁸⁵⁰.

Figure 54: Standalone LL-RFTS Market Shares (Number of PSTN, ISDN BRA and VoIP equivalent subscriptions) Q3 2014 to Q4 2020 [REDACTED]⁸⁵¹



6.104 The number of Standalone LL-RFTS customers has fallen since the 2014 RFVA Decision (Q3 2014) when there were 445,234 subscriptions (31% of total RFTS subscriptions) to 226,489 subscriptions (17% of total RFTS subscriptions) in Q4 2020. At the time of the 2012 RFVA Consultation, Standalone LL-RFTS accounted for 51% of RFTS subscriptions.

⁸⁵⁰ 40-50%.

⁸⁵¹ ComReg QKDR data.

6.105 Furthermore, the distribution of market shares has changed since the 2014 RFVA Decision. As illustrated in Table 56, Eircom's Standalone LL-RFTS market share is [REDACTED] [REDACTED] %], compared with [REDACTED] [REDACTED] %] in Q3 2014.

6.106 Table 59 below outlines market shares in the Bundled LL-RFTS Market measured by lines (and equivalent Managed VoB lines). Eircom has the highest market share at [REDACTED] [REDACTED] %],⁸⁵² followed by Virgin Media, Sky and Vodafone, as well as a number of smaller SPs.

Table 59: Bundled LL-RFTS Market Shares (Number of PSTN and ISDN BRA access lines and VoIP equivalent lines Q4 2019 to Q4 2020)⁸⁵³ [REDACTED]

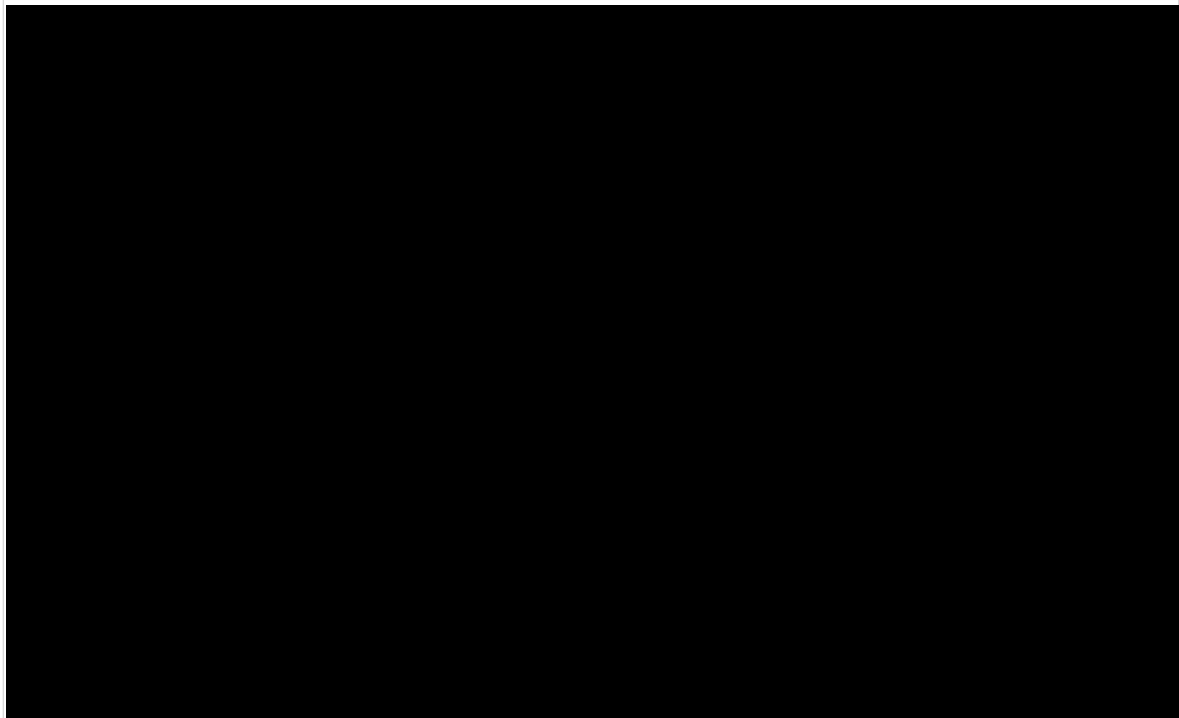
SP	Lines Q4 2020	Q4 2019	Q4 2020
Eircom	[REDACTED]	[REDACTED]	[REDACTED]
Digiweb	[REDACTED]	[REDACTED]	[REDACTED]
Pure Telecom	[REDACTED]	[REDACTED]	[REDACTED]
Sky	[REDACTED]	[REDACTED]	[REDACTED]
Virgin Media	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]
Other	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]

6.107 Figure 55 below presents Bundled LL-RFTS market shares since the 2014 RFVA Decision, measured by subscriptions. ComReg notes, as with the 2014 RFVA Decision, and as discussed above in paragraph 6.100, that Bundled LL-RFTS subscription data may include a small number of ISDN FRA and ISDN PRA subscriptions. However, the number of these subscriptions is relatively small and does not materially affect the analysis of market shares. Eircom's market share, measured by Bundled LL-RFTS subscriptions ([REDACTED] [REDACTED] %]), a figure which has remained fairly stable over time.

⁸⁵² 40-50%.

⁸⁵³ ComReg QKDR data.

Figure 55: Bundled LL-RFTS Market Shares (Number of PSTN, ISDN BRA and VoIP equivalent subscriptions) Q3 2014 to Q4 2020 [REDACTED]⁸⁵⁴

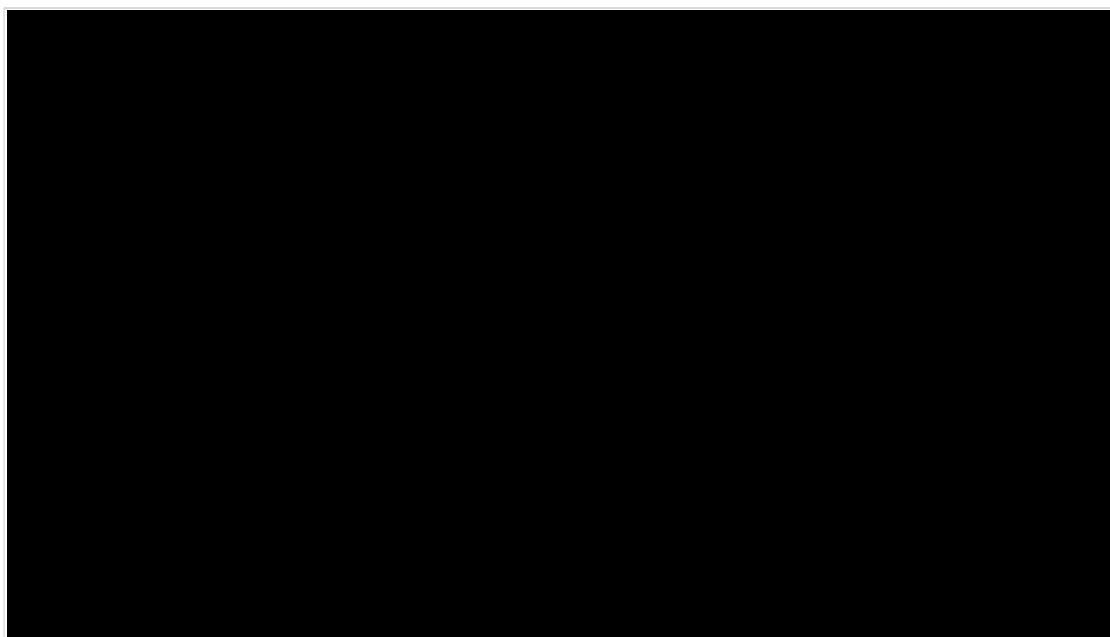


6.108 Figure 56 below outlines market shares in the HL-RFTS Market, measured by subscriptions, comprising both standalone and bundled ISDN FRA, ISDN PRA and VoIP equivalent subscriptions. Goldfish holds the highest share in this market at [REDACTED],⁸⁵⁵ followed by Vodafone, Eircom and Digiweb. ComReg began collecting Goldfish data for QKDR purposes at the end of 2017.

⁸⁵⁴ ComReg QKDR data.

⁸⁵⁵ 40-50%.

Figure 56: HL-RFTS Market Shares (Number of ISDN FRA, PRA and VoIP equivalent subscriptions), Q3 2014 – Q4 2020 [REDACTED]⁸⁵⁶



- 6.109 The availability of SB-WLR (and WLV, which makes use of SB-WLR inputs) enables those SPs that do not have a direct connection with end users to provide RFTS to any end user connected to Eircom's network. SB-WLR has, accordingly, reduced barriers to entry to the Relevant RFTS Markets since its introduction in 2004. Regulated wholesale access prices also allow SPs to obtain the same access prices as Eircom's own downstream retail arm.
- 6.110 As illustrated in Figure 23, since the 2014 RFVA Decision, Access Seekers have migrated away from CPS, SB-WLR and, since, Q3 2018, from WLV. In Q3 2014, CPS accounted for 5% of total indirect (i.e. wholesale) access paths, SB-WLR accounted for 70% and WLV accounted for 26%. As of Q4 2020, the CPS and SB-WLR shares have dropped to 1.2% and 50% respectively, and WLV has increased to 49% (Figure 23). In practice, many end users that previously purchased RFVA from Eircom and RFVC from another SP have since switched to a single SP for both RFVA and RFVC, which is evidenced by the very low number of CPS access paths. This implies that, while Eircom has lost RFVA subscribers and revenues on the one hand, it has gained many of the same subscribers at the wholesale level, as these retail customers buy RFTS from an SB-WLR or WLV Access Seeker.

⁸⁵⁶ ComReg QKDR data. ComReg began collecting data from Goldfish for QKDR purposes at the end of 2017.

- 6.111 As set out in Section 4, Managed VoIP-based RFTS is a substitute for FNA RFTS, especially for end users that have already decided to purchase broadband, and that place value on a bundle. The bulk of Managed VoIP subscriptions are currently provided over CATV (mainly Virgin Media), with 43% delivered over FTTx (see Figure 30). Most of the recent growth in Managed VoIP (effectively, growth in Managed VoB) has been over FTTx (see paragraph 4.222 and Figure 30).
- 6.112 Virgin Media does not sell Standalone RFTS Managed VoB, nor does it sell RFVA and RFVC separately. Virgin Media customers can purchase Bundled LL-RFTS as an add-on to their broadband or TV service at an entry level cost of €33 per month for the first six months for broadband and RFTS.⁸⁵⁷ This compares to Eircom standalone RFVA which costs €25.78 per month (with RFVC costs on a per minute basis),⁸⁵⁸ independent of any broadband. Eircom's basic standalone RFTS is €39.99 including line rental and (unlimited off-peak local and national) calls.⁸⁵⁹ Virgin Media Managed VoB is likely to only provide a competitive constraint for the subset of the market that is passed by Virgin Media and which has a preference for Bundled LL-RFTS.
- 6.113 SPs have indicated to ComReg that higher margins can be earned on bundles of services where broadband is the anchor product, and that RFTS generally has, in their view, reached saturation point.⁸⁶⁰
- 6.114 Finally, the absence of regulation in the Urban FACO Markets may have implications for downstream RFTS market shares, depending on whether SPs can self-supply RFTS, absent FACO regulation. This is considered in paragraphs 7.166 to 7.233. Table 60 below presents RFTS market shares in the Urban FACO Markets and Regional FACO Markets, absent regulation in the Urban FACO Markets. Given data limitations, ComReg presents only LL-RFTS (both Standalone and Bundled) and HL-RFTS (excluding Managed VoIP-based HL-RFTS) data. Market shares are calculated by assuming that FACO lines in the Urban FACO Market are migrated to Managed VoIP, where each SP has the ability to self-supply Managed VoIP using WLA/WCA market inputs. The latter is based on having backhaul and interconnect facilities in place at each EA or Aggregation Node. The findings show slight differences on the two LL-RFTS markets, compared with the tables above, but a significant difference in market shares on the HL-RFTS market arising, in particular, from the exclusion of Managed VoIP-based HL-RFTS, which results in the largest SP (Goldfish) being excluded from consideration.

⁸⁵⁷ <https://www.virginmedia.ie/broadband/buy-a-broadband-package/> Accessed on 16 February 2021.

⁸⁵⁸ <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/Pt1.1.pdf>

⁸⁵⁹ <https://www.eir.ie/phone/> Accessed on 19 March 2021.

⁸⁶⁰ Eircom, Virgin Media and Vodafone – response to April 2019 IIR.

Table 60: Relevant RFTS Market Shares absent regulation in the Urban FACO Market Q4 2019 [REDACTED]⁸⁶¹

SP	Urban FACO Market		Regional FACO market	
	LL-RFTS	HL-RFTS	LL-RFTS	HL-RFTS
BT /Sky	█	█	█	█
Digiweb	█	█	█	█
Eircom retail	█	█	█	█
Pure Telecom	█	█	█	█
Virgin Media	█	█	█	█
Vodafone	█	█	█	█
OAOs	█	█	█	█
Total	100%	100%	100%	100%

Pricing behaviour

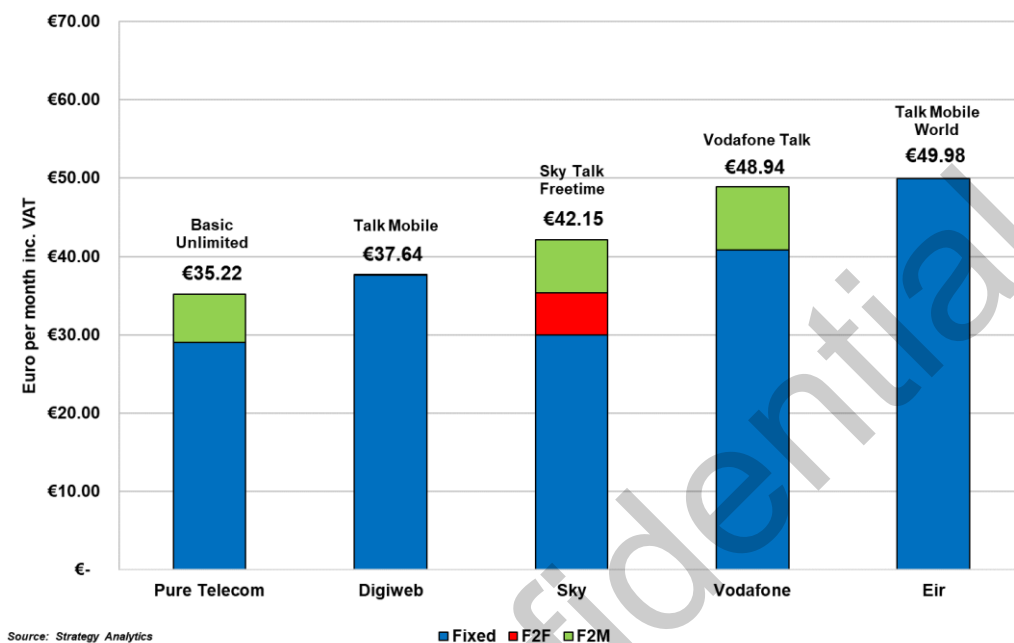
- 6.115 The development and extent of competition in a market over time may be evident in the pricing of RFTS. As of Q4 2020, five SPs account for 94% of RFTS subscriptions. Table 17 outlines a sample of RFTS packages offered by these SPs plus Digiweb and Imagine, with prices over time presented in Figure 59. Prices of each of the SPs for residential/business RFTS and broadband packages largely overlap. Prices advertised by Eircom for RFTS and broadband broadly fall within the range of prices advertised by other SPs in the market, as set out at Table 17.
- 6.116 ComReg uses pricing data independently collated by Strategy Analytics (Teligen) using OECD-approved methodologies to examine the relative prices of a number of usage baskets of national and international RFTS, for both residential and business users.⁸⁶² For national comparisons, the prices advertised by the largest Standalone LL-RFTS SPs (measured by subscriptions) during Q4 2019 were analysed for selected usage baskets. Standalone LL-RFTS prices advertised by Eircom, Sky, Digiweb, Pure Telecom and Vodafone were analysed. Thus, the pricing analysis does not necessarily present the lowest prices available in the whole market, but rather the lowest prices offered by the SPs having the largest number of subscribers. The analysis incorporates discounts offered by SPs. Non-recurring charges (e.g. charges for the installation of a service) are discounted/amortised over five years. Fixed recurring monthly costs such as line rental and any other additional recurring charges are included. Calls to fixed, mobile and international destinations are included.

⁸⁶¹ As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, more recent data are currently unavailable.

⁸⁶² This pricing assessment is benchmarked against an illustrative basket of goods which is periodically updated. The current illustrative basket of goods was last updated in Q4 2019.

6.117 Figure 57 compares tariffs advertised by Standalone LL-RFTS SPs for residential customers based on a basket of 60 calls.⁸⁶³ Pure Telecom offers the cheapest tariff for this basket at €35.22, followed by Digiweb (€37.64) and Sky (€42.15).

Figure 57: OECD Residential Standalone Fixed Voice 60 Calls Basket, as of Q4 2020⁸⁶⁴



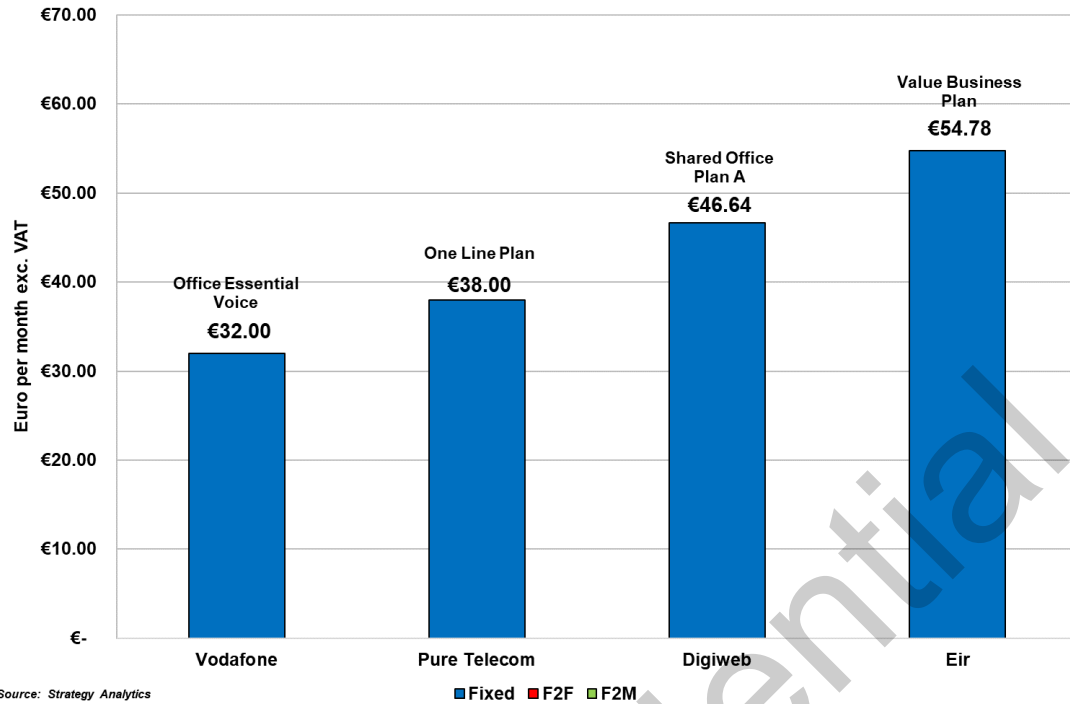
6.118 Figure 58 compares Standalone LL-RFTS tariffs advertised by SPs for business customers based on a basket of 260 calls, excluding VAT.⁸⁶⁵ Vodafone offers the cheapest tariff for this particular basket at €32.

⁸⁶³ Basket assumes usage of 135 fixed to fixed minutes and 45 fixed to mobile minutes.

⁸⁶⁴ ComReg QKDR data.

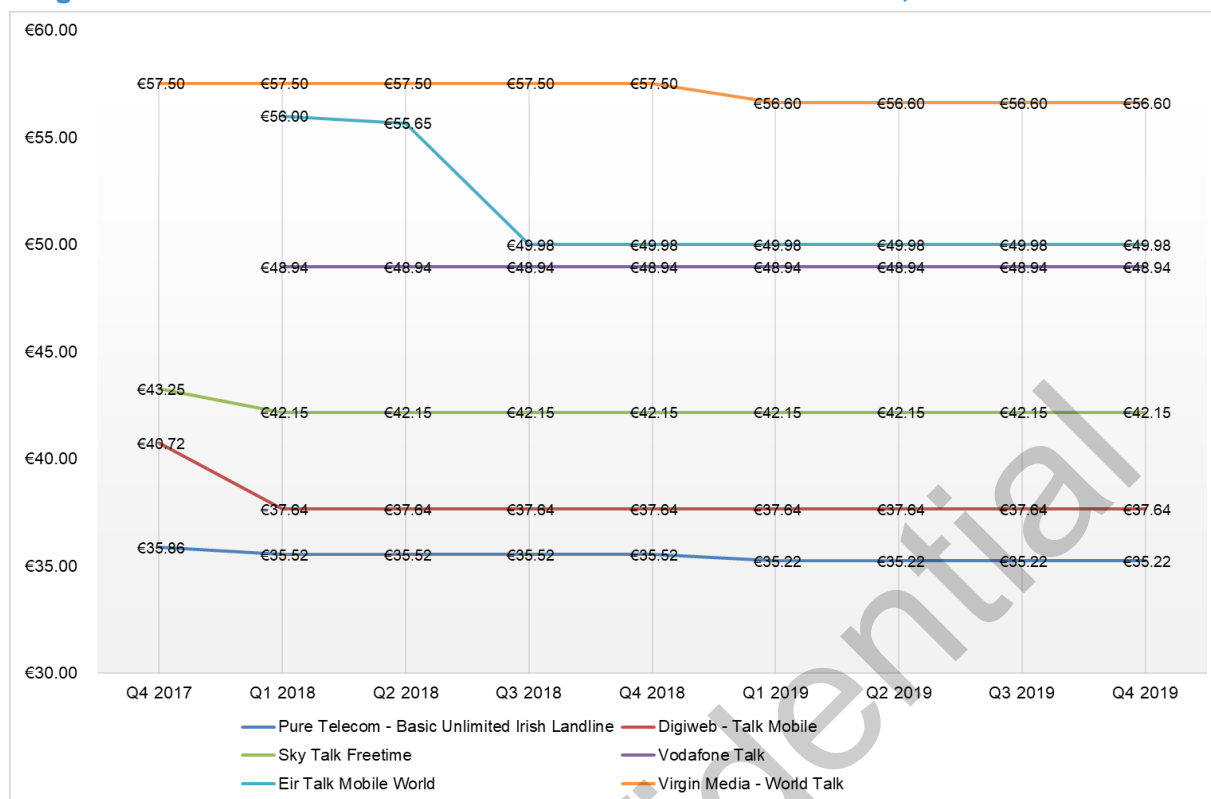
⁸⁶⁵ Basket assumes usage of 370 fixed to fixed minutes and 190 fixed to mobile minutes.

Figure 58: OECD Business Standalone Fixed Voice 260 Calls Basket, as of Q4 2020⁸⁶⁶



6.119 Figure 59 below tracks a sample of residential Standalone LL-RFTS packages over the past nine quarters. In general, the prices of these packages have remained consistent, with minimal changes in price.

⁸⁶⁶ ComReg QKDR data.

Figure 59: OECD Residential Standalone RFTS 60 Calls Basket, Q4 2017 - Q4 2019⁸⁶⁷

Universal Service Obligation

- 6.120 ComReg notes that, pursuant to the 2016 USO Decision, Eircom is required, where requested, to provide RFTS at a geographically averaged price ('GAP').⁸⁶⁸ This limits Eircom's commercial pricing freedom by requiring it to charge the same price for RFTS, regardless of location. Thus, Eircom is not entitled to charge more to end users who, for example, live in remote rural areas.
- 6.121 In applying the MGA, ComReg assesses the Relevant RFTS Markets absent the Retail Price Cap ('RPC')⁸⁶⁹ remedy imposed under the 2014 RFVA Decision, but in the presence of GAP under the USO. ComReg discusses the USO in greater detail at paragraphs 6.201 to 6.205 below.

⁸⁶⁷ ComReg QKDR data.

⁸⁶⁸ As set out at footnote 515 above, ComReg is currently consulting on an updated USO requirement.

⁸⁶⁹ This was originally imposed in 'SMP Obligation: Retail Price Cap Remedy - Fixed Narrowband Access Markets', ComReg Document No. 07/76, Decision No. 07/07 dated 1 October 2007.

Wholesale prices

- 6.122 The extent to which competitors in the Relevant RFTS Markets can set prices independently of Eircom impacts the competitive constraint imposed by those SPs in those markets. Many of Eircom's competitors rely on its wholesale inputs, including SB-WLR, to provide RFTS, as they do not have a network of their own. ComReg regulates the price of SB-WLR. Prices for the FVCO component of SB-WLR are currently subject to a cost orientation obligation, calculated based on a Top Down Forward-Looking Long Run Average Incremental Cost-plus pricing ('LRAIC+') model. PSTN WLR is currently subject to cost orientation based on a combination of Bottom-up LRAIC+ and Top-down Historical Cost Accounting ('HCA') costing methodologies.⁸⁷⁰ ISDN WLR is subject to a maximum charging approach, i.e. no more than current prices under the 2016 Pricing Decision.⁸⁷¹
- 6.123 Similarly, WLV is purchased by some SPs to provide RFTS, which avoids the need for SPs to manage interconnection for their traffic. While the price of WLV is not regulated by ComReg, the WLR and FVCO components (together being SB-WLR) that are necessary for this end-to-end service to be offered by SPs are subject to price control obligations. Other components such as transit are not regulated, but in order to provide the end-to-end service, are priced in by Eircom in its offering to SPs.
- 6.124 Approximately half of Eircom's wholesale customers purchase SB-WLR alongside WLA/WCA inputs to provide POTS-based RFTS and broadband bundles. As noted in paragraphs 5.271 to 5.274 (and Table 36 to Table 37), 51% of Access Seeker purchases of wholesale NG Broadband inputs (FTTC or FTTP VUA, or Bitstream) are on a standalone basis, as of Q4 2020 (which would require the Access Seeker to deliver RFTS by means of Managed VoIP if offering a bundle of broadband and RFTS), while the remaining 49% of wholesale NG Broadband inputs were purchased alongside POTS (which requires the Access Seeker to pay FACO charges to Eircom).

⁸⁷⁰ PSTN retail line rental charges are subject to a price cap pursuant to ComReg's 2014 RFVA Decision. ComReg intends to remove this price cap.

⁸⁷¹ Paragraph 6.153 of "Pricing of Eir's Wholesale Fixed Access Services: Response to Consultation Document 15/67 and Final Decision", ComReg Decision 03/16, Document 16/39 (the '2016 Pricing Decision').

6.125 The 2018 Bundles Decision imposed an obligation on Eircom not to cause a margin squeeze in the WLA Market and Regional WCA Market when it offers retail bundles for sale. Eircom is therefore required, when it offers a bundle for sale, to demonstrate that it is not causing a margin squeeze between the price(s) for regulated wholesale components required by an SP to economically replicate such an Eircom bundle offer, and the price of the Eircom retail bundle. ComReg recognised in the 2018 Bundles Decision the decline in call volumes (paragraph 3.70 in the 2018 Bundles Decision), which has continued (see Figure 22 in Section 4), but also recognised, in relation to FACO, that new technology (e.g. Managed VoIP) significantly reduced the need for bundles to be defined as having to require FACO inputs, except where they have to be included in providing the fixed access path to the end user (e.g. POTS-based Bitstream). As noted in the 2018 Bundles Decision, one respondent ([X ██████████ X]) identified that, for it at least, call packages included in a bundle are not the main driver behind customers' bundling preferences. The 2019 Residential Market Research also indicates that this is the case.⁸⁷²

6.126 To date, Eircom wholesale pricing has largely been a function of regulation in the FACO market rather than competition *per se*, but ComReg notes that prices of regulated products are set in relation to Eircom's underlying costs, compared to an equally efficient SP and what prices would prevail, were prices cost-oriented.

Fixed Number Porting

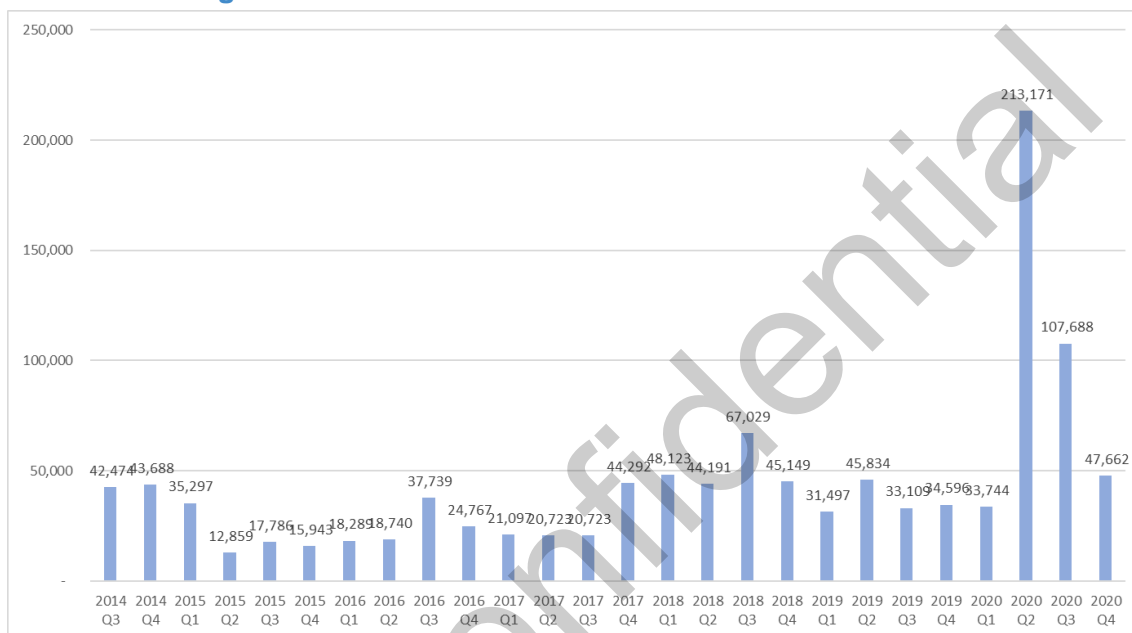
6.127 Figure 60 illustrates the number of (geographic and non-geographic) fixed numbers ported between RFTS SPs since Q3 2014. Fixed Number Portability ('FNP') allows end users to switch RFTS SP while retaining their fixed number. In Q4 2020, 47,662 numbers were ported between SPs (402,265 numbers in the preceding twelve months).⁸⁷³ Over the last twelve months, an average of 100,566 numbers have been ported each quarter.

⁸⁷² Slide 24 of the 2019 Residential Market Research shows that, of those respondents with a bundle of services, 64% noted that broadband was the most important component, followed by TV (17%).

⁸⁷³ ComReg notes that, at Q4 2018, the industry project to transition from a porting process based on a legacy central reference database for recording the porting status of geographic and non-geographic ported numbers to a new porting solution had completed its implementation and data migrations phase and had moved into normal operational mode. Furthermore, the process associated with the new porting solution provided for enhanced data collection capabilities that would improve the accuracy of porting data recorded.

6.128 ComReg notes that the FNP database only records data on end users that retain their telephone number while switching between RFTS SP networks. Therefore, porting numbers presented in Figure 60 should not be considered as a full proxy for RFTS switching activity, as switching between SPs using the same underlying network for the provision of RFTS (e.g. where a retail customer switches SP, but both SPs' underlying retail services are provided on the same network – as in the case where retail services are provided over the same wholesale network) would not be recorded in the FNP database.

Figure 60: Fixed Numbers Ported Q3 2016 to Q4 2020⁸⁷⁴



Conclusions on observable trends towards effective competition

6.129 Having regard to the assessment in paragraphs 6.96 to 6.126 above, absent regulation in the Relevant RFTS Markets, ComReg's position is that, on balance, Eircom, as the previously-designated SMP SP is sufficiently constrained by existing competition, suggesting a tendency towards effective competition.

6.130 In the Relevant RFTS Markets, ComReg's position is that Eircom faces sufficient constraints from existing competition, having regard to the conclusions on the Relevant FACO Markets (paragraphs 7.408 to 7.411). This includes competition from Managed VoIP-based RFTS delivered over alternative networks (e.g. Virgin Media, SIRO), competition from Access Seekers at the retail level (that make use of FACO or WLA/WCA inputs) and regulated wholesale access prices.

⁸⁷⁴ ComReg QKDR data. For the avoidance of doubt, ComReg can confirm that the spike at Q2 2020 does represent actual number ports, and is not a data error, or the result of a data re-categorisation.

Potential Entry to the Relevant RFTS Markets

- 6.131 In this section, ComReg examines the likelihood, extent and timeliness of potential entry and competition occurring in the Relevant RFTS Markets over the lifetime of this market review.
- 6.132 While Section 4 defined the Relevant RFTS Markets in terms of short to medium term constraints on a HM provider of RFTS, in the context of the 3CT assessment, the effectiveness of potential direct and indirect competitive constraints that may materialise is considered over a longer time horizon.
- 6.133 In paragraph 6.22 ComReg identified that SPs wishing to compete with Eircom in the Relevant RFTS Markets would need to:
- (a) Build an independent network to offer RFTS;
 - (b) Purchase upstream FACO or WLA/WCA broadband inputs; or
 - (c) Adapt an existing network to provide RFTS.
- 6.134 Below, ComReg considers the effectiveness of any competitive constraints arising from potential entry under each of these three scenarios. ComReg's position is that there is a likelihood of potential competition in the Bundled LL-RFTS Market and the HL-RFTS Market, but that there is unlikely to be potential entry to the Standalone LL-RFTS Market. SPs have indicated to ComReg that there are higher margins to be earned on bundles of RFTS and broadband (and other services) compared to standalone RFTS and, thus, there are greater incentives to enter the Bundled LL-RFTS Market. As noted in paragraph 6.67, economies of scope also arise in the provision of RFTS and broadband bundles.

Building an independent network to provide RFTS

- 6.135 ComReg has considered the extent to which potential competition from greenfield network builds would be likely to materialise over the period of this market review. This is also considered in the context of the upstream FACO markets in paragraphs 7.203 to 7.233.
- 6.136 As discussed at paragraph 6.53 above, a number of factors may act as a barrier to this type of entry on the Relevant RFTS Markets:
- (a) The incumbent SP controls infrastructure that is difficult for a new entrant to replicate;
 - (b) The incumbent SP has a large customer base and diversified product range, and benefits from significant economies of scale, scope and density;
 - (c) Significant sunk costs would be incurred when entering the Relevant RFTS Markets; and
 - (d) The incumbent SP benefits from a vertically-integrated structure.

- 6.137 Eircom's position in retail markets could also exacerbate the barriers to entry/expansion for SPs that do not have an existing foothold in related markets (such as RFTS, fixed broadband or pay-TV markets).
- 6.138 ComReg's position is that there is unlikely to be greenfield entry into the Relevant RFTS Markets. Furthermore, entry into the Relevant RFTS Markets based on new network build is unlikely to effectively constrain Eircom within the period of this market review. For example, as noted in paragraph 3.121, SIRO is rolling out an FTTP network, [REDACTED]
[REDACTED] [REDACTED]. ComReg notes that NBI rollout is expected to take place over a seven-year period, with the first premises connected in 2021.⁸⁷⁵ This may impact competition in the Relevant RFTS Markets as RFTS delivered over NBI's FTTP network will likely be provided in the form of Managed VoIP, and likely bundled with broadband. Accordingly, in the short to medium term, a potential constraint on Eircom could emerge from additional RFTS SPs offering Managed VoIP in the IA and in the SIRO network footprint.

Respondents' Views

- 6.139 ALTO suggested that NBP rollout implied that a 'wait and see' approach should be taken to the deregulation of the RFTS markets outside the footprint of the Urban FACO Markets.

ComReg's Assessment of Respondents' Views and Position

- 6.140 ComReg's view is that NBI has earmarked specific premises and areas for connection to the NBI network, and that this will facilitate competition in those areas and also ensure that end users can avail of NG Broadband to support Managed VoIP, absent regulation in the upstream FACO markets. ComReg discusses NBI in the context of the FACO markets in Section 5. Given the timing of NBI rollout, ComReg does not consider that its presence will have a material impact on the RFTS Markets in the short term but, as set out at Section 11 below, ComReg intends to reassess the capability of NBI to exercise an effective competitive constraint on the upstream Regional FACO Markets as part of the envisaged Mid-term Assessment.

Adapting an existing network to provide RFTS

- 6.141 ComReg has considered the extent to which potential entry in the Relevant RFTS Markets by an existing vertically-integrated SP would be likely to occur over the period of this market review. As discussed above and as summarised in paragraph 6.54, sunk costs incurred in entering the Relevant RFTS Markets may be lessened, in part, if a potential entrant has an existing network that is used to provide other services and could be leveraged to also provide RFTS.

⁸⁷⁵ <https://nbi.ie/news/latest/2021/01/22/nbi-connects-the-first-premises-under-the-national-broadband-plan/> and <https://nbi.ie/news/latest/2020/05/18/first-phase-of-national-broadband-plan-nbp-well-underway/>

- 6.142 Relative to a greenfield entrant, an existing vertically-integrated SP seeking to enter the Relevant RFTS Markets could face reduced sunk costs, particularly relating to the upfront civil costs involved in building a network. An existing SP also has an existing customer base over which it may, through cross-selling, more easily recover entry costs, and may be better placed to achieve economies of scale, scope, and density relative to a 'new build' greenfield entrant.
- 6.143 In the specific context of discussing Criterion 1 of the 3CT in respect of RFVA, the 2014 Explanatory Note notes that:

“Furthermore, alternative operators without their own fixed infrastructure can relatively easily enter the market by way of making use of regulated wholesale inputs, namely LLU and bitstream. An alternative operator who seeks access to LLU or bitstream for the purpose of providing retail broadband services can relatively easily expand its offer to telephone services (both access and calls) by utilizing IP technology. In conclusion, the market for fixed narrowband access is no longer characterised by high and non-transitory entry barriers on a Union level.”⁸⁷⁶

- 6.144 This suggests that the view of the EC is that barriers to entry are lessened by access to regulated wholesale inputs that can be used to provide RFTS.

Potential entry to the Standalone LL-RFTS Market

- 6.145 ComReg considers that the likelihood of potential entry to the Standalone LL-RFTS market is limited, although there is no technical reason why such entry could not occur in certain areas, including based on the use of broadband inputs. SPs are unlikely to invest in building an independent network, or to adapt an existing network, to offer standalone LL-RFTS, as there are higher margins to be earned on bundles of RFTS and broadband. Even where an SP operates an FTTx network, it is unlikely to offer standalone LL-RFTS delivered over Managed VoIP, as the bulk of the cost stack is the broadband access component.⁸⁷⁷ As has been shown, there are very low numbers of standalone Managed VoIP products, with Blueface being the main vendor supplying a standalone Managed VoIP solution, mainly to businesses.⁸⁷⁸

⁸⁷⁶ At p.23.

⁸⁷⁷ For example, from an Access Seeker's perspective, the monthly rental on a standalone FTTP VUA line is €23.50 (150mbps) – see page 52 of Wholesale Bitstream Access Reference Offer ('WBARO'): https://www.openeir.ie/Reference_Offers/. This is compared with €16.59 for a PSTN line, as shown in Table 34. BT indicated its response to the April 2019 IIR that it is not commercially viable to offer standalone VoB, given the cost of the broadband line.

⁸⁷⁸ As of Q4 2020, Blueface had [redacted] RFTS subscriptions.

6.146 Virgin Media offers bundles of Managed VoIP and broadband (and other services) but does not provide standalone LL-RFTS. This is because the bulk of the cost of providing Managed VoIP to the end user is in the broadband access connection and so Virgin Media has indicated to ComReg that it is not commercially viable to offer standalone LL-RFTS Managed VoIP.⁸⁷⁹

Potential entry to the Bundled LL-RFTS Market

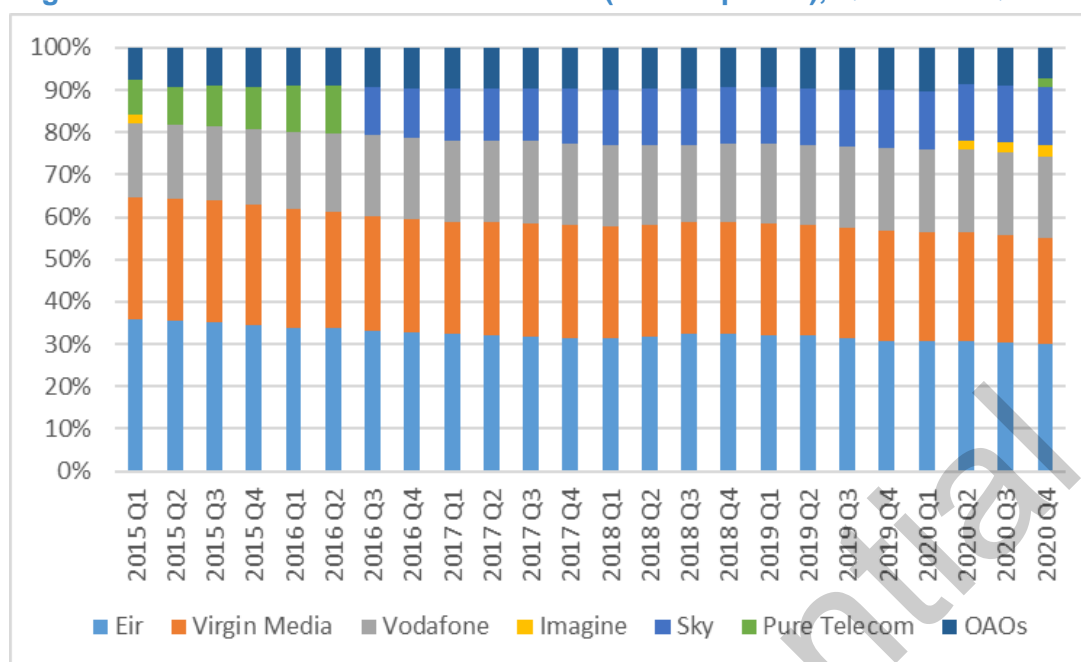
6.147 ComReg considers that there is a likelihood of potential entry to the Bundled LL-RFTS market arising from adapting an existing network to provide RFTS. SPs that currently operate an independent network or that purchase upstream wholesale inputs to provide retail broadband may relatively easily enter the Bundled LL-RFTS Market and offer bundles of RFTS and broadband. This can be by means of Managed VoIP, or by purchasing POTS-based RFTS alongside broadband from Eircom in the FACO market. For example, SPs purchasing FTTP from SIRO could add RFTS to their broadband offering by either developing their own VoIP platform or by purchasing White Label VoIP from Eircom or BT in the Relevant FACO Markets.

6.148 In 2013, Sky entered the retail markets for broadband and RFTS, leveraging its considerable TV customer base, largely reliant on access to wholesale services supplied by BT (which, in turn, relies on wholesale services purchased from Eircom). A number of smaller SPs also make use of SIRO's FTTP rollout to offer broadband in regional areas around the country.⁸⁸⁰

6.149 ComReg notes also that Eircom's retail fixed broadband (including both standalone broadband and bundles) market share has declined slowly but consistently by 16% over the past five years, as illustrated below in Figure 61 (including on the basis of wholesale regulation). This suggests that wholesale regulation has opened the market to a greater number of competitors and, accordingly, fostered greater competition, especially for broadband bundles.

⁸⁷⁹ Indicated to ComReg in bilateral meeting 12 October 2018.

⁸⁸⁰ SIRO has agreements in place with 12 retail partners, including Carnsore, Kerry Broadband, Nova Telecom, Rocket Broadband, and Westnet. <https://siro.ie/>

Figure 61: Fixed Broadband Market Share (Subscriptions), Q1 2015 – Q4 2020

Potential entry to the HL-RFTS Market

6.150 ComReg's position is that there is some likelihood of entry to the HL-RFTS Market for SPs that operate their own network or adapt an existing network to provide HL-RFTS. For example, an SP with an existing broadband network could enter the HL-RFTS Market and offer a Managed VoIP solution to businesses, as business contracts for HL-RFTS tend to be of sufficient scale to incentivise the use of broadband/IP networks to offer HL-RFTS. SIP Trunking and Hosted PBX services can be delivered using WLA/WCA market inputs. For example, Vodafone offers HL-RFTS (Hosted PBX) to businesses, which makes use of its investment in purchasing WLA/WCA products. Business contracts often include bundles of HL-RFTS and broadband/connectivity, such that SPs with an existing broadband network could likely enter the HL-RFTS Market offering such bundles.

Summary of conclusions on potential entry

6.151 In paragraphs 6.145 to 6.150, ComReg has considered the extent to which potential competition would, over the period of this market review, be likely to effectively constrain Eircom's behaviour, as the designated SMP SP in the Relevant RFTS Markets. Overall, ComReg's position is that, absent regulation in the Relevant RFTS Markets, it is likely that Eircom would be sufficiently constrained by potential competition from exercising its market power to a material degree consistent with SMP.

- 6.152 ComReg considers that there is a likelihood of potential competition in the Bundled LL-RFTS Market and the HL-RFTS Market, but that there is unlikely to be potential entry to the Standalone LL-RFTS Market, although there is no technical reason why entry cannot occur. SPs have indicated to ComReg that there are higher margins to be earned on bundles of RFTS and broadband (and other services) compared to standalone RFTS, and thus there are greater incentives to enter/expand in the Bundled LL-RFTS Market and offer bundles with broadband. As noted in paragraph 6.67, economies of scope also arise in the provision of bundles of RFTS and broadband.
- 6.153 While it is still the case that considerable upfront investment is required to supply RFTS, a number of SPs either have their own network or purchase upstream wholesale inputs in the FACO, WLA, or WCA markets, and could prospectively offer Bundled LL-RFTS and HL-RFTS.
- 6.154 For the Standalone LL-RFTS Market, ComReg considers that barriers to entry are lower than they were at the time of the 2014 RFVA Decision, largely due to the increased availability of NG Broadband that supports Managed VoIP. However, despite lower barriers to entry, the commercial incentives to enter the market are lower than at the time of the 2014 RFVA Decision, as SPs have indicated that the margins earned on standalone RFTS are lower than those for bundles of RFTS and broadband.

Expected or foreseeable technological and economic developments

- 6.155 This section identifies any anticipated technological or economic developments that may alter the competitive dynamic of the Relevant RFTS Markets and considers how such developments might impact on the market.
- 6.156 Eircom will ultimately decommission its legacy FNA network ('copper switch-off') and initial correspondence to this effect has already taken place between Eircom and ComReg. In March 2021, open eir published a White Paper entitled "*Copper switch-off: Leaving a legacy for the Future*" (the '**White Paper**') which set out some indicative proposals in respect of Eircom's approach to copper switch-off although no process or timelines have been yet agreed for this.⁸⁸¹ Once copper switch-off occurs, RFTS will cease to be delivered over the legacy network and will likely be delivered by means of Managed VoIP. In an April 2021 Information Notice, ComReg published correspondence between itself and Eircom in respect of the White Paper, in the course of which it noted that it intends to consult publicly on this matter in due course.⁸⁸²

⁸⁸¹ Available online at https://www.openeir.ie/wp-content/uploads/2021/03/White-paper_Leaving-a-Legacy.pdf

⁸⁸² ComReg - Eircom Correspondence on Copper Switch Off. Information Notice, Reference: ComReg 21/35, Date: 09/04/2021.

- 6.157 However, Eircom has also proposed to implement a network modernisation programme (using a PSTN emulation solution) which would effectively lengthen the useful lifetime of its copper access network by routing traffic through an IP core network.
- 6.158 Eircom indicated, in meetings and correspondence in September and October 2019 that its ISDN BRA network could be an exception to this. Eircom wishes to decommission its ISDN BRA network due, in part, to production of ISDN BRA chips ceasing in 2015. Eircom accordingly proposed an end of sale date for ISDN BRAs of 1 January 2021, and an end of support date for ISDN BRAs of 31 December 2024. ComReg has declined this request, and its position on phasing out of ISDN BRA is outlined in paragraphs 10.90 to 10.110. ComReg notes that the MSAN programme may impact on the Relevant RFTS Markets and on the Relevant FACO Markets in a number of ways, as outlined below at paragraphs 7.235 to 7.236. As of May 2021, it is unclear how exactly Eircom intends to proceed with its network modernisation programme, based on its recent White Paper.
- 6.159 ComReg's position is that the Standalone LL-RFTS market will continue to decline over the period of the market review as end users migrate to bundles of broadband and RFTS, a development which is dependent on the availability of broadband.

Overall Conclusions on Tendency of Relevant RFTS Markets towards Effective Competition

- 6.160 In paragraphs 6.94 to 6.159, ComReg has examined whether the Relevant RFTS Markets are likely to tend towards effective competition within the relevant time horizon, having regard to whether:
- (a) there are observable trends suggesting a tendency towards effective competition;
 - (b) potential entry in the Relevant RFTS Markets, and whether alternative SPs are in a position to roll out infrastructure, to the extent that they would be able to compete effectively with Eircom; and
 - (c) any expected or foreseeable technological and economic developments that will impact on competition within the timeframe of this market review.
- 6.161 ComReg's position, having taken into account Respondents' views in their Submissions, is that the Relevant RFTS Markets are currently tending towards effective competition. Eircom's market share in the Standalone LL-RFTS Market, which was indicative of a position of SMP in the 2014 RFVA Decision, has fallen considerably since then. Many Standalone LL-RFTS end users have moved into the Bundled LL-RFTS Market, and this has been facilitated by the increased availability of broadband. In the HL-RFTS Market, end users can avail of Managed VoIP products (including via SIP Trunks or Hosted PBX) and likely upgrade their infrastructure when contracts are due for renewal.

- 6.162 ComReg considers that the dynamics of competition on the Relevant RFTS Markets are likely to continue to change over time, due to end user behaviour and technological developments. Based on current market dynamics, ComReg's position is, therefore, that the Relevant RFTS Markets are likely to fail the second criterion of the 3CT.
- 6.163 The trends identified above indicate that the Bundled LL-RFTS Market is characterised by greater levels of competition due to the availability of broadband bundles. Where NG Broadband rollout has occurred, OAOs will be able to offer a suite of services to end users, including Managed VoB, on the basis of purchases of WLA or WCA from Eircom, SIRO, BT, or – on a forward-looking basis - NBI. Such enhanced NG Broadband availability also allows for the provision of HL-RFTS over SIP Trunking or Hosted PBX, thus reducing reliance on Eircom HL-FACO. For the Standalone LL-RFTS Market, despite wider dispersion of market shares since the 2014 RFVA Decision, ComReg's position is that the market is likely to continue to decline in absolute terms, although the barrier to offering Standalone LL-RFTS has been lowered by the availability of wholesale access products, including FACO and WLA/WCA products from Eircom, SIRO, or – on a forward-looking basis - NBI.
- 6.164 Accordingly, ComReg's position is that, within the relevant time horizon for this market review, the Relevant RFTS Markets are tending towards, and are likely to continue to tend towards, effective competition, based on evolving consumer preferences and technological developments. On that basis, ComReg's position is that the second 3CT criterion fails in relation to the Relevant RFTS Markets.
- 6.165 At least one of the three 3CT criteria must fail in order for the presumption in favour of *ex ante* regulation to be lifted.⁸⁸³ Since ComReg's analysis suggests that the first and second criteria have failed, the presumption can be lifted, and, in principle, there are grounds to withdraw *ex ante* regulation of the Relevant RFTS Markets. It is therefore not strictly necessary to proceed to assess the last criterion. However, in the interests of analytical completeness, ComReg assesses the third of the 3CT criteria.

Criterion 3: The insufficiency of competition law alone to adequately address the market failure(s) concerned

- 6.166 In its Submission response, ALTO and Vodafone noted that *ex post* competition law remedies are cumbersome, expensive and slow.

⁸⁸³ See page 5 of the 2014 Explanatory Note: ".....the Recommendation provides that NRAs should only *regulate* markets which differ from those identified in this Recommendation where this is justified by national circumstances in the sense that the three cumulative criteria referred to in point 2 of this Recommendation are met."

- 6.167 *Ex ante* regulation should only be imposed where competition law remedies are likely to be insufficient to address identified competition problems. This third criterion therefore assesses the sufficiency of competition law by itself to deal with any market failures identified in the market analysis, in the absence of *ex ante* regulation.
- 6.168 In this respect, *ex ante* regulation should only be applied in markets where an NRA is satisfied on the basis of its analysis, and of the evidence available to it, that national and EU competition law is unlikely to be sufficient by itself to redress market failures, and to ensure effective and sustainable competition.
- 6.169 *Ex ante* regulation may, in general, be more appropriate to markets which, due to underlying structural characteristics (such as, for example, the presence of natural monopoly), or due to repeated patterns of behaviour, are deemed more likely to exhibit ongoing competition problems which would, ultimately, lead to persistent harm to end users which the market would be unlikely to remedy, due to the absence of the self-correcting mechanisms which are normally present in competitive markets, and which typically discipline efforts by firms to exercise market power. Accordingly, regulation may be appropriate to markets where it can be predicted, with a high level of probability, that competition problems are likely to occur.
- 6.170 In contrast, *ex post* competition law may be more appropriate to markets which are not structurally prone to competition problems or characterised by repeated patterns of anticompetitive conduct. In such markets, competition may be generally presumed to be working well, due to the presence of sufficient competitive constraints which are capable of disciplining market participants, to the ultimate benefit of end users. Competition law may be a more appropriate means of assuring competitive outcomes in such markets, on the assumption that anti-competitive conduct is likely to be the exception, rather than the rule. In such cases, it may not be reasonable to impose an ongoing burden of compliance with regulatory obligations on a firm or firms designated with SMP, and it may be preferable to rely on the protections afforded by competition law.
- 6.171 The length of time involved in remedying competition problems by means of *ex post* competition law would be likely to limit its effectiveness. Competition law requires the commission and detection of an anti-competitive act. A National Competition Authority ('NCA') or competent NRA must then assess the allegedly anti-competitive act to determine whether it likely breaches the Competition Act 2002, or Articles 101 or 102 of the Treaty on the Functioning of the European Union (TFEU). To apply effective sanctions in Ireland, an NCA or competent NRA must then initiate court proceedings, which may or may not be successful. This is a lengthy process which would likely be ineffective in deterring and preventing anti-competitive conduct in the short to medium term in markets which are structurally prone to anticompetitive conduct.

6.172 Having regard to the issues above, ComReg does not consider that competition law is likely to be sufficient to effectively address any market failures in the RFTS Markets, should they arise. However, ComReg notes that, in any event, given that the first two criteria of the 3CT are not met, this does not alter ComReg's overall conclusions on the application of the 3CT to the Relevant RFTS Markets.

Conclusions on insufficiency of competition law

6.173 For the reasons set out above, ComReg's position is that competition law alone would not be adequate to address market failures, should they arise on the Relevant RFTS Markets. Accordingly, Criterion 3 passes in relation to the Relevant RFTS Markets. However, given ComReg's position that Criterion 1 (paragraphs 6.82 to 6.93) and Criterion 2 (paragraphs 6.160 to 6.165) fail on the basis of lower barriers to entry and a general tendency towards effective competition in the Relevant RFTS markets, this does not alter ComReg's overall conclusion on the application of the 3CT to the Relevant RFTS Markets.

Other NRA approaches to the 3CT

6.174 ComReg notes that, as of May 2021, just five NRAs⁸⁸⁴ have assessed their national RFVA/RFTS markets and concluded that the markets passed the 3CT (i.e. continued to regulate RFVA/RFTS).⁸⁸⁵ The following table outlines the particular aspect of RFVA/RFTS that is subject to regulation by these NRAs. For example, the Austrian NRA has put in place a RPC for non-residential RFTS users relating to POTS and ISDN BRA connections due to the high market share of the incumbent, barriers to entry in the form of economies of scale/scope, and low likelihood of new entry over the period of the review.

Table 61: NRAs that continue to regulate RFTS/RFVA Market as at May 2021

Country	Year	RFVA/RFTS Regulation
Austria	2017	Regulation for a sub-market of non-residential customers, POTS/ISDN BRA (price cap and accounting separation).
Croatia	2018	Access to WLR on analogue POTS and IP networks, transparency, non-discrimination, accounting separation and price control - retail minus 15% for standalone WLR, commercial negotiation for WLR and bitstream - declining number of customers that demand broadband and PSTN.
France	2017	Regulation for non-residential only: (i) access and interconnection, (ii) provision of WLR, (iii) provision of call origination services, when these are associated with WLR, (iv) non-discrimination, (v) transparency (including reference offers), (vi) indicators of quality of service, (vii) price control (price cap), and (viii) accounting obligations.
Ireland	2014	Price cap on Standalone LL-RFVA (PSTN and ISDN BRA).
Italy	2015	WLR and price squeeze test in Market 3A.

⁸⁸⁴ Austria, Croatia, France, Ireland, and Italy. There are 27 EU countries, plus Switzerland (single market) and 3 EEA countries (Iceland, Liechtenstein and Norway). ComReg looked at 30 NRAs - EU 28, Switzerland and Norway.

⁸⁸⁵ Source: Cullen International.

6.175 Table 62 indicates that the most prevalent barriers to entry to the RFTS markets identified by other NRAs are the high sunk costs of investment, economies of scale/scope, and the high and stable market share of the incumbent. The following table sets out the key reasons why each NRA found that the relevant market in question should, in principle, continue to be subject to *ex ante* regulation.

Table 62: NRA reasons for passing Criteria 1 and 2 to regulate RFTS/RFVA markets

Criterion 1 – Barriers to Entry	n	Criterion 2 – Tendency towards effective competition	N	Criterion 3 - Insufficiency of competition law	n
SA RFTS is important market segment	1	High, stable incumbent market share	4	Sufficient	
High sunk costs / economies of scale / scope / investment required	3	Lack of mobile constraint		Insufficient	5
Alternative infrastructure not constraint	1	Lack of VoIP constraint			
Incumbent network not easy to duplicate	1	Importance of CPS and WLR			
Other		Other			
o High / stable incumbent market share	4	o Incumbent has independence in price setting behaviour	1		
		Incumbent only SP for significant part of market	1		

6.176 In relation to the tendency toward effective competition, the main inhibitor of effective competition was the high and stable market share of the incumbent, followed by the incumbent's independence in price setting behaviour, and the fact that the incumbent is the only provider for a significant part of the market.

6.177 In respect of the competition law criterion, four NRAs concluded that this criterion passed because *ex post* competition law would be unable to address or rectify market failures in a sufficiently prompt and timely manner, while the remaining NRA did not specify why the criterion passed.

6.178 For the 25 NRAs that have deregulated the RFVA/RFTS markets, Table 63 below outlines the key reasons for such conclusions. In general, NRAs concluded that criteria 1 and 2 were not met, and either did not assess criterion 3 or concluded that it was met (i.e. insufficient to address *ex post* competition problems).

Table 63: NRA reasons for failing Criteria 1 and 2 to deregulate RFTS markets

Country	Year	3CT met?			Key reasons for deregulation
		Criterion 1	Criterion 2	Criterion 3	
Belgium	2018	No	Not assessed	Not assessed	IBPT concludes that there are no high, non-transitory barriers to entry to the fixed telephone access market

Bulgaria	2016	No	No	Yes	High number of companies providing retail access to PSTN, FNP reduces barriers to switching, constraint from mobile
Cyprus	2015	No	No	Not assessed	
Czech Rep.	2016	No	No	Yes	ČTÚ observes that there are 387 market players providing retail access to the fixed or mobile public telephone networks (of which 268 provide only fixed access).
Denmark	2018	No	No	Yes	Regarding the retail market for fixed telephony (including both connections and calls as a bundle), DBA finds that barriers to entry are no longer present due to IP telephony services (90% of subscriptions), NGA services and access to TDC's CATV
Estonia	2014	No	No	No	
Finland	2010	No	No	Not assessed	In view of the competitive pressure coming from mobile telephony both markets show a tendency towards effective competition over the review period and therefore the second criterion is not met.
Germany	2019	No	No	Not assessed	BNetzA is of the view that entry barriers will continue to significantly decrease and ultimately become so low that the first criterion will no longer be fulfilled. BNetzA observes a clear and constant downwards trend in the incumbent's market share 2013-2017, which continues in the projections for 2018-2021
Greece	2017	Yes	No	Not assessed	EETT has found that, despite the presence of entry barriers, in the recent years OTE's market shares have significantly decreased and prices have shown a downward trend. EETT concludes that the second criterion is not met and the analysed markets tend towards effective competition
Hungary	2016	Yes	No	Not assessed	NMHH concludes that there is a continuous trend of shrinking market shares of the incumbent operators, while the shares of infrastructure-based competitors are growing
Latvia	2017	Yes	No	No	
Lithuania	2020	No conclusion	No	Not assessed	
Luxembourg	2016	No	No	No	ILR concludes on the absence of high and non-transitory entry barriers due to the development of NGA networks, increased fixed-mobile convergence, the transition from services based on PSTN networks to VoIP services, as well as the easier availability of LLU and other wholesale access products offered by EPT (i.e. bitstream and others).
Malta	2014	No	No	No	MCA considers that, despite the existence of potential barriers to entry, they have not prevented market entry. Incumbent is no longer able to behave independently of its competitors in view of direct constraints exerted by other fixed operators and indirect constraints from mobile and OTT services.
Netherlands	2017	Not assessed	No	Not assessed	
Norway	2016	No	Not assessed	Not assessed	

Poland	2018	No	No	No	UKE considers that the markets are no longer characterised by high barriers to entry: a significant number of operators provide access services (mostly at local / regional level), potential new entrants do not need to have their own network but may rely on regulated wholesale inputs, and, finally, operators can provide converged fixed-mobile services on the basis of MVNO access.
Portugal	2014	No	No	No	
Romania	2013	No	No	Not assessed	
Slovakia	2015	No	Not assessed	Not assessed	RÚ observes that there are more than 50 Undertakings providing public telephone service at a fixed location on the retail market.
Slovenia	2018	No	No	Yes	
Spain	2016	No	No	No	
Sweden	2016	No	No	Yes	
Switzerland	No legal basis				
UK	2010/2017 update	No	No	No	

Conclusions on the 3CT

6.179 Accordingly, ComReg has formed the view that, in respect of the Relevant RFTS Markets, the 3CT is not passed. ComReg therefore has evidence to conclude that each of the Relevant RFTS Markets are characterised by sufficient levels of competition to immediately withdraw *ex ante* regulation. In light of this finding, ComReg is not required to carry out a competition assessment of the Relevant RFTS Markets, to determine whether any SP or SPs on those markets hold positions of SMP.

Respondents' Views

6.180 BT considered that, absent regulation of the Urban FACO Markets, the 3CT would pass on the RFTS markets in the footprint of the Urban FACO Markets. In respect of the RFTS markets in the footprint of the Regional FACO Markets, BT considered that HL-RFTS should continue to be regulated due to high replacement costs for end users. BT did not specify precisely what replacement costs it was alluding to, but from the context, it appears that BT refers to replacement costs associated with migrating from HL-RFTS delivered over FNA, to HL-RFTS Managed VoIP.

ComReg's Assessment of Respondents' Views and Position

6.181 ComReg considers replacement costs in the broader context of migration from FNA RFTS to Managed VoIP at paragraphs 7.199 to 7.201 below.

6.2 Overall Conclusions on RFTS Market Analysis

- 6.182 Having defined the Relevant RFTS Markets in Section 4 and carried out an assessment of the 3CT for these markets in paragraphs 6.13 to 6.179 above, ComReg's position is that none of the three Relevant RFTS Markets continue to warrant *ex ante* regulation.
- 6.183 Table 64 below summarises the 3CT outcome for the Relevant RFTS markets, with ComReg's position that the 3CT fails for the Relevant RFTS Markets.

Table 64: Summary of 3CT for Relevant RFTS Markets

Criterion 1 Presence of high and non-transitory barriers to entry	Fail
Criterion 2 Tendency towards effective competition within the relevant time horizon	Fail
Criterion 3 Insufficiency of competition law alone to adequately address the market failures(s) concerned	Pass
Outcome	Fail 3CT

- 6.184 ComReg's position is that barriers to entry have lowered sufficiently since the 2014 RFVA Decision and that the markets will tend towards effective competition, suggesting that the Relevant RFTS Markets are not susceptible to *ex ante* regulation. Accordingly, ComReg is withdrawing existing regulation from the Relevant RFTS Markets.
- 6.185 ComReg further revisits the 3CT assessment in Section 8, having also considered the SMP and 3CT assessment for the Relevant FACO Markets.

6.3 Withdrawal of SMP and Remedies on the Relevant RFTS Markets

- 6.186 In cases where Eircom has previously been designated as holding SMP on a specific market, and has therefore been subject to regulatory obligations, ComReg notes that Regulation 27(2) of the Framework Regulations⁸⁸⁶ allows ComReg to give reasonable notice to any parties which it considers to be affected by the withdrawal of such obligations.
- 6.187 As discussed above in paragraphs 6.13 to 6.185, ComReg's position is that the following Relevant RFTS Markets are not susceptible to *ex ante* regulation:

⁸⁸⁶ This provision is mirrored at Article 67 of the EECR.

- (a) **Market 1a:** Standalone Low-Level RFTS (**'Standalone LL-RFTS'**) including RFTS delivered over PSTN and ISDN BRA, and Managed VoB delivered over NG Broadband on a standalone basis;
 - (b) **Market 1b:** Bundled Low-Level RFTS (**'Bundled LL-RFTS'**) including RFTS delivered over PSTN and ISDN BRA, and Managed VoB delivered over (and with) NG Broadband on a bundled basis together with any of broadband, television or mobile services; and
 - (c) **Market 1c:** High-Level RFTS (**'HL-RFTS'**) including RFTS delivered over ISDN FRA and PRA, and SIP Trunk or Hosted PBX forms of Managed VoIP delivered over NG Broadband on a standalone basis or on a bundled basis together with any of broadband, television or mobile services.
- 6.188 In particular, ComReg's position is that high and non-transitory barriers to entry are no longer present, and that these markets are tending towards effective competition. Failure to meet any of the 3CT criteria implies that the Relevant RFTS Markets are no longer susceptible to *ex ante* regulation and are effectively competitive. In such cases, ComReg is required, pursuant to Regulation 27(3), to remove regulation from those markets.
- 6.189 ComReg accordingly withdraws existing regulatory obligations imposed on Eircom by means of the 2014 RFVA Decision and associated Decisions, given its finding that the Relevant RFTS Markets are not susceptible to *ex ante* regulation. In this respect, all existing SMP obligations are withdrawn from the Relevant RFTS Markets on the date at which this Decision takes effect.

Respondents' Views

- 6.190 In the presence of Regional FACO Market regulation, **BT** agreed with the withdrawal of remedies for LL-RFTS, but not for HL-RFTS. While acknowledging that HL-RFTS is in decline, BT noted that the replacement costs for customers can still be significant and the services should be allowed to 'retire gracefully' over the coming years with customers protected, rather than the potential for fast track closure of these services that deregulation would allow.
- 6.191 BT strongly disagreed with the ComReg proposal for deregulation in the Urban FACO market and, likewise, disagreed with any deregulation of RFTS in the footprint of the Urban FACO Markets, absent Urban FACO Market regulation. BT considered that there would be a real risk of supply disruption such as non-supply or higher prices in that part of the RFTS market covered by the portion of the Urban FACO Markets not supplied with wholesale NG Broadband (to a maximum of 20% of premises in the relevant EA).

- 6.192 **Eircom** commented that it was disappointed that ComReg had taken so long to reach what was, in its view, an inevitable conclusion to deregulate the Relevant RFTS Markets, and noted that it was unclear what the rationale was for reviewing the RFTS and FACO markets in parallel. Eircom suggested that delays by ComReg in deregulating the Relevant RFTS Markets had led to it remaining subject to SMP obligations in a market where it no longer had a position of market power and, as a result, was at a competitive disadvantage in comparison to other operators.
- 6.193 CE referenced the USO which, in CE's view, would provide an additional protection for any 'captive' retail customers.⁸⁸⁷ CE noted that ComReg acknowledged the presence of the USO and considered it when analysing the RFTS Market.

ComReg's Assessment of Respondents' Views and Position

- 6.194 ComReg responds to BT's views on deregulation of the Urban FACO market in Section 7, paragraphs 7.190 to 7.202. ComReg also considers the impact of defining sub-national FACO markets on the downstream RFTS markets and responds to points raised in that regard below in Section 8.
- 6.195 In relation to BT's point on the maximum 20% of premises in the Urban FACO market that may not have access to wholesale NG Broadband, ComReg has responded to a similar point by ALTO (see paragraph 7.201). ComReg notes that the 3CT suggested that it was no longer appropriate to regulate the RFTS Market, and as such it was no longer appropriate to impose a RPC on Eircom for RFVA for standalone PTSN and ISDN BRA customers.
- 6.196 In relation to Eircom's point that it has been subject to SMP obligations in a market where it no longer has a position of market power and, as a result is at a competitive disadvantage in comparison to other operators, ComReg does not accept that Eircom has been subject to any material competitive disadvantage. While regulation has been in place, ComReg notes that since the 2015 FACO Decision the level of retail regulation has been minimised, and competition problems have sought to be addressed at the most upstream level possible. ComReg further notes that the RPC remedy applies only to the RFVA component of this singular market with Eircom having freedom to compete in other RFTS markets.
- 6.197 ComReg notes that there is currently an RPC remedy in place in the Standalone LL-RFTS market (imposed under the 2014 RFVA Decision) and, for the avoidance of doubt, this remedy is withdrawn.

⁸⁸⁷ p.27 of Copenhagen Economics Report.

- 6.198 As of Q4 2020, the total number of Eircom retail Standalone LL-RFTS subscriptions eligible for the RPC obligation amounted to [X ██████████ ██████████ X]. Information provided to ComReg from Eircom suggests 51% of these end users are located in EAs within the footprint of the Urban FACO Markets, where several competing SPs are present and there is significant coverage of NG Broadband.⁸⁸⁸ As noted in paragraph 4.94, the number of Standalone LL-RFTS end users is in decline.
- 6.199 The RPC remedy will be withdrawn on the effective date of this Decision. ComReg's position is that it is not necessary to provide a sunset (withdrawal) period in relation to the RPC remedy. Withdrawal of the RPC remedy should not cause disruption to parties such as Access Seekers, and such a withdrawal period is not required to allow Access Seekers to make alternative arrangements for their end users, absent regulation. In particular, ComReg notes that the RPC remedy applies only to Eircom's pricing of PSTN and ISDN BRA to its own retail arm, and as such, ComReg considers that disruption is likely to be minimal.
- 6.200 Although ComReg is removing remedies from this market, a USO in relation to RFTS remains in place. Universal service concerns the basic rights of end users, set out in the Universal Service Directive, to a minimum set of telecommunications services. The Universal Service Directive was transposed into Irish law by means of the Universal Service Regulations 2011.⁸⁸⁹
- 6.201 The 2016 USO Decision designated Eircom as the Universal Service Provider ('**USP**') for the provision of the access at a fixed location ('**AFL**') under the USO for the period 29 July 2016 to 30 June 2021.⁸⁹⁰ ComReg is currently consulting on this designation, as set out at footnote 515 above.
- 6.202 The 2016 USO Decision requires, *inter alia*, that "*the USP shall apply geographically averaged prices throughout the State for the Connections and PATS.*"⁸⁹¹ This relates to services designated in accordance with Regulation 3, namely, a connection and Publicly Available Telephone Service ('**PATS**').⁸⁹²

⁸⁸⁸ 51% of end users fall into the Urban FACO Market, 35% fall into the Regional FACO Market, 14% of end users cannot be mapped to an EA.

⁸⁸⁹ S.I. No. 337/2011 - European Communities (Electronic Communications Networks and Services) (Universal Service and Users' Rights) Regulations 2011.

⁸⁹⁰ "Universal Service Requirements - Provision of access at a fixed location (AFL USO)", Decision D05/16, ComReg Document 16/65, 29 July 2016.

⁸⁹¹ 'Publicly Available Telephone Service' or 'PATS' means a service made available to the public for originating and receiving, directly or indirectly, national or national and international calls through a number or numbers in a national or international telephone numbering plan.

⁸⁹² For the avoidance of doubt, this does not apply to bundled products.

- 6.203 The requirement to apply geographically averaged pricing ('**GAP**') as part of the 2016 USO Decision restricts Eircom's commercial pricing freedom by requiring it to charge the same price for RFTS, regardless of location. Thus, Eircom is not entitled to charge more to end users who, for example, live in remote rural areas.
- 6.204 Additionally, Regulation 8 of the Universal Service Regulations gives ComReg the power to monitor retail tariffs and to impose tariff options (with the consent of the Minister) in order to ensure that consumers are not prevented from accessing certain services, including AFL. In the 2016 USO Decision, having regard to the presence of the existing RPC remedy (under the 2014 RFVA Decision), ComReg did not consider it necessary to impose tariff options at that time. Accordingly, the sole affordability measure included in the 2016 USO Decision is the obligation on the USP to charge according to GAP principles.
- 6.205 In the 2014 RFVA Decision, ComReg assessed the constraint imposed on Eircom in view of its position as USP and, specifically, the impact of GAP. It held that any such constraint was insufficient on the basis that the USO did not cover ISDN services, did not address the absolute level of the RFVA price and did not ameliorate other competition problems.

Respondents' Views: risk of margin squeeze

- 6.206 **Vodafone** raised concerns that removal of existing RFTS pricing and cost accounting obligations could afford Eircom the opportunity to cause a margin squeeze in the footprints of both the Urban and Regional FACO Markets vis-à-vis the prices Eircom can levy at the retail level (e.g. in multi-site tenders for fixed voice services across multiple EAs). Vodafone requested that ComReg set out in more detail the impact of its proposals on margin squeeze assessment moving forward to ensure operators can compete effectively in the footprint of the Urban FACO Markets, and for multi-site tenders across the footprints of the Urban and Regional FACO Markets.
- 6.207 **BT** was strongly concerned at the risk of an upstream margin squeeze between WLR prices and WLA+VoIP costs in the FACO market that could create supply issues in the footprint of the Urban FACO Markets, and ultimately cause RFTS supply difficulties to the portion of the Urban FACO Markets supplied with wholesale NG Broadband (to a minimum of 80% of premises).

ComReg's Assessment of Respondents' Views and Position

6.208 ComReg has responded to Vodafone's and BT's concerns in paragraphs 10.311 to 10.314. ComReg's view is that removing the RPC remedy will afford Eircom flexibility in setting prices for RFVA to its own customers only, including PSTN and ISDN BRA customers. Any such margin squeeze in the footprints of the Urban and Regional FACO Markets would relate to RFVA charges only and to standalone LL-RFTS customers (on PSTN and ISDN BRA), as the RPC does not apply to Bundled LL-RFTS or HL-RFTS. As the standalone cohort of LL-RFTS customers is in decline (see Figure 40) Eircom's retail pricing flexibility in this market is unlikely to have a significant impact on other SPs, particularly as most SPs are not competing for these standalone customers. In the Bundled LL-RFTS market and the HL-RFTS market, Eircom already has pricing flexibility. It is also worth noting that ISDN BRA is in decline and it is proposed that it will eventually be discontinued (see Figure 11, and paragraphs 11.63 to 11.66 for a discussion of ISDN BRA withdrawal).

Conclusion

6.209 ComReg notes that the size of the Standalone LL-RFTS Market has declined as end users have migrated to the Bundled LL-RFTS Market. Additionally, of those end users availing of the RPC remedy, the majority are PSTN and, so, the fact that the USO does not apply to ISDN products poses less of an affordability concern. In relation to absolute RFVA prices, as noted in paragraph 4.379, other SPs in the market price RFVA in a similar manner to Eircom's price under the RPC. Finally, in relation to competition problems, as noted in paragraph 6.163, ComReg does not foresee competition problems in the Standalone LL-RFTS market, particularly insofar as the market is in decline and shares have become more dispersed since the 2014 RFVA Decision.

7 FACO Competition Analysis – 3CT and SMP

7.1 Three Criteria Test for Relevant FACO Markets

Overview

- 7.1 ComReg notes that neither the 2014 Recommendation nor the 2020 Recommendation include FACO (or FA or FVCO) on the list of markets deemed susceptible to *ex ante* regulation. Accordingly, at EU level, there is no presumption in favour of continuing to regulate these markets. ComReg must therefore determine whether, at national level, any of the four candidate FACO markets defined at Section 5 above continue to warrant regulation. The Three Criteria Test ('3CT') set out in the 2014 Explanatory Note, the 2020 Explanatory Note and Article 67(1) of the EECC is the mechanism which allows for this assessment to be carried out in a structured and objective way.
- 7.2 The 3CT sets out the criteria that must be cumulatively satisfied in order to determine whether a relevant market should be, or should continue to be, subject to *ex ante* regulation. The three criteria are:
- (a) The presence of high and non-transitory barriers to entry;
 - (b) A market structure which does not tend towards effective competition within the relevant time horizon; and
 - (c) The insufficiency of competition law alone to adequately address the market failure(s) concerned.
- 7.3 If the 3CT passes, that is to say, if all three criteria are satisfied, then competition is unlikely to be working well on the market in question, and *ex ante* regulation continues, in principle, to be warranted. It is then necessary to carry out a competition assessment, to determine whether the market is characterised by the presence of SMP.
- 7.4 If, on the other hand, at least one of the 3CT criteria fails, this suggests that competition is working well on the market in question, and that *ex ante* regulation is no longer required. In such instances, the market should be deregulated.
- 7.5 The following sub-sections consider the 3CT to determine whether it is, in principle, appropriate to continue to regulate the four Relevant FACO Markets.
- 7.6 As set out at Section 5 above, ComReg defines four Relevant FACO Markets. The 3CT assessment which follows analyses the two Urban FACO Markets and the two Regional FACO Markets.

Summary of Consultation Responses

- 7.7 Vodafone broadly agreed with ComReg's 3CT and competition assessment. Accordingly, Vodafone agreed that Eircom has SMP in the Regional HL-FACO Market and the Regional LL-FACO Market. Vodafone also broadly agreed at a conceptual level that Eircom does not have SMP in the Urban LL-FACO Market and Urban HL-FACO Markets, subject to concerns it expressed elsewhere in its Submission.
- 7.8 ALTO broadly agreed with ComReg's preliminary conclusions on the market assessment for the Relevant FACO Markets. However, ALTO disagreed that sufficient indirect constraints exist in the Urban FACO Markets. BT also disagreed with various aspects of ComReg's 3CT and SMP analysis, and the conclusions which ComReg drew from its assessment.
- 7.9 Eircom disagreed with ComReg's market assessment for the Relevant FACO Markets. Eircom considered that both the assessment of the 3CT and the assessment of SMP for the Relevant FACO Markets are flawed. Eircom and its consultants CE also made a number of comments in respect of the proposals (the '**Proposals**') offered by Eircom.⁸⁹³ ALTO also commented on the proposed MTA. Both the Proposals and the MTA are addressed at Section 10 below.
- 7.10 Sky offered no specific comments.

Criterion 1: High and non-transitory barriers to entry

- 7.11 The 2020 Explanatory Note identifies that high, non-transitory barriers to entry may be structural, or legal and regulatory:
- (a) **Structural barriers** to entry arise where technology or network characteristics (e.g. cost structure, level of demand) create asymmetric conditions between SPs. Examples include the presence of absolute cost advantages, substantial economies of scale or scope, capacity constraints, and high sunk costs; and
 - (b) **Legal or regulatory barriers** result from legislative, administrative or other state measures that directly affect the relevant market. Examples include legal requirements related to the necessary permissions to roll out infrastructure (e.g. planning permission for civil works, or the need to obtain rights of way to roll out a network over private property).

⁸⁹³ In February 2020, Eircom approached ComReg offering to implement a set of commitments which it proposed to implement on the Relevant FACO Markets on a voluntary basis (the '**February 2020 Proposals**') in lieu of any regulatory obligations. A non-confidential version of the February 2020 Proposals was published alongside the 2020 Consultation as ComReg Document 20/46c. Eircom subsequently provided a revision to ComReg in April 2021 (the '**April 2021 Proposals**'), together, the '**Proposals**'. ComReg publishes non-confidential version of the April 2021 Proposals as a (late) Submission to the 2020 Consultation.

Respondents' Views

- 7.12 Eircom considered that ComReg's Criterion 1 assessment was flawed, due to the definition of a FACO focal product consisting of both FA and FVCO, which focussed on barriers to entry in relation to both elements as one. In Eircom's view, this missed the context of the EC framework to minimise regulation where possible by focussing on the actual bottleneck, which Eircom claimed is FA, not FVCO.
- 7.13 Eircom argued that ComReg's conclusion that FVCO and FA should be assessed collectively as FACO leads to an inevitable conclusion that barriers to entry remain on the Regional FACO Market. This error is then extrapolated to the FVCO market. In Eircom's view, the FA and FVCO elements of the FACO focal product are subject to differing competitive constraints, the strengths of which will vary. ComReg's assessment fails to capture this, since it has only considered FACO as a single focal product.
- 7.14 Eircom suggested that the 2014 Explanatory Note recognises the ability of both mobile and fixed SPs to overcome barriers to entry to the provision of FVCO. For mobile SPs, the Commission noted, on the basis of (self-supplied) wholesale call origination services, that *"...it can be concluded that the Mobile Network Operators (MNOs) have already overcome the barriers to entry"* and that *"the wholesale call origination services in the fixed networks are subject to direct competitive pressure from (self-supplied) mobile call origination."*
- 7.15 Eircom also alluded to the 2014 Explanatory Note's statement that wholesale call origination can be relatively easily self-supplied by SPs who establish a direct connection to end users, either on the basis of their own infrastructure or through - regulated - wholesale products, and that demand for CS/CPS services would become less relevant over time.
- 7.16 Eircom accordingly concluded that, given competitive constraints arising from complementary products and a valid CBP assessment, the FVCO market fails Criterion 1 of the 3CT. Furthermore, given prospective NBI rollout over the market review period, the FA component of FACO will tend towards a competitive outcome, thus failing Criterion 2.

ComReg's Assessment of Respondents' Views and Position

- 7.17 ComReg has addressed views in respect of its FACO focal product assessment at paragraphs 5.83 to 5.98 above. ComReg notes that its assessment of the relevant focal product is conducted based on its own merits and not with the intent of satisfying a particular outcome at the 3CT assessment stage.

7.18 ComReg further notes that the 2014 Explanatory Note only recognises the ability of mobile telephony to overcome barriers to entry to the provision of FVCO by means of (self-supplied) mobile call origination when it is considered to fall within the same relevant retail market as RFTS. This is noted on page 26 of the 2014 Explanatory Note:

*“...in view of progressing fixed-mobile substitution **where the mobile services could be considered to fall within the same relevant retail market** for access to telephone network at a fixed location, the (self-supplied) wholesale call origination services in the mobile networks should also be considered to fall within the boundaries of the market for wholesale call origination in the fixed networks. Therefore, it can be concluded that the Mobile Network Operators (MNOs) have already overcome the barriers to entry.”* (emphasis added)

7.19 As set out in detail at Section 4 and Section 5 above, ComReg notes that FMS has been excluded from the Relevant RFTS Markets and, indeed, the Relevant FACO Markets, for the reasons set out therein. In this regard, ComReg considers that MNOs are unlikely to overcome barriers to entry to the provision of FACO by means of FMS.

7.20 Furthermore, ComReg notes that, in respect of Eircom’s comments at paragraph 7.15, it has recognised that wholesale call origination can, in certain circumstances (for example, where an appropriate wholesale NG broadband product is available which enables Managed VoIP) be relatively easily self-supplied by SPs who establish a direct connection to end users. This is consistent with ComReg’s assessment of both direct and indirect constraints in Section 5 above. ComReg has also considered the decline in standalone CPS services at paragraph 5.16, where it noted that purchases of CPS have fallen dramatically over time, and such CPS is now offered by Eircom on a legacy-only basis.

Structural barriers to entry

7.21 ComReg has examined the nature and extent of any barriers to firms both entering and, subsequently, expanding⁸⁹⁴ in the Relevant FACO Markets.

7.22 Barriers to entry generally comprise any disadvantage that a new entrant faces when entering a market that incumbents do not currently face. According to the 2020 Explanatory Note:⁸⁹⁵

⁸⁹⁴ ComReg notes that barriers to expansion are typically considered under constraints from existing competition, however, given similarities associated with issues concerning barriers to entry, they are considered in this context.

⁸⁹⁵At page 12.

“...high structural barriers may be found to exist when the market is characterised by absolute cost advantages, substantial economies of scale and/or economies of scope, capacity constraints, and high sunk cost. Such barriers can be found in sectors that rely on the deployment of networks, such as fixed networks for electronic communications.”

- 7.23 Barriers to growth and expansion are obstacles that a new entrant (or smaller existing competitor) faces in its ability to grow or expand in a particular market, and which limit its ability to exert an effective competitive constraint over the medium to longer term.
- 7.24 Assessing barriers to entry and expansion first involves identifying credible threats of entry into the Regional FACO Markets. To do so, a potential entrant must provide a product that, at the very least, meets the characteristics of the FACO products, services and facilities set out in Section 5 - thereby meeting the expectations of Access Seekers.
- 7.25 A number of factors may act as structural barriers to entry in the Relevant FACO Markets:
- (a) The incumbent supplier of FACO can control infrastructure that is difficult for a new entrant to replicate;
 - (b) The incumbent has a large customer base and diversified product range, and therefore benefits from significant economies of scale, scope and density;
 - (c) Entry to the FACO Markets may be likely to incur considerable sunk costs;
 - (d) The presence of capacity constraints on the part of OAOs might exist; and
 - (e) The incumbent may benefit from being vertically-integrated.
- 7.26 ComReg notes that there appears to be a divergence in respect of how high and stable Eircom market shares have been since the 2015 FACO Decision in the Urban FACO Markets on the one hand, and the Regional FACO Markets, on the other hand. ComReg now considers evidence in respect of each of the five potential structural barriers to entry listed above.

Factor 1: Control of infrastructure that is difficult for a new entrant to replicate

- 7.27 Eircom's legacy FNA network is ubiquitous in the State and is used by Eircom to deliver FACO to Access Seekers upstream, and RFTS to its own end users downstream across the footprints of both the Urban FACO Markets and the Regional FACO Markets. Eircom is currently upgrading its FNA network to FTTx. As of Q4 2020, Eircom reports that its FTTx (VDSL + FTTP) network already passes 2.1⁸⁹⁶ million (or 86%) of the 2.4 million premises in the State (measured by delivery points) at speeds capable of delivering Managed VoIP. As set out at paragraph 5.35 above, Eircom also proposes to modernise its FNA network using MSAN technology to route PSTN traffic through an IP, rather than a legacy copper, core network. This is intended to have the effect of extending the useful life of Eircom's copper network.⁸⁹⁷
- 7.28 Eircom is, by far, the largest FACO SP in the Regional FACO Markets (99% market share), and is also the largest supplier of RFTS. Eircom controls an extensive access infrastructure that is not easily replicated by its competitors.⁸⁹⁸ Eircom also benefits from its large network coverage, subscriber base size and product portfolio, thereby giving it the ability to exploit greater economies of scale and scope in the provision of FACO than would otherwise be achievable by potential competitors.
- 7.29 It is worth noting at this point that the market share data above do not distinguish between all four Relevant FACO Markets and, instead, only distinguish between the two FACO Geographic Markets. This arises from the fact that, on the HL-FACO Market, Managed VoIP products (Hosted PBX and SIP Trunking) are not measured by EA,⁸⁹⁹ while, on the LL-FACO market, Managed VoB is measured by EA. Accordingly, as a best approximation, ComReg has calculated market shares in the Urban FACO Markets and Regional FACO Markets. ComReg considers that this is likely to closely reflect LL-FACO market shares, given that over 99.5% of SB-WLR and WLV lines are sold on the LL-FACO market.

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https://www.eir.ie/opencms/export/sites/default/content/pdf/IR/presentations/2019_2020/eir_Q1_FY21_results_presentation.pdf split between 1.3 million premises passed by FTTC, and 749,000 premises passed by FTTP. Eircom measures premises using delivery points derived from the Eircode database, and reports 2.421 million such delivery points, as of Q4 2020.

⁸⁹⁷ See paragraph 7.176 of the 2020 Consultation where it is noted that in 2016, Eircom stated in correspondence with ComReg its intention to decommission its legacy FNA network, although no timelines were put forward or agreed for this process. However, Eircom's more recent MSAN's proposal would effectively lengthen the useful lifetime of its FNA network by routing traffic through an IP core network. This proposal, if adopted, could have the effect of pushing further out any timeline for copper switch-off. Eircom's recent White Paper does not specify exact dates for copper switch-off but, rather, indicates that it will make a formal announcement in respect of copper switch-off by 2025, following expected completion in 2024 of the Ireland's Fibre Network programme.

⁸⁹⁸ However, as noted earlier, it may not be necessary to fully replicate Eircom's infrastructure in order to pose a potential competitive constraint on the Relevant FACO Markets.

⁸⁹⁹ EA information is not captured for Hosted PBX or SIP Trunking services, as these services are generally provided on Modern Interface Wholesale High Quality Access ('MI WHQA') lines terminating in specific exchanges which contain aggregation nodes.

7.30 To enter or expand in the Relevant FACO Markets, an SP may roll out its own network infrastructure, or, in the alternative, purchase access to another SP's network. While some SPs, for instance, Vodafone or Pure Telecom, purchase wholesale inputs to facilitate the delivery of RFTS in preference to engaging in network investment, as identified at Section 6 above, other SPs are progressively rolling out their own networks, either on the basis of commercial rollout for expected future returns (for example, SIRO and Virgin Media), or on the basis of a government policy decision to provide service on a non-commercial basis (NBI). Accordingly, no SP appears to have the intention – or the incentive - to roll out a network at least as ubiquitous as Eircom's legacy network (i.e. which rolls out to both commercially attractive Urban FACO Markets, and less commercially attractive Regional FACO Markets), as Table 65 indicates with respect to coverage:

Table 65: Eircom, Virgin Media, SIRO, NBI network rollout, Q4 2020

Network Operator	Rollout to date	Coverage to date	Target rollout	Target coverage
Eircom FNA	2.4 million	100%	2.4 million ⁹⁰⁰	100%
Eircom FTTx (VDSL + FTTP)	2.1 million ⁹⁰¹	86%	2.0 million ⁹⁰²	85%
Virgin Media	946,500 ⁹⁰³	39%	N/A	N/A
SIRO	360,000	16%	450,000	20%
NBI	0	0%	544,000 ⁹⁰⁴	22%

7.31 It is clear that, based on announced network rollout plans, no SP contemplates rolling out a network as ubiquitous as that of Eircom, and therefore replicating Eircom's nationwide coverage. This suggests that it would be difficult for a new entrant to fully replicate Eircom's network infrastructure, without incurring very substantial sunk costs which it would be unlikely to recover in the short term. Even SIRO, which is able to benefit to a degree from the presence of an electricity distribution network which has ubiquity equivalent to Eircom's FNA network, only intends to roll its network out to 19% of premises in the State.

7.32 ComReg examines FACO network replicability under the following headings:

⁹⁰⁰ Eircom counts premises using delivery points derived from Eircode data. As of Q4 2020, Eircom estimated a total of 2.421 million delivery points in the State.

⁹⁰¹ https://www.eir.ie/pressroom/eir-announces-second-quarter-FY21-results-to-31-December-2020/#_ftn1

⁹⁰² https://www.eir.ie/content/pdf/IR/presentations/2019_2020/eir_Q1_FY21_results_presentation.pdf

⁹⁰³ <https://www.libertyglobal.com/wp-content/uploads/2021/02/Virgin-Media-Fixed-Income-Q4-2020-Release.pdf>

⁹⁰⁴ While the NBI rollout consists of c.544,000 premises, this amounts to only [x [REDACTED] x] coordinates. This difference arises from situations where there are multiple units at a coordinate (e.g. apartment, office block), or where a building is both a business and a residential premises (e.g. B&B).

- (a) In the context of the infrastructure required to supply FACO;
- (b) Whether that infrastructure is exclusively or overwhelmingly under the control of a single SP; and
- (c) Whether there are high and non-transitory barriers associated with replacing that infrastructure.

Infrastructure required to enter the FACO markets

- 7.33 Entry to the FACO markets is dependent on an SP either having wholesale access to third party network infrastructure or building its own network capable of delivering FACO. Entry may, in particular, occur where SPs, having incurred significant upfront costs in building a network for the purpose of providing other services – specifically, broadband - have capacity available on that network capable of delivering FACO, or broadband capable of delivering FACO.
- 7.34 FACO and RFTS can be delivered over both FNA and NG Broadband infrastructure. Eircom currently offers FNA FACO nationally in accordance with its existing SMP regulatory obligations. As the largest provider of FACO, Eircom enjoys control of ubiquitous network infrastructure in both the Urban and Regional FACO Markets that has not been replicated by other SPs. Eircom benefits from its network coverage, the size of its retail and wholesale subscriber base, and a broad product portfolio. This gives it the ability to exploit greater economies of scale and scope in the provision of FACO than is likely achievable by existing and potential FACO competitors.
- 7.35 Nevertheless, while Eircom provides FACO on a national basis, ComReg's view is that it is not necessary for an SP to fully replicate Eircom's FACO network in order for actual or potential effective competition to arise in the Relevant FACO Markets, as set out at paragraph 5.360 above. In this respect, ComReg is aware of evidence of demand for wholesale inputs that can be used for FACO over networks with sub-national coverage (e.g. BT purchases of SIRO and Eircom WLA based VUA – neither of which have national coverage – [X ██████████ X]), and also of demand for VUA or Bitstream Plus offered over networks with sub-national coverage, by means of which SPs can offer Managed VoB-based RFTS to their own end users on a self-supply basis. The effectiveness of any competitive constraint will depend, amongst other things, on the extent to which an existing competitor or potential entrant replicates Eircom's network. Accordingly, *ceteris paribus*, the greater the network coverage, the more likely it is that FACO delivered over that network will have the potential to show that barriers to entry can be overcome or that a market can tend towards effective competition (and thus exert a more effective competitive constraint).

- 7.36 FACO can be provided either by deploying new network infrastructure, or by purchasing upstream wholesale inputs (on either a regulated or non-regulated basis) and using these to self-supply a Managed VoIP service. The cost of providing FACO using wholesale NG Broadband inputs may be lower than the cost of doing so by means of FNA. Managed VoIP, apart from potentially reducing the number of switching/interconnection points in a network, would also increase economies of scope for SPs, given that it can be used to deliver multiple services.
- 7.37 ComReg notes that, in the footprint of the Regional FACO Markets, other SPs have only replicated Eircom network rollout to a limited degree. However, once NBI rollout commences (on a non-commercial basis), there is likely to be some greater replication of Eircom's FNA network in the IA. In contrast, in the footprint of the Urban FACO Markets, other SPs – specifically, SIRO and Virgin Media, as well as Eircom itself – have more actively engaged in NG Broadband network rollout which partially replicates Eircom's ubiquitous FNA network. This suggests that, in the Urban FACO Markets, SPs have rolled out infrastructure which can be used to enter the Relevant FACO Markets on a commercial basis, to a greater degree than in the Regional FACO Markets.

Whether FACO infrastructure is under the control of a single SP

- 7.38 The FACO focal product is delivered over FNA infrastructure (PSTN, ISDN BRA, ISDN FRA, and ISDN PRA) owned by Eircom. Eircom's FNA network has not been replicated by any other SP, and ComReg is not aware of any plans by SPs to roll out competing FNA networks. In the footprint of the Urban FACO Markets, Eircom's broadband network has been replicated in part by a number of other SPs (SIRO and Virgin Media) for the purpose of delivering wholesale NG Broadband inputs in the case of SIRO, and delivering self-supply of broadband, RFTS and TV, in the case of Virgin Media. This suggests that, on the basis of the availability of upstream wholesale NG Broadband inputs that can be used for FACO, barriers to entry can be surmounted in the Urban FACO Markets. However, replication of Eircom's NG Broadband network is partial, and no other broadband network rivals the coverage of Eircom. In particular, and as set out above, such alternative infrastructure is not widespread in the footprint of the Regional FACO Markets, although ComReg acknowledges that the FTTP network being rolled out by NBI in the IA on a non-commercial basis will, over time, assist in eroding such barriers.

- 7.39 As set out above, BT offers a White Label VoIP product which competes with Eircom FACO on the basis of the purchase of wholesale NG Broadband inputs from Eircom and SIRO, while SIRO, Virgin Media, and – on a forward-looking basis – NBI, offer wholesale NG Broadband inputs which SPs can use to offer Managed VoIP-based RFTS to their own end users. Table 65 above illustrates the extent to which other SPs have, to varying degrees, replicated Eircom's network infrastructure, thereby providing the fixed access component for a potential entrant to the Relevant FACO Markets. Outside of each network footprint, an SP which did not operate its own network would rely on purchasing wholesale NG Broadband inputs from Eircom to deliver FACO over wholesale Managed VoIP.
- 7.40 Eircom is the sole wholesale NG Broadband operator present at 743 (93%) EAs which fall into the footprint of the Regional FACO Markets. In contrast, both Eircom and SIRO wholesale NG Broadband are present at 148 EAs (36%) which fall into the footprint of the Urban FACO Markets. This suggests that FACO infrastructure continues to be overwhelmingly under the control of a single SP in the Regional FACO Markets, and that NG Broadband network infrastructure capable of acting as an input to delivering FACO by an SP is confined to the Urban FACO Markets.

Whether barriers to replicating FACO infrastructure are high and non-transitory

- 7.41 SPs have only succeeded in partially replicating Eircom's FNA network rollout, in the footprint of the Urban FACO Markets. This suggests that the costs involved in replicating the fixed access network and FVCO components of Eircom's FNA network generate high and non-transitory barriers to entry. However, as the provision of fixed telephony shifts from delivery over FNA to delivery over NG Broadband by means of VoIP, the costs of such replication may decline over time, as reflected in the intention set out at Section 11 below to carry out a MTA by re-assessing the scope of the Relevant FACO Geographic Markets having regard, *inter alia*, to levels of wholesale NG broadband rollout.
- 7.42 The commercial viability of replicating Eircom FACO is dependent on scale, and replication of Eircom's ubiquitous FNA network may only be commercially viable for an SP where there is sufficient demand or premises density, as is more likely to be the case in the Urban FACO Markets.
- 7.43 SPs require access to infrastructure to provide FACO. Potential entry into the Regional FACO Markets by an SP would involve one or more of the following:
- (a) Building an independent network to offer FACO;
 - (b) Adapting an existing network (or existing network access) to offer FACO;

- (c) Deploying Managed VoIP-based FACO (and associated systems) using wholesale NG Broadband inputs provided by Eircom and SIRO (and, on a forward-looking basis, NBI).

- 7.44 Each of the above approaches would encounter significant entry barriers, and the degree to which each would be potentially effective for replicating FACO would likely vary. In this respect, ComReg assesses whether an SP's ability to enter the Regional FACO Markets by means of one of the entry strategies outlined at paragraph 7.43 above would effectively constrain Eircom's behaviour in the Regional FACO Markets over the period of this review.
- 7.45 ComReg is of the view that, in the Regional FACO Markets, which typically encompass areas of lower population or premises density, a market entrant is unlikely to commercially rollout a network across a large geographic area. Many EAs may be either too remote, or do not serve a sufficiently sized, customer base to warrant the necessary investments to be made in providing FACO independently of Eircom. Additional networks may struggle to generate the necessary level of economies of scale, scope and density, noting that NBI rollout is occurring only on the basis of State Aid intervention. The analysis set out at Section 5 above suggests that the Regional FACO Markets contain a large cohort of less-densely populated EAs.
- 7.46 In the Urban FACO Markets, which typically encompass areas of higher population or premises density, Eircom may face competition from SPs which own NG Broadband networks, or use wholesale NG Broadband inputs to provide RFTS and (in the case of BT) FACO by means of Managed VoIP. However, as set out above, the Regional FACO Markets are generally characterised by a lack of effective competitive constraints arising from the presence of NG Broadband networks with sufficient coverage (pending NBI rollout). Furthermore, wholesale NG Broadband inputs available from Eircom or SIRO are not generally present to a sufficient extent in the Regional FACO Markets to allow SPs to compete with Eircom's FNA based FACO product.
- 7.47 ComReg recognises that it may not be necessary to fully replicate Eircom's infrastructure in order for a potential entrant to pose an effective competitive constraint in the Relevant FACO Markets. However, factors such as the extent of sunk costs, economies of scale and scope, and vertical integration are all likely to influence the extent to which Eircom's FACO infrastructure is replicable, and hence the degree of competitive constraint arising from potential competition in the Relevant FACO Markets through entry. These are considered below.

Respondents' Views

- 7.48 ALTO argued that ComReg's analysis tends to assume and confirm that another access seeker would be unable to roll out a network on a commercial basis, and referred in this regard to paragraph 7.32 of the 2020 Consultation, which is substantially repeated at paragraph 7.45 above.

- 7.49 BT similarly noted that ComReg's comments at paragraph 7.32 of the 2020 Consultation appear to only address FNA. However, BT was of the view that Eircom has the incentive and capability to roll out its high-speed broadband network to the NBP IA. The lower premises density and lack of existing alternative access infrastructure compared to Eircom appeared, in BT's view, to make it difficult for commercial SPs other than Eircom to rollout into the IA, other than for exceptional one-off cases such as large business customers/data centres.

ComReg's Assessment of Respondents' Views and Position

- 7.50 ComReg notes that its assumption that network rollout on a commercial basis in the footprint of the Regional FACO Markets is unlikely is based on the evidence available to it. Compared to the Urban FACO Markets which are characterised by wholesale NG Broadband network rollout passing at least 80% of premises, the Regional FACO Markets are, by definition, characterised by comparatively lower levels of wholesale NG Broadband network rollout. As of May 2021, no commercial NG Broadband rollout appears to have taken place on a widespread basis in the footprint of the Regional FACO Markets, nor is ComReg aware of plans by operators to do so.

Factor 2: Eircom benefits from significant economies of scale, scope and density

- 7.51 Economies of scale, scope and density refer to potential advantages that larger incumbents may enjoy over smaller new entrants. Economies of scale generally refer to the cost advantage which a large-scale SP may have over a smaller SP where the marginal cost of production decreases as the quantity of output produced increases. Economies of scope refer to the potential efficiencies which may be gained by a firm jointly producing a range of goods and services, e.g. where an FTTx network could be used to provide RFTS, TV and broadband services simultaneously. Economies of density refer to potential efficiencies associated with supplying customers who are geographically concentrated. A large proportion of the costs associated with building and maintaining a telecommunications network is fixed or sunk. Accordingly, the average cost per subscriber of providing FACO will fall as the number of customers served by a network increases. Economies of scale and density are, therefore, achieved where an SP can serve as many subscribers as possible from its investment in a part of the network, e.g. an EA.

- 7.52 Eircom provides FACO across PSTN and ISDN BRA to deliver LL-FACO dimensioned to the needs of residential and small business users, and HL-FACO (over ISDN FRA and PRA) dimensioned to the needs of large corporate and institutional users, on both a merchant market basis, and on a retail self-supply basis. Eircom is the only SP which offers services on a widespread basis capable of delivering fixed telephony at both wholesale and retail levels, to itself and to third parties, to both small and large end users, and on both the Urban FACO Markets and the Regional FACO Markets. No other SP offers this level of diversification.
- 7.53 Economies of scale, scope and density in relation to the provision of FACO have to be considered in light of the RFTS market, where the cost of supply per customer decreases in line with the number of customers supplied. Economies of scale and scope could act as a barrier to entry to the Regional FACO Markets because Eircom has a substantial customer base (comprised of its self-supply of FACO to its retail subscribers and Access Seekers purchasing SB-WLR and WLV) which exceeds that of any other SP.
- 7.54 ComReg notes the presence of actual and potential competitors to Eircom in the downstream RFTS market, such as Vodafone, Virgin Media, BT and Sky, which offer a variety of retail and/or wholesale services. These SPs either have already, to one degree or another, or have the potential to, gain benefits from economies of scale and scope by winning a significant number of RFTS customers, including through cross-selling TV and other products to their customers. However, there is insufficient evidence to conclude that current or potential retail⁹⁰⁵ economies of scale and scope are sufficient to justify upstream entry into the Regional FACO Markets by building a network to provide FACO (noting that BT has launched a White Label VoIP FACO product without engaging in infrastructure investment).

Economies of Scale

- 7.55 **Economies of scale** describe the cost advantages a firm accrues as it increases output, since its fixed costs are distributed over a higher volume of production. Eircom has incurred substantial sunk costs in the delivery of FACO, but the marginal costs of, for instance, providing one more SB-WLR connection to an Access Seeker are low. Accordingly, Eircom can disperse its sunk costs across a larger customer base (and therefore at a lower amount per customer) consisting of both self-supply of FACO to its own RFTS subscribers, and the merchant market sale of FACO to Access Seekers, than competitors with smaller output levels. ComReg considers that Eircom is better placed to benefit from economies of scale across both the Urban FACO Markets and the Regional FACO Markets than other SPs.

⁹⁰⁵ SP retail market shares by RFTS subscriptions are published on a quarterly basis by ComReg, in its Quarterly Key Data Report, and also on its online data portal, at <https://www.comreg.ie/industry/electronic-communications/data-portal/>

- 7.56 The following indicators suggest that economies of scale are present in the Relevant FACO Markets:
- (a) Significant upfront capital costs - The provision of FACO may involve significant upfront capital costs, including costs associated with building and maintaining a network, where an SP chooses not to rely on wholesale inputs provided by another SP. As a result, the average cost of providing FACO falls as the volume of minutes originated over a network increases.
 - (b) RFTS SPs still purchase FACO - or wholesale NG Broadband inputs capable of delivering FACO - from large SPs who own and operate network assets: By doing so, RFTS SPs can benefit from the economies of scale enjoyed by the network operator (and can avoid the high upfront cost of replicating network infrastructure, in cases where doing so is not considered to be commercially justifiable).
- 7.57 Eircom is likely to achieve significantly greater economies of scale in the provision of FACO, as the largest supplier of both RFTS and FACO in the State, than other SPs. Eircom operates a ubiquitous FNA network that supports the provision of RFTS and FACO on both the Urban FACO Markets and Regional FACO Markets, as well as an FTTx network which is capable of supporting the provision of FACO by means of wholesale Managed VoIP, and which, as of Q4 2020, passed 86% of premises in the State. Eircom is, therefore, likely to face lower average and marginal costs of providing FACO, relative to other SPs.
- 7.58 BT appears to have achieved sufficient economies of scale to compete in parts of the Relevant FACO Markets by providing White Label VoIP based on purchases of Eircom and SIRO WLA. ComReg is not aware of other SPs having achieved sufficient economies of scale to facilitate the provision of FACO.
- 7.59 ComReg's view is that economies of scale are likely to amount to a high and non-transitory barrier to entry in the Regional FACO Markets, but not necessarily in the Urban FACO Markets, which have seen greater levels of entry by other SPs, which allows Access Seekers to achieve the benefits of lower economies of scale by means of access to wholesale NG Broadband. On the Regional FACO Markets, the level of network infrastructure capable of delivering FACO to date indicates that other SPs have had limited success in achieving economies of scale equivalent to Eircom.

Economies of Scope

- 7.60 **Economies of scope** describe the reduction in costs arising from producing two or more distinct products, compared to the costs of producing those products separately. A significant economy of scope is generated by routing FACO or RFTS over FTTx networks, which eliminates the need for SPs to operate separate voice and data networks and permits cost savings. As the only operator of separate FNA and broadband networks, Eircom suffers some diseconomies of scope, compared to SPs who operate a broadband network only, such as Virgin Media, SIRO, or – on a forward-looking basis - NBI. However, these diseconomies of scope will likely reduce over time as Eircom decommissions its FNA network or implements MSAN technology to route PSTN (and ISDN FRA and PRA) traffic through an IP core.
- 7.61 At the wholesale level, it is not necessarily clear that Eircom is better placed than other SPs to benefit from economies of scope in the provision of LL-FACO and HL-FACO. In order to compete with Eircom in the supply of FACO, a new entrant would likely also need to provide (or have access to) wholesale NG Broadband access (on a merchant market or self-supply basis) of a sufficiently similar quality to that provided by Eircom. This would also allow Access Seekers to provide RFTS bundled with other retail services, such as broadband or TV. This condition appears to be largely met on the Urban FACO Markets, insofar as SIRO and Virgin Media operate broadband networks which deliver access of similar quality to that of Eircom FTTx. The absence of these SPs from the Regional FACO Markets (or their presence, but at a level which is unlikely to generate an effective competitive constraint) indicates that this condition is unlikely to be met on those markets, pending the greater rollout of NBI in the IA over the course of the next seven years.
- 7.62 Economies of scope are also evident in that FACO is often provided as an input to a retail bundle, and networks used to supply such FACO typically support a range of wholesale and retail services. As set out at Table 5 above, there is an increasing trend towards the provision of RFTS as part of broader product bundles, but 17% of RFTS subscriptions were purchased on a standalone basis as of Q4 2020. Economies of scope could represent an entry barrier if a potential entrant into the Regional FACO Markets were required to offer a range of wholesale and retail services in order to compete effectively in the provision of FACO, thus increasing the costs associated with entry.

Economies of Density

- 7.63 **Economies of density** refer to efficiencies arising from supplying customers who are geographically concentrated. The uneven (existing and planned) deployment of NG Broadband networks capable of delivering FACO or RFTS suggests the presence of economies of density in the Urban FACO Markets, and the comparative absence of such economies of density in the Regional FACO Markets. Virgin Media and SIRO have both concentrated their network rollout in areas of higher population density in the Urban FACO Markets, while NBI will service areas of lower premises density, largely in the Regional FACO Markets on a non-commercial basis, due to commercial decisions taken by other SPs not to incur the costs of network rollout to those areas.
- 7.64 While Eircom's FNA and broadband networks extend to both the Urban FACO Markets and the Regional FACO Markets, ComReg is nevertheless of the view that Eircom is not disadvantaged in terms of economies of density, compared to SPs who have concentrated network rollout in areas of higher population density. In the first instance, Eircom's network has, aside from greenfield developments, been in place for many decades, and the costs of servicing its comparatively widespread network are predominantly related to maintenance, repair and upgrade, rather than initial network rollout. Thus, Eircom does not face the same level of initial rollout costs as other SPs engaged in network rollout, since poles, ducts, cabinets and so on are generally already in place.⁹⁰⁶
- 7.65 Secondly, in April 2017, as set out in the Commitment Agreement between Eircom and the Department of Communications, Climate Action, and Energy,⁹⁰⁷ 300,575 premises (the '**Rural 340k**' – Eircom subsequently added another 40,000 premises to the initial 300,000 premises) which had originally been included in the NBP IA on the basis that it was not commercially attractive to offer high-speed broadband to these premises, were removed from the NBP IA on the understanding that they would, instead, be served by broadband deployed by Eircom on a commercial basis. This suggests that Eircom had satisfied itself that there was a sufficient level of premises density within the footprint of the Rural 340k, such that it would be both possible and profitable to roll an FTTx network out in those areas. Accordingly, Eircom has actively sought to roll network out to areas previously considered to be commercially unviable. This indicates that Eircom may be in a position to benefit from economies of density at a lower level of density than other SPs, noting that the counterfactual would require Eircom to seek to roll services out to premises which it considered to be prospectively unprofitable to service.

⁹⁰⁶ ComReg also notes that, compared to a greenfield entrant, SIRO likely faces a lower level of rollout costs, due to its use of ESB's electricity distribution network. However, compared to Eircom, SIRO must incur additional costs associated with, for instance, ensuring that both telecoms and electricity infrastructure are safely deployed on the same poles and cables.

⁹⁰⁷ <https://www.dccae.gov.ie/documents/Commitment%20Agreement.pdf>

- 7.66 ComReg therefore concludes that both Eircom and other SPs are capable of benefitting from economies of density in the footprint of the Urban FACO Markets. However, due to the ubiquity of its network (and the associated lower cost of upgrading that network, compared to rolling it out *de novo*), for the period of this review Eircom has a greater capacity to benefit from economies of density in the footprint of the Regional FACO Markets than SPs who face rollout costs which Eircom can avoid, and who therefore are more constrained in investing in network rollout only for FACO in areas with sufficiently high premises density (i.e. the Urban FACO Markets). Economies of density therefore likely create a sufficient barrier to entry to the Regional FACO Markets by restricting profitable entry to geographic areas characterised by a sufficiently high level of density.
- 7.67 Economies of density are evident from the uneven deployment of competing networks across Ireland. SIRO's FTTP network and Virgin Media's CATV network have a sub-national footprint, predominantly in areas with higher premises density.
- 7.68 The economies of density are likely to be challenging in the Regional FACO Markets, which include substantial semi-urban and rural areas characterised by lower population density. This lower density increases the average cost of network rollout, evidenced by the comparative lack of NG Broadband networks capable of providing services on a commercial basis in these areas.
- 7.69 Overall, there is evidence to suggest that economies of scale, scope, and density are factors that are relevant for consideration in the Regional FACO Markets. Eircom has benefited from economies of scale, scope and density in the provision of FACO. These economies are likely to result in high barriers to entry for other SPs who may seek to enter the Regional FACO Markets.

Conclusion on economies of scale, scope and density

- 7.70 Overall, this suggests that Eircom's capacity to benefit from economies of scale, scope and density, compared to other SPs is not uniform, and varies across the economy in question, and across the Urban FACO Markets or Regional FACO Markets. The analysis set out above suggests that Eircom has a greater capacity to benefit from economies of scale than other SPs, on both the Urban FACO Markets and the Regional FACO Markets. On the Urban FACO Markets, Eircom benefits from economies of scale, but does not appear to enjoy a material advantage over other SPs in respect of economies of scope or density. On the Regional FACO Markets, Eircom benefits from economies of scale, scope and density. Overall, this suggests that Eircom is more likely to benefit from economies of scale, scope and density on the Regional FACO Markets than on the Urban FACO Markets, compared to other SPs.

7.71 ComReg accordingly considers that there is sufficient evidence to suggest that economies of scale, scope, and density give rise to greater barriers to entry to the Regional FACO Markets, than the Urban FACO Markets, as demonstrated by the presence of SPs (SIRO and Virgin Media) largely on the Urban FACO Markets.

Factor 3: Entering the Relevant FACO Markets incurs considerable sunk costs

7.72 Sunk costs are costs that are incurred, but that cannot be recovered, if an entrant decides to, or is forced to, exit the market. The existence of sunk costs does not automatically imply that entry barriers are high. In fact, a certain level of sunk costs will be involved in entering most markets, and Eircom may also have had to incur a similar level of sunk costs before it entered the Relevant FACO Markets (although the risks of non-recovery faced by Eircom would have been lower, given its 100% market share at the time).

7.73 Sunk costs arise particularly where assets are specialised and cannot readily be diverted to other uses. These assets are therefore difficult or impossible to re-sell. Sunk costs include investments in equipment which can only produce a specific product, the development of products for specific customers, and product installation and labour costs, including opening up the ground and installing ducting, cables, and associated infrastructure.

7.74 Sunk costs accordingly create particularly high risks for new entrants, as the value of these sunk costs cannot easily be recouped, for instance by resale, should the entrant subsequently decide to exit the market (or is forced from the market). Entering the Relevant FACO Markets by means of network rollout is likely to generate a level of sunk costs which a new entrant would find difficult, if not impossible, to recover.

7.75 In some circumstances, it is more difficult for new entrants to break into a market than it was for the first firm (or subsequent firms) to enter – the ‘first mover advantage’. Such circumstances create a decisional asymmetry, where an incumbent has already incurred and recovered its sunk costs, but a new entrant has not. In general, higher sunk costs tend to have a greater dissuasive effect on market entry.⁹⁰⁸

7.76 Sunk costs therefore raise barriers to entry and may also increase the incumbent’s commitment to signal to the market its willingness to respond aggressively to entry, in order to ensure that it recoups its own sunk costs. It should also be noted that sunk costs create barriers to exit, as the firm incurring those costs cannot easily recover them by diverting the infrastructure to alternative uses. The knowledge that sunk costs represent a barrier to market exit may therefore raise barriers to entry.

⁹⁰⁸ OECD, Barriers to Entry, (DAF/COMP(2005)42), 2006, Paris.

- 7.77 ComReg's view is that sunk costs are likely to be incurred when entering both the Regional FACO Markets and the Urban FACO Markets, for the following reasons, where an entrant proposes to invest in rolling out FACO infrastructure:
- (a) Market entry involves significant upfront capital investment;
 - (b) Eircom has already incurred sunk costs, and is likely to have already achieved economies of scale in the provision of FACO. This could create commercial uncertainty surrounding investment in FACO infrastructure;
 - (c) A significant proportion of the sunk costs initially incurred by Eircom in rolling out FNA networks capable of delivering FACO is likely to already be amortised; and
 - (d) Demand for SB-WLR and WLV is in decline, which implies that some excess capacity is likely to be available on Eircom's existing FNA network. This may create a degree of commercial risk for potential entrants because the likelihood of excess supply lowers the expected profits for entrants.
- 7.78 However, the magnitude of these sunk costs is more likely to raise barriers to entry to the Regional FACO Markets than the Urban FACO Markets, given the greater presence of NG Broadband networks in EAs falling within the footprint of the Urban FACO Markets, which suggests that at least some SPs have overcome the barrier to entry raised by sunk costs.

Whether sunk costs are the same for all entrants

- 7.79 Eircom operates a ubiquitous FNA network that supports the provision of FACO on a national basis. A significant proportion of the sunk costs incurred in the construction of that network (including the associated duct, pole and other assets) is likely to be amortised by now. In rolling out its FTTx⁹⁰⁹ network, Eircom is also likely to incur additional sunk costs.⁹¹⁰ In contrast, any new entrant would likely face higher sunk costs than those faced by Eircom, given its existing network, including the recent FTTx upgrades.
- 7.80 The level of sunk costs associated with entry into the Relevant FACO Markets depends, *inter alia*, on an SP's presence in related telecommunications markets. In the case of an entrant with no RFTS customers, and no existing FACO infrastructure, the cost of entry is likely to be substantial, and the sunk cost element of the overall costs is also likely to be significant. However, sunk costs can be mitigated where the entrant:
- (a) Has a significant presence on the RFTS market, and can achieve economies of scale independently of the Relevant FACO Markets;

⁹⁰⁹ Eircom provides retail and wholesale services over its FNA and broadband networks.

⁹¹⁰ Eircom's FTTx deployment re-utilises existing assets such as ducts, trenches, poles and exchanges.

- (b) Already has network infrastructure in place, and can assign capacity on that network to the provision of FACO or RFTS; or
- (c) Enters the Relevant FACO Markets by purchasing wholesale NG Broadband inputs to offer RFTS on a self-supply basis to its own end users.

- 7.81 An entrant falling under category (a) above is likely to face lower sunk costs, and lower risks arising from investing in a FACO network, because the investment in infrastructure is used to provide both RFTS and FACO (and, potentially, other services, such as broadband or TV, in the case of broadband network rollout). Accordingly, a smaller proportion of the cost of investment is at risk arising from potential uncertainty around FACO market conditions.
- 7.82 An entrant falling under category (b) above faces lower costs of entry to the Relevant FACO Markets associated with relatively less risky capital investment. The sunk costs associated with entry to the Relevant FACO Markets are likely to be lowest for SPs that fall under categories (a) and (b).
- 7.83 An entrant falling under category (c) above may avoid incurring sunk costs where it enters the Relevant FACO Markets by purchasing wholesale inputs. However, this possibility only arises where some other SP has incurred the sunk costs of rolling out a network. Accordingly, where an SP intends to avoid sunk costs by purchasing wholesale NG Broadband inputs, it can only do so where an SP has successfully overcome the barrier to entry posed by sunk costs. Thus, sunk costs may generate barriers to entry, even where SPs do not roll out their own network infrastructure, because they are reliant on SPs in either of categories (a) or (b) above overcoming these sunk costs.

Do sunk costs represent a barrier to entry to the Relevant FACO Markets?

- 7.84 Network rollout is a resource-intensive exercise, characterised by long time horizons and substantial sunk costs. As the level of sunk costs increases, market entry becomes, *ceteris paribus*, less likely, as an SP must satisfy itself that it is likely to recoup its sunk costs of investment within a given timeframe.
- 7.85 A new entrant providing FACO would need to invest in the provision of the FVCO component (a call origination platform), and either its own network infrastructure, or the interconnection technology necessary to offer FACO on a third-party network. Given moves away from FNA towards NG Broadband, it is a reasonable assumption that a hypothetical new entrant would offer FACO over NG Broadband rather than FNA. An FTTx network, for example, is capable, in principle, of delivering multiple functionalities at both wholesale and retail level, including, but not limited to, RFTS delivered by means of Managed VoIP, FACO, WLA, WCA, retail broadband, and IPTV.

- 7.86 A new entrant providing wholesale NG Broadband inputs which could be used for the delivery of FACO or RFTS would similarly need to invest in network and/or interconnection infrastructure but would avoid the costs of providing a FVCO platform. This means that, in the case of an SP which rolled out its own network, the sunk costs of investing in an FTTx network would likely be incurred in the expectation of delivering multiple services, including the provision of wholesale or retail broadband access, rather than just FACO, or FACO and RFTS. Therefore, a new entrant would likely expect to recoup those sunk costs of network rollout by facilitating the delivery of a range of electronic communications services, and could avoid the costs associated with tailoring individual products by simply delivering wholesale NG Broadband access, such that the Access Seekers would need to invest in service-specific components such as in, the case of FACO or RFTS, a VoIP platform.
- 7.87 In order to deliver a FACO service consisting of both FA and FVCO, however, a new entrant would, aside from the costs of network rollout required to deliver FA – which are themselves substantial and sunk, in respect of fibre, ducts and poles, ancillary facilities, interconnection facilities, and so on – also need to invest in the delivery of the FVCO component. Assuming that a new entrant would deliver this component over NG Broadband, this would require the development of a Managed VoIP platform which, paired with the FA component, would allow the new entrant to wholesale a FACO product to Access Seekers.
- 7.88 In the case of an SP which offered FACO on third party networks (e.g. BT), it would avoid incurring the costs of network rollout, and would only incur the costs of procuring or development of a Managed VoIP platform, and investing in the necessary infrastructure to interconnect with third party networks.
- 7.89 Nevertheless, the development of a wholesale Managed VoIP platform would incur some costs associated with the implementation of systems which would allow for the delivery of Managed VoIP capability to the Access Seeker, including billing, appropriate QoS standards, traffic prioritisation, and other technical requirements necessary to provide a FACO service over FTTx which would be of at least equal quality to the equivalent FNA-based SB-WLR service provided by Eircom. Moreover, unlike the FA component (WLA/WCA), the FVCO component can only be used for the delivery of Managed VoIP, and no other services deliverable over FTTx. For these reasons, ComReg is of the view that a new entrant would likely incur substantial sunk costs entering the Regional FACO Markets, arising from network rollout, the development of a Managed VoIP platform which would allow for wholesaling FACO to Access Seekers, or both.

- 7.90 By contrast, Eircom's network consists of substantial legacy asset components which support the nationwide provision of FACO. A significant proportion of the sunk costs incurred in the construction of Eircom's legacy FNA network is likely to be largely amortised by now, although ComReg recognises that Eircom is likely to incur⁹¹¹ additional sunk costs arising from the upgrade of its network to FTTC, and FTTP (or the modernisation of its network using MSAN technology, as described at paragraph 5.35 above). Nonetheless, in ComReg's view, the sunk costs associated with *de novo* network rollout faced by a new entrant would likely be more substantial, and would take longer to recover, than the sunk costs faced by Eircom in upgrading its existing network. Similarly, ComReg recognises that SIRO is capable of relying on substantial legacy ESB assets which may support the nationwide provision of FACO. However, for the reasons set out at footnote 906 above, ComReg is of the view that SIRO is nevertheless likely to incur greater sunk costs than Eircom, due to the need to accommodate both electricity and telecommunications infrastructure on the same legacy assets.
- 7.91 In practice, while sunk costs arise in the provision of FACO, these have not prevented some degree of replication in the rollout of NG Broadband networks capable of delivering FACO in the Urban FACO Markets, noting that such networks capable of delivering FACO are also capable of delivering other services, without the attendant need to provide a VoIP platform. Moreover, where an SP wishes to enter the Relevant FACO Markets (as BT has done) by purchasing wholesale NG Broadband inputs from other SPs, and delivering the VoIP platform itself, that SP incurs no sunk costs in respect of fixed access (these costs are incurred by the network owner), and incurs costs only in respect of the provision of the VoIP platform.
- 7.92 There are a number of possible means of entering the Relevant FACO Markets, each of which carry different levels of sunk costs dependent, *inter alia*, on the extent to which the potential entrant already has infrastructure in place that can be harnessed to provide FACO, as set out below.

Relevant FACO Market entry option 1: Build an independent network

- 7.93 Building a new independent network requires very significant financial and time investment, as exemplified by SIRO or NBI (neither of which, it should be noted, propose to offer a FACO product). Entry into the FACO markets would therefore likely involve significant costs of network deployment which would be largely sunk (although, as indicated above, these costs could be recovered across the provision of multiple services), as well as an FVCO platform which would also incur sunk costs.

⁹¹¹ Eircom's FTTx deployment utilises some existing assets, including ducts, trenches, and poles.

- 7.94 Building an independent network to provide FACO would require significant investment. The proportion of expenditure on, for example, trenches, ducts and overground/underground plant is likely to be particularly high and sunk when deploying a local access network. Even if a potential entrant did not fully replicate Eircom's network, the extent of geographic coverage is likely, in ComReg's view, to be an important factor for Access Seekers. Thus, a trade-off arises between a limited network rollout which would generate lower sunk costs and a potentially lower base of Access Seekers, and a larger network rollout which would likely involve higher sunk costs, but a potentially higher base of Access Seekers. A more extensive network would, all else being equal, also potentially have a greater impact on competition in the provision of RFTS. Therefore, entry into the Relevant FACO markets is likely to involve significant costs which would be largely sunk and, relative to an existing FACO SP, an entrant faces increased risk of non-recovery of sunk costs.
- 7.95 In order to overcome the posited barrier to entry, it may not be necessary for an alternative SP to entirely replicate Eircom's FACO coverage footprint. However, ComReg notes that the main SPs compete in the provision of RFTS at a national level and, in this respect, the geographic coverage of a hypothetical alternative FACO product is likely to be an important feature for Access Seekers. Therefore, while a more extensive infrastructure deployment would have the potential to lower barriers to entry in the Relevant FACO Markets, so too would it incur higher sunk costs which would deter expansion. ComReg is of the view that the Urban FACO Markets include those EAs where partial rollout by an SP of independent network infrastructure is likely to successfully lower barriers to entry.
- 7.96 Prospectively, Eircom will face a greater level of competition in the Regional FACO Markets as NBI rolls out. However, ComReg's position is that, given that, as of May 2021, NBI rollout has only resulted in connections in two counties (Cork and Cavan),⁹¹² such entry is not necessarily indicative of the lowering of barriers to entry in the Regional FACO Markets over the lifetime of this market review. ComReg will keep this under review, including by means of the MTA detailed at Section 11.3 below.
- 7.97 ComReg is of the view that the sunk costs faced by a new entrant considering building an independent network to provide FACO would likely far exceed the sunk costs faced by Eircom and would amount to a significant barrier to entry.

⁹¹² <https://nbi.ie/news/latest/2020/05/18/first-phase-of-national-broadband-plan-nbp-well-underway/>.

- 7.98 ComReg is further of the view that, where a new entrant builds an independent network to offer wholesale NG Broadband access which an Access Seeker could purchase in order to offer FACO or RFTS, that new entrant is still likely to incur substantial sunk costs, despite not having to invest in the provision of an FVCO capability. The evidence available to ComReg suggests that these sunk costs are not, however, insurmountable barriers to entry. In particular, ComReg notes that both SIRO and Virgin Media have rolled out independent networks in the footprint of the Urban FACO Markets, which are capable of providing FACO and/or RFTS on a merchant market and/or self-supply basis.
- 7.99 However, entry through the construction of an independent network is unlikely to occur on the Regional FACO Markets over the period of this market review to a sufficient extent, such that it would suggest that barriers to entry are no longer high and non-transitory. Furthermore, it is ComReg's view that further entry into the Regional FACO Markets based on new network build is unlikely to effectively constrain Eircom over the lifetime of this market review, while noting that, where it has rolled out, NBI has the potential to generate such a constraint at local level.

Relevant FACO Market entry option 2: Adapt an existing network to provide FACO

- 7.100 ComReg has considered the extent to which potential entry in the Regional FACO Markets by an existing vertically-integrated RFTS SP, or an existing network operator, would be likely to occur over the period of this market review to effectively constrain Eircom.
- 7.101 Barriers to entry to the Regional FACO Markets may be lessened, in part, if a potential entrant has an existing network that is used to provide other services and could be leveraged to also provide FACO services.
- 7.102 The sunk costs involved in entering the Relevant FACO Markets may be lower where the new entrant has an existing network in place. On the Urban FACO Markets, Virgin Media already self-supplies RFTS over its DOCSIS 3.0 CATV network and would potentially be able to avoid some of the sunk costs that would otherwise be incurred by SPs entering the FACO Markets. However, on the Regional FACO Markets, in addition to these costs, Virgin Media would also have to incur the costs of new network rollout in EAs where it is not already present.

- 7.103 Nevertheless, even on the Urban FACO Markets, Virgin Media would likely still incur an unavoidable level of sunk costs associated with, for instance, wholesale billing systems, interconnection capability, and a wholesale FVCO platform. The likely level of demand from Access Seekers for FACO delivered over a CATV network with non-national coverage would also be a relevant factor for Virgin Media to consider when assessing its capacity to recover its sunk costs. As noted in paragraph 5.181, [REDACTED] though it may be technically feasible to do so.
- 7.104 Similarly, on the Urban FACO Markets, SIRO wholesales VUA to Access Seekers, and would potentially be able to avoid some of the sunk costs that would otherwise be incurred by SPs entering the FACO Markets.⁹¹³ However, SIRO would also incur an unavoidable level of sunk costs associated with, *inter alia*, the provision of a wholesale FVCO platform.
- 7.105 Furthermore, an entrant using an existing RFTS network would still be likely to incur other sunk costs associated with developing and marketing a wholesale product and putting in place the necessary order handling, product management and billing systems. There may also be other sunk costs associated with reconfiguration of the network and points of interconnection with wholesale customers to accommodate entry in the FACO Markets.
- 7.106 Relative to a greenfield entrant, an SP which already operates a network, either on a wholesale-only basis, or for the purposes of self-supply, seeking to enter the FACO Markets could face reduced sunk costs, particularly relating to the upfront civil costs involved in building a network.⁹¹⁴ An existing RFTS SP also has an existing customer base over which it may, through cross-selling, better recover entry costs, and may be better placed to achieve economies of scale, scope, and density, relative to a new build greenfield entrant.
- 7.107 Nevertheless, ComReg is of the view that a new entrant considering adapting an existing network to provide FACO would likely face significant sunk costs relative to the impact on the cost profile faced by Eircom, amounting to a significant barrier to entry. Accordingly, ComReg concludes that entry option 2 is unlikely to eventuate on either the Urban FACO Markets or the Regional FACO Markets.

⁹¹³ SIRO has not expressed any interest in entering the Relevant FACO Markets.

⁹¹⁴ Arising from the geographic market criteria set out at Section 5 above, it is more likely that such an SP would be already present in the footprint of the Urban FACO Markets, rather than the Regional FACO Markets.

Relevant FACO Market entry option 3: Use wholesale NG Broadband inputs

- 7.108 Eircom sells wholesale NG Broadband inputs to Access Seekers on a regulated basis on the WLA market and the Regional WCA Market, and on a commercial basis on the Urban WCA Market. Similarly, SIRO sells VUA on a commercial basis, with the eventual intention to roll out its network to 50 regional towns nationwide. Lastly, in 2021 NBI network rollout within the IA has resulted in some limited connectivity in the footprint of the Regional FACO Markets and will make WLA products available to Access Seekers. Lastly, as of May 2021 NBI network rollout within the IA has resulted in some limited connectivity in the footprint of the Regional FACO Markets and will make WLA products available to Access Seekers. An Access Seeker could potentially use WLA and/or WCA to provide FACO or to self-supply RFTS by means of Managed VoIP, and certain SPs already supply RFTS and FACO using such inputs.
- 7.109 To provide FACO, an Access Seeker would use wholesale NG Broadband inputs which would act as the access channel, coupled with a VoIP capability to offer the FVCO component. To provide RFTS, an Access Seeker would use wholesale NG Broadband inputs which would act as the access channel, coupled with a VoIP capability to offer RFTS to its own end users.
- 7.110 In this scenario, a potential entrant could purchase VUA (in the case of WLA) or Bitstream Plus (in the case of WCA, along with wholesale backhaul products), thereby avoiding some of the sunk costs associated with CEI and network deployment. However, other sunk costs are likely to be involved, such as the costs involved in building a VoIP platform as an input to the FVCO or RFTS component of the Managed VoIP service, as well as the need to integrate this platform into existing billing and order management systems.
- 7.111 Access Seekers are currently heavily reliant on Eircom's FNA network to deliver FACO, particularly in the Regional FACO Markets. Accordingly, significant costs and lead times would still be needed for Access Seekers to develop and launch a credible Managed VoIP product.
- 7.112 However, ComReg notes that there has been significant growth, largely confined to the Urban FACO Markets, since the publication of the 2015 FACO Decision in the provision of RFTS by means of Managed VoIP using wholesale NG Broadband inputs (that is, excluding Virgin Media self-supply of Managed VoB over its own CATV network). This growth in the delivery of RFTS by means of Managed VoIP using wholesale NG Broadband inputs indicates that, where NGA infrastructure is available – that is, predominantly in the footprint of the Urban FACO Markets – SPs have been able to overcome the sunk cost barrier to entry.

- 7.113 In contrast, in the footprint of the Regional FACO Markets, where NGA infrastructure is typically unavailable (pending NBI rollout in the IA), there is a much lower incidence of provision of RFTS by means of Managed VoIP.⁹¹⁵ A purchaser of wholesale NG Broadband inputs is accordingly unlikely to be able to enter the Regional FACO Markets by way of generating an indirect retail constraint, where the SP invested in a VoIP platform which allowed it to deliver RFTS by means of Managed VoIP. As set out in Section 5, ComReg is aware that a limited level of such market entry has occurred on the Urban FACO Markets. However, SP self-supply by means of wholesale NG Broadband inputs could, over the lifetime of this review, exercise a sufficient indirect constraint on Eircom in the Urban FACO Markets. The Regional FACO Markets are characterised by the comparative absence of such NGA networks, such that an Access Seeker cannot enter the Regional FACO Markets by purchasing wholesale NG Broadband inputs (pending NBI rollout).
- 7.114 Even where an SP has secured wholesale NG Broadband inputs to satisfy the fixed access component of FACO delivery, the development of a Managed VoIP platform may not be straightforward, and for a large-scale provider of RFTS would likely involve network, hardware, software and operational support adjustments that would take some time to develop and incur costs.
- 7.115 ComReg is of the view that the sunk costs faced by a new entrant considering using wholesale NG Broadband inputs to provide FACO may exceed the sunk costs faced by Eircom, and, in principle, create a significant barrier to entry. However, given the availability of wholesale NG Broadband inputs on the Urban FACO Markets, ComReg considers that some SPs have been able to overcome this barrier to entry, principally by offering Managed VoIP RFTS on a self-supply basis using wholesale NG Broadband inputs. In contrast, given the comparatively lower incidence, or absence of, alternative NGA networks on the Regional FACO Markets, there is still a significant barrier to entry to those markets by means of the purchase of wholesale NG Broadband inputs.
- 7.116 ComReg's view is that entry to, and expansion in, the Regional FACO Markets (including self-supply) would involve considerable sunk costs for SPs that do not already own an RFTS network. Furthermore, they constitute a lesser, but still significant, barrier to entry for an SP which has an access network but not the elements required to offer FACO and/or for an SP that already rents non-NG Broadband lines from Eircom and does not have the potential to launch Managed VoB over those non-NG Broadband lines, given the absence of NGA networks in the footprint of the Regional FACO Markets.

⁹¹⁵ As of Q4 2020, there were 404,157 Managed VoIP lines in the footprint of the Urban FACO Markets, and 128,184 Managed VoIP lines in the footprint of the Regional FACO Markets, a split of 76% to 24%.

- 7.117 ComReg considers that entry to, and expansion in, the Relevant FACO Markets would involve considerable sunk costs for SPs that do not already own a network capable of delivering FACO. Sunk costs are a lesser, but still significant, barrier to entry for SPs which operate an access network, but do not offer FACO, or for SPs which purchase wholesale NG Broadband from Eircom or SIRO, and could provide Managed VoIP using those inputs.
- 7.118 The evidence available to ComReg suggests that these sunk costs create sufficiently high barriers to entry on the Regional FACO Markets, such that NG Broadband network rollout is contemplated (by NBI) on a non-commercial basis only. In contrast, the presence of NG Broadband networks (SIRO and Virgin Media) capable of delivering inputs to FACO and/or RFTS on a merchant market and/or self-supply basis on the Urban FACO Markets suggests that SPs can overcome the barriers to entry generated by sunk costs on those markets.

Factor 4: Capacity Constraints

- 7.119 ComReg also considers whether capacity constraints may act as a barrier to entry or expansion in the Relevant FACO Markets. Capacity constraints occur where demand for bandwidth on a network exceeds available capacity. In considering this likelihood, ComReg operates on the working assumption that market entry is unlikely to occur by means of the rollout of new FNA networks and is more likely to occur by means of NG Broadband.
- 7.120 ComReg understands that the delivery of voice traffic over reliable broadband⁹¹⁶ is very unlikely to encounter capacity constraints for two key reasons. Firstly, the capacity taken up on a broadband connection by fixed voice telephony is typically trivial (less than 1% of broadband data rate). A single VoIP call delivered over broadband will, for example, require bandwidth of approximately 100kbps/s.
- 7.121 For example, using the G.722 codec to deliver a Managed VoIP call, which requires average bandwidth of 80 Kbps,⁹¹⁷ would amount to 0.08% of the capacity of a notional 100 Mbps broadband connection. Moreover, an SP may assign prioritisation to categories of traffic delivered by means of broadband as part of its traffic management. Thus, while internet browsing may be delivered on a 'best effort' basis, VoIP may be delivered on a 'real time' basis, thus ensuring that, even if a broadband network were constrained, VoIP traffic would be prioritised.
- 7.122 ComReg accordingly considers that capacity constraints are unlikely to act as a significant barrier to entry on a forward-looking basis on the Relevant FACO Markets.

⁹¹⁶ See paragraph 5.221

⁹¹⁷ <https://www.avoxi.com/blog/how-much-bandwidth-is-needed-for-voip/>

Factor 5: Eircom benefits from being vertically-integrated

- 7.123 A vertically-integrated SP may generate significant efficiencies arising from its presence in upstream and downstream markets which are not available to SPs who are not vertically-integrated. In principle, these efficiencies can be passed on to end users in the form of more competitive prices, lower transaction costs, or enhanced product quality. However, vertical integration may create a barrier to entry where an SP's presence at multiple levels of the supply chain raises the costs of new entry, for example, where prospective new entrants perceive the need to enter multiple markets simultaneously to pose a viable competitive constraint on the vertically-integrated SP. A vertically-integrated SP may also face greater opportunities and incentives to foreclose competition at one or more levels in the value chain. It may not even be necessary for a vertically-integrated SP to engage in such discriminatory behaviour; the threat of such behaviour occurring may suffice to act as a disincentive to new market entry.
- 7.124 Absent regulation, Eircom would likely retain a very substantial proportion of FACO focal product self-supply and merchant market supply in the Regional FACO Markets. Eircom is also a significant provider of RFTS in the footprint of those markets. Eircom's customer base in the RFTS markets is likely to facilitate its ability to consolidate its market power in the Regional FACO Markets. As a supplier of both FACO and RFTS, Eircom also faces an incentive to raise the costs of its SP rivals supplying RFTS (in a MGA scenario) by, for example, applying a margin/price squeeze between these prices (or, indeed, refusing access to supply FACO) and, in doing so, foreclosing competition on the RFTS market.⁹¹⁸
- 7.125 The strength of this incentive is likely to be greater on the Regional FACO Markets, where Access Seekers cannot easily switch to alternative service provision in response to a margin or price squeeze levied by Eircom. In contrast, Eircom may face lower incentives to apply margin or price squeezes on the Urban FACO Markets, as any attempt to do so may result in Access Seekers (or end users) switching SP, resulting in a loss of revenue to Eircom.
- 7.126 Eircom, through its supply of FACO and RFTS, has, absent regulation, incentives to raise the price of FACO, thereby raising rivals' costs and potentially foreclosing RFTS. By making its rivals less competitive, Eircom could amass a significant portion of its customers at the RFTS level, without the need to rely on wholesale FACO revenue. Furthermore, Eircom may be able to absorb the increase in FACO costs passed on to its retail arm, if it can offset these higher costs by increasing its RFTS base, particularly given the ease with which RFTS customers of an Access Seeker could switch to Eircom's retail arm, given the similarities in underlying FACO infrastructure.

⁹¹⁸ See further discussion of the potential for Eircom to apply a margin squeeze between FACO and RFTS prices in Section 9 and Section 10 below.

- 7.127 Eircom's vertically-integrated structure also mitigates the extent to which it is dependent on its FACO revenue. As such, absent regulation, Eircom could potentially seek to maximize its total profits by increasing FACO prices (or, indeed, refusing to supply FACO) and, in doing so, seek to foreclose competition in the RFTS market.
- 7.128 Both SIRO and NBI offer – or plan to offer – services at the wholesale level only, and neither is therefore vertically-integrated. In contrast, Virgin Media self-supplies RFTS in the footprint of the Urban FACO Markets using its own CATV network. However, Virgin Media does not supply FACO on a merchant market basis and is not expected to do so over the lifetime of this market review. Moreover, Virgin Media's network footprint is substantially concentrated within the Urban FACO Markets and is not expected to enter the Regional FACO Markets over the lifetime of this market review. Aside from Virgin Media, only three SPs competing with Eircom on the downstream RFTS market have market shares in excess of 3%, as of Q4 2020 – Vodafone, Sky and Pure Telecom. None of these SPs are vertically-integrated, and all three must therefore procure wholesale inputs from other SPs, including Eircom, BT, and SIRO, to provide RFTS to their end users.
- 7.129 ComReg considers that, given the presence of both SIRO and Virgin Media on the Urban FACO Markets, Eircom's vertical integration is likely to be a greater barrier to entry on the Regional FACO Markets.
- 7.130 Accordingly, ComReg's view is that Eircom's vertically-integrated structure is capable of creating a barrier to entry to the Regional FACO Markets, absent regulation. It does so by dissuading market entry due to the threat of the vertically-integrated SP potentially engaging in discriminatory behaviour which would put the new entrant at a disadvantage to the vertically-integrated SP's wholesale or retail arms. Accordingly, a vertically-integrated SP may contribute to barriers to entry simply by refusing to grant access to its infrastructure, by delaying access or by granting access on pricing or other terms which are sufficiently disadvantageous to dissuade or prevent market entry.

Respondents' Views

- 7.131 Eircom argued that ComReg's assessment is over-reliant on theory. Eircom stated that a successful foreclosure strategy requires the wholesaler imposing the refusal to supply to be able to recoup the profit sacrifice at the retail level. This profit sacrifice must include the wholesale revenue foregone as a result of Access Seekers leaving the market due to the margin squeeze through the recoupment of downstream margins.

- 7.132 Eircom argued, firstly, that the incentive to discriminate in the Regional FACO Market is very weak, even assuming that Eircom retail would gain all the retail business of the foreclosed Access Seekers, as the risk of Access Seekers withdrawing business in the Urban FACO Market in retaliation more than outweighs this risk. Coupled with the availability of Virgin Media and Imagine, Eircom concluded that it was highly unlikely that all end users in the Regional FACO Market would purchase from Eircom on the RFTS market. Eircom also suggested that a share of these RFTS customers may instead use MTS or Managed VoIP.
- 7.133 Eircom argued, secondly, that if it foreclosed the market today it would lose a share of present-day wholesale revenues, and would only have the incentive to do so only if it hoped to gain greater market share and revenues in the RFTS market, which it argued above, is unlikely. Even assuming that Eircom was able to gain such RFTS share, it would take considerable time to do so, particularly given a declining RFTS market for the importance of calls in retail offers and the lower available margins for standalone customers. At the same time, the rollout of alternative NG Broadband networks provides a substitute to legacy FACO. Consequently, in the timeframe of the relevant market review the exclusionary conduct would be ill-advised, as Eircom would likely be unsuccessful in recouping the wholesale revenues foregone. Therefore, even theoretically, Eircom cannot expect likely recoupment of the wholesale revenues sacrificed under the refusal to deal scenario.
- 7.134 Finally, Eircom argued that, even assuming hypothetically that the refusal to supply is successful on the legacy network, the 2014 Explanatory Note recognised that such a strategy would only be transient:

“In the medium-term it will not be profitable for an operator to keep the PSTN network running in parallel with its all-IP network, even if the operator could price above the competitive level for a limited period of time to a dwindling group of captive users. Simultaneously, technological solutions, particularly offered by VoIP and mobile operators, will further reduce PSTN user captivity by offering increased reliability and security at similar levels as PSTN networks.”⁹¹⁹

⁹¹⁹ At p.21.

ComReg's Assessment of Respondents' Views and Position

- 7.135 Eircom considers that, in respect of its SMP assessment of the Regional FACO Markets, ComReg has, *inter alia*, over-relied on a theoretical possibility of foreclosure. ComReg would first note that, in the 2020 Consultation, it did not refer to foreclosure in its SMP assessment, and assumes that Eircom is, rather, referring to ComReg's discussion of foreclosure as part of its assessment of Criterion 1 of the 3CT. In respect of Criterion 1, ComReg disagrees that it has over-relied on the possibility of foreclosure, and notes that this was but one of five aspects which it considered in its Criterion 1 assessment.⁹²⁰
- 7.136 Eircom argues that a foreclosure strategy is only plausible where the profit sacrifice can be recouped at the retail level, and sets out two reasons why it considers that this would be unlikely
- 7.137 First, Eircom considers that Access Seekers would retaliate in the Urban FACO Markets by withdrawing their business. ComReg considers that this is not a credible strategy for the reasons set out at paragraphs 7.401 to 7.407 below. Eircom also considers that it would be unlikely that all RFTS end users in the Regional FACO Markets would revert to Eircom retail given the presence of Virgin Media, Imagine, Managed VoIP over NG Broadband or MTS. ComReg would note, however, that Virgin Media and Managed VoIP are concentrated in the footprint of the Urban FACO Markets and will not, therefore, be credible switching options for many RFTS end users in the Regional FACO Markets.
- 7.138 Second, Eircom argued that a recoupment strategy would be inadvisable, given the limited time in which it would likely be successful as RFTS declines and alternative NG Broadband networks roll out. This assumption is predicated on Eircom winning a greater RFTS market share to compensate for the loss of wholesale revenues. Under the MGA, and in an absent regulation scenario, Eircom ceases to offer merchant market FACO. If Eircom captures an RFTS customer previously served by an Access Seeker using FACO inputs, it gains additional margin that it had not previously earned. Accordingly, on a per FNA line basis, Eircom is likely to earn a greater total margin on delivery of RFTS, than on delivery of FACO alone. Therefore, a foreclosure strategy may be profitable for Eircom, even if it delivers service to fewer lines overall.

⁹²⁰ 1. Control of infrastructure that is difficult for a new entrant to replicate, 2. Economies of scale, scope and density, 3. Sunk costs, 4. Capacity constraints, and 5. Vertical integration.

7.139 Finally, ComReg notes that Eircom assumes a foreclosure strategy requires recoupment. This is not necessarily consistent with case law in the telecommunications sector. For instance, as set out by the European Court of Justice in the 2009 France Télécom case,⁹²¹ proof of likely recoupment of losses was not required in predatory pricing cases, and that the intent of the SMP operator to eliminate competitors may be presumed under certain limited circumstances. Thus, Eircom's founding contention – that exclusionary conduct is only 'commercial' where recoupment is possible – is by no means self-evident.

Legal, regulatory and administrative barriers to entry

7.140 Legal or regulatory barriers result from legislative, administrative or other state measures that directly affect the relevant market. Examples include legal requirements related to the necessary permissions to roll out infrastructure (e.g. planning permission for civil works, or the need to obtain rights of way to roll out a network over private property).

7.141 Unlike the structural barriers to entry discussed above, legal, regulatory and administrative barriers to entry are derived not from economic conditions, but from state or EU interventions which have a direct impact on a firm's ability to enter a new market. Pursuant to the 2014 Explanatory Note and the 2020 Explanatory Note,⁹²² which set out the guidelines for the 3CT, the aforementioned barriers must be assessed in respect of the relevant market (in this case, the FACO market), in a MGA scenario, to determine whether the specified market requires *ex ante* regulation.

7.142 The State (or the EU) would generate legal barriers to entry if, by means of legislation or legal precedents, it facilitated the prohibition or limitation of a firm's capacity to compete with the incumbent. Such an intervention could, for instance, be justified by reference to enabling the provision of utilities – products and services which are integral to everyday life, such as fixed voice telephony – which are of mass social benefit. An example of a legal barrier to entry would be if a government enforced a statutory ban on entry to a specific market, thereby creating a legal monopoly where only one firm is authorised to operate. ComReg is of the view that legislation and case law now generally promote market entry, rather than erecting or maintaining barriers to entry.

7.143 ComReg also assesses whether regulations enforced by NRAs or the EC are capable of erecting regulatory barriers to entry to the relevant markets. Examples would include regulation regarding the prices which SPs active at both the wholesale and retail levels can charge for products and services, or conditions surrounding access to an incumbent's network to facilitate the entry of new firms.

⁹²¹ Case C-202/07, see also MEMO/09/147.

⁹²² The 3CT is also set out in Article 67(1) of the EECC.

7.144 Administrative barriers to entry generally encompass all required, relevant documentation or processes such as planning permissions, wayleaves, and other administrative hurdles which all firms must satisfy, but which may have the effect of deterring, inhibiting or slowing the process of a firm attempting to enter a new market. These types of barriers may generate a comparative advantage for SPs already active on the market who have previously secured these rights (or secured exemptions or derogations from these obligations), and therefore may not be subject to the full and formal inspections required of new entrants.

Legal Barriers

7.145 Legal barriers to entry arise from Irish or EU legislation, or legal precedent. In such cases, firms may be legally prohibited from entering a market, or restricted in terms of expansion in a particular market, therefore eradicating any potential competitors and offering protection from competition for the incumbent. Prohibitions in this case may be absolute in nature, whereby firms are specifically blocked from entry to a market, or constructive, whereby the legal barriers are simply insurmountable to enable a firm to compete with the incumbent. Although this type of legal monopoly once existed within the telecommunications sector in Ireland, this rigid legal structure has since been removed and, ComReg is of the view that no substantial legal barriers to entry to the Relevant FACO Markets remain in place.

7.146 As outlined in the Framework Regulations (currently in force as of May 2021), any ‘*Authorised Undertaking*⁹²³ has the right:

“...under the conditions of and in accordance with the 2011 Access Regulations and the Access Directive, to negotiate interconnection with and, where applicable, obtain access to or interconnection from another Undertaking deemed to be authorised in the State or in another Member State to provide a publicly available electronic communications network or service...”

7.147 Rather than acting as a barrier to entry, ComReg is of the view that the above regulation supports the entry of SPs into the Relevant FACO Markets, thereby playing a central role in facilitating competition, although negotiation is still required and may be impacted by the bargaining power of each party.

⁹²³ Authorised Undertaking: an Undertaking deemed to be authorised under Regulation 4 in the European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011. <http://www.irishstatutebook.ie/eli/2011/si/335/made/en/print>. This provision is mirrored at Article 12 of the EECC.

- 7.148 Under section 53 of the Communications Regulation Act 2002⁹²⁴ and section 254(1) of the Planning and Development Act 2000,⁹²⁵ all Authorised Undertakings hold the right to apply for consent to install the relevant infrastructure required to enable the provision of electronic communications. Although applicable to firms both already in the market and those seeking entry, it is likely that the minimal barriers which are created by the legal obligation to apply for such consents are predominantly administrative in practice, although they do have a legal basis.
- 7.149 Also addressing the potential impact of case law on the Relevant FACO Markets, ComReg is unaware of the presence of any legal precedent which is likely to act as a barrier to entry to any of the four Relevant FACO Markets.

Regulatory Barriers

- 7.150 Pursuant to Section 12 of the Communications Regulation Act 2002 and Regulation 16 of the Framework Regulations, the primary objectives of ComReg, as a regulator of electronic communication services, is to promote efficiency, sustainable competition, efficient investment, and innovation, in order to achieve the maximum benefit for end users.⁹²⁶ As such, the imposition of regulation in the Relevant FACO Markets must concur with these objectives. In particular, regulation must therefore constrain the designated SMP SP from making use of its SMP, in order to facilitate the entry and expansion of new firms in the market.
- 7.151 The MGA requires ComReg to conduct its analysis in a hypothetical scenario in which no regulation is present on the market under review. However, ComReg assesses regulation present on any relevant adjoining markets, to determine, *inter alia*, whether such regulation would have either a direct or indirect impact on a firm's ability to enter the Relevant FACO Markets. As discussed previously in Section 6,⁹²⁷ ComReg is of the view that the delivery of wholesale NG Broadband inputs, specifically WLA and WCA, may facilitate both direct demand-side and indirect retail constraints on the Relevant FACO Markets, when packaged with a wholesale or retail VoIP platform, thereby validating the requirement for its inclusion in this assessment. As set out at Section 5.2 above, the availability of NG WLA and WCA is predominantly confined to the footprint of the Urban FACO Markets. Accordingly, the potential constraints generated by NG WLA or WCA are, typically, not present on the Regional FACO Markets.

⁹²⁴ Communications Regulation Act 2002 (No. 20 of 2002), as amended (the '**Communications Regulation Act 2002 (as amended)**'). <http://www.irishstatutebook.ie/eli/2002/act/20/enacted/en/html>

⁹²⁵ Planning and Development Act 2000 (No. 30 of 2000).
<http://www.irishstatutebook.ie/eli/2000/act/30/enacted/en/html>

⁹²⁶ The general objectives of the EECC are set out at Article 3 thereof. Article 3(4)(d) stipulates the promotion of efficient innovation and investment.

⁹²⁷ See paragraphs 5.262 to 5.283.

- 7.152 Arising from ComReg's 2018 WLA/WCA Decision, a series of remedies have been imposed on the SMP SP (Eircom) on the WLA Market and the Regional WCA Market.
- 7.153 Due to the presence of SMP remedies in the WLA and the Regional WCA Markets, and their capacity to facilitate the provision of direct and indirect constraints on the Urban FACO Markets, ComReg is of the view that, contrary to the notion that regulation is likely to erect barriers to entry, the existence of regulation in related markets actually facilitates the entry of new firms into the Urban FACO Markets, by ensuring that Access Seekers are guaranteed access to wholesale NG Broadband inputs which allow them to offer FACO or RFTS. In the footprint of the Regional FACO Markets, given the absence of NG Broadband networks (pending extensive NBI rollout in the IA), the remedies applied on the WLA Market and the Regional WCA Market assure access to wholesale broadband offered by Eircom. However, ComReg notes that wholesale broadband access delivered over FNA is unlikely to have the necessary speed, bandwidth, capacity and QoS parameters to allow for the delivery of effective Managed VoIP RFTS.
- 7.154 In the absence of the above remedies, Eircom would have the ability to wield its SMP to exclude firms from the market, by denying access to its network. This, in turn, would remove the possibility of WLA and WCA acting as a direct or indirect constraint, and enable Eircom to construct and sustain barriers to entry into the Urban FACO Markets.

Administrative Barriers

- 7.155 Administrative barriers to entry refer to all administrative duties a prospective SP must carry out prior to entry into a new market, or expansion of current operations within a specific market, in line with the obligations set out by statutory entities, including county councils, planning authorities, ComReg, and any other relevant bodies. Within telecommunications, administrative barriers most often include requirements in respect of planning permissions, wayleaves and licensing which are required prior to the rollout or upgrade of network infrastructure. Specified in the Framework Regulations, some of these administrative tasks include:
- (a) Provision of a notification to ComReg of a firm's intention to enter the market and provide a network and/or service;
 - (b) Application for consent or a licence to establish over-ground electronic communications infrastructure and any necessary, related infrastructure; and
 - (c) Negotiation of interconnection with, or access to, an interconnection from another SP which has been authorised in the State or EC to provide a publicly available electronic communications network or service.

- 7.156 In the case of any market for the provision of an electronic communications service (including FACO), when seeking permission for the construction of a new network, or further expansion of a current network, a T2 Road Opening License is required. This authorisation must be requested from the Road Management Office ('**RMO**'), which acts as the sole agency for processing of road opening licences for all local authorities in the country, other than Dublin City Council ('**DCC**') which maintains a separate licencing system.
- 7.157 If the rollout of a new network, or expansion of a current network, is deemed a strategic infrastructure development, meaning one which is of "*strategic economic or social importance to the State or the region in which it would be situate*",⁹²⁸ and fulfils any of the objectives of the National Planning Framework or regional, spatial and economic strategy for an area, whilst also having a significant impact on more than one local planning authority, planning permission must be sought directly from An Bord Pleanála ('**the Board**'). Whilst the procedure varies by circumstances, a three-step administrative process is most often required:
- (a) Prospective SPs who require planning permission, a licence or another form of consent must request a pre-application consultation with the Board;
 - (b) Prospective SPs may submit a request to the Board to scope⁹²⁹ the Environmental Impact Assessment Report for the project; and
 - (c) Prospective SPs must formally submit an application for planning permission or other relevant consent to the Board.
- 7.158 Planning submissions in this case are assessed in line with the normal procedures undertaken by each of the other planning authorities.
- 7.159 ComReg concludes that the need to satisfy administrative criteria generates a barrier to entry, but that this barrier is not substantial, and does not appear to differ substantially, either between Eircom and other SPs, or between the Urban FACO Markets and the Regional FACO Markets. In particular, where an SP is committed to investing in the provision of network infrastructure capable of delivering FACO, the barrier to entry arising from the sunk costs of infrastructure provision is likely to be more substantial than the barrier arising from the associated administrative requirements.

Conclusions on barriers to entry

- 7.160 ComReg's position, having considered Respondents' views, is that:

⁹²⁸ As set out at Section 37(a)(2) of the Planning and Development Act 2000, as amended by the Planning and Development (Strategic Infrastructure) Act 2006.

⁹²⁹ Scoping is a discretionary process provided for in EU directives whereby a prospective SP may request the relevant authority (the Board in this case) to provide an opinion on what information will be required in an Environmental Impact Assessment Report regarding the proposed project.

- (a) The Regional FACO Markets are characterised by the presence of high and non-transitory structural barriers to entry;
- (b) The Urban FACO Markets are not characterised by the presence of high and non-transitory structural barriers to entry; and
- (c) Neither the Regional FACO Markets nor the Urban FACO Markets are characterised by high and non-transitory legal, regulatory, or administrative barriers to entry.

7.161 In respect of structural barriers to entry, ComReg is of the view that:

- (a) Eircom controls infrastructure which is ubiquitous and difficult to replicate. This is consistent with the presence of high and non-transitory barriers to entry in the Regional FACO Markets. However, the presence of market entrants on the Urban FACO Markets suggests that these barriers to entry have been overcome (and are capable of being further overcome), and are therefore not necessarily high and/or non-transitory;
- (b) Eircom appears to benefit from economies of scale, scope and density in the provision of FACO, to the extent that it is likely to act as a high and non-transitory barrier to entry on the Regional FACO Markets, given that other SPs have had limited success in achieving economies of scale commensurate with those achieved by Eircom.⁹³⁰ However, the presence of market entrants on the Urban FACO Markets suggests that OAOs have been able to benefit to the required degree from economies of scope or density, suggesting that these barriers to entry have been overcome, and are therefore not necessarily high and/or non-transitory;
- (c) Entry to the Relevant FACO Markets would require a new entrant to incur substantial sunk costs which it would have to be confident of recovering; in contrast, Eircom faces a lower burden of sunk costs. Sunk costs associated with entry are likely to be mitigated for SPs with extensive wholesale NG Broadband infrastructure already in place (e.g. SIRO and Access Seekers using these networks), but this may be purely academic where those SPs have made a commercial decision not to enter the Regional FACO Markets. Overall, the level of sunk costs which a new entrant would be required to incur is likely to act as a high and non-transitory barrier to entry on the Regional FACO Markets. However, the presence of market entrants on the Urban FACO Markets suggests that, on those markets, SPs have chosen to incur sunk costs, suggesting that these barriers to entry have been overcome, and are therefore not necessarily high and/or non-transitory;

⁹³⁰ With sufficient coverage, the presence of wholesale NG Broadband can lessen entry barriers.

- (d) Eircom's vertically-integrated structure and its control of an important upstream input would, absent regulation on the Regional FACO Markets, likely create a barrier to entry arising from a new entrant's understanding that Eircom would be incentivised to offer FACO services at comparatively disadvantageous terms – or not all – to it, compared to Eircom's own retail arm (in a MGA scenario). In contrast, the presence of SPs in the Urban FACO Markets – including a vertically-integrated SP (Virgin Media) - suggests that Eircom's vertical integration does not amount to a high and non-transitory structural barrier to entry on the Urban FACO Markets; and
- (e) Capacity constraints are unlikely to act as a significant barrier to entry on a forward-looking basis on any of the Relevant FACO Markets.

7.162 Accordingly, ComReg has formed the view that the Urban FACO Markets are likely not characterised by the presence of high and non-transitory barriers to entry. In contrast, the Regional FACO Markets are likely characterised by the presence of high and non-transitory barriers to entry.

7.163 All three 3CT criteria must pass in order for the presumption in favour of *ex ante* regulation to be retained. In respect of the Regional FACO Markets, Criterion 1 has passed. The assessment now proceeds to the second and third criteria. In respect of the Urban FACO Markets, Criterion 1 has failed. In principle, this suggests that it is not necessary to proceed to an assessment of whether the second and third criteria pass or fail in respect of the Urban FACO Markets. However, for analytical completeness, ComReg proceeds to do so in respect of both the Regional FACO Markets and the Urban FACO Markets.

Criterion 2: Is the market tending towards effective competition within the relevant time horizon?

7.164 Criterion 2 assesses whether the Relevant FACO Markets are likely to tend towards effective competition over the lifetime of this market review.⁹³¹ By definition, it is necessary to carry out the assessment of Criterion 2 on a dynamic and forward-looking basis.

7.165 In this respect, ComReg has examined whether:

- (a) There are observable trends towards effective competition on the Regional FACO Markets and the Urban FACO Markets (see paragraphs 7.166 to 7.202 below);

⁹³¹ A market may tend towards effective competition not only by means of new entry into the Relevant FACO Markets, but also by the deployment of alternative infrastructures by Access Seekers that would allow them to offer RFTS in the absence of regulation in the Relevant FACO Markets.

- (b) SPs other than Eircom are in a position to enter the Regional FACO Markets and the Urban FACO Markets to the extent that they would be able to compete effectively with the incumbent (see paragraphs 7.203 to 7.233 below); and
- (c) Any expected or foreseeable technological and economic developments are likely to impact on competition within the time period of the market review (see paragraphs 7.234 to 7.248 below).

Whether there are observable trends towards effective competition

7.166 In this section, ComReg examines whether there are observable trends towards effective competition in the Relevant FACO Markets:

- (a) A decrease in incumbent Relevant FACO Market share, corresponding with increasing market share of competing FACO SP(s);
- (b) A decrease in incumbent RFTS market share, corresponding with increasing market share of competing RFTS SP(s); and
- (c) An increase in the self-supply of RFTS by means of Managed VoIP by SPs (thereby removing the need for SPs to purchase FACO in order to provide RFTS to their own end users).

7.167 Assessing market shares based on FACO volumes alone fails to account for the indirect retail constraint on the Relevant FACO Markets generated by self-supply of RFTS by means of Managed VoIP. Having regard to the extent to which RFTS is capable of being delivered over NG Broadband inputs, market shares based on both FACO and RFTS volumes are a more accurate indicator of the extent of competition within the Relevant FACO Markets.

Volume of FACO lines provided by each FACO SP

7.168 As set out at Table 49 above, demand for Eircom FACO (SB-WLR, but also WLV, which makes use of upstream SB-WLR inputs) decreased by 13% to 476,804 access paths between the publication of the 2015 FACO Decision in Q3 2015, and Q4 2020. BT's White Label VoIP product was launched in January 2019, and, as of Q4 2020, [REDACTED] [REDACTED] %]. Accordingly, despite a slight decrease in sales of indirect access paths, Eircom still accounts for over 99% of merchant market sales of FACO, even before taking into account Eircom sales of White Label VoIP. No other SP is currently active in the provision of merchant market FACO, but ComReg notes that a number of SPs choose to self-supply FACO.

7.169 As of Q4 2019, as set out at Table 66 below, Eircom continues to account for over half of all FNA RFTS lines on both the Urban FACO Markets and the Regional FACO Markets.

Table 66: % purchase share of direct and indirect FNA lines in the presence of regulation, Q4 2019 [REDACTED]⁹³²

	Urban FACO Market		Regional FACO Market	
	LL-FACO	HL-FACO	LL-FACO	HL-FACO
BT	████	████	████	████
Digiweb	████	████	████	████
Eircom	████	████	████	████
Pure Telecom	████	████	████	████
Virgin Media	████	████	████	████
Vodafone	████	████	████	████
OAO & Other VoIP	████	████	████	████
Total	100%	100%	100%	100%

7.170 When indirect lines only (excluding Eircom) are counted, BT is the largest purchaser on the Urban LL-FACO Market, while on the Regional FACO Markets, BT and Vodafone purchase similar numbers of FNA lines:

Table 67: % purchase share of direct and indirect merchant market FNA lines, Q4 2019 [REDACTED]⁹³³

	Urban FACO Market		Regional FACO Market	
	LL-FACO	HL-FACO	LL-FACO	HL-FACO
BT	████	████	████	████
Digiweb	██	██	██	██
Pure Telecom	██	████	████	████
Virgin Media	██	██	██	██
Vodafone	████	████	████	████
OAO & Other VoIP	████	████	████	████
Total	100%	100%	100%	100%

Volume of RFTS subscriptions provided by each RFTS SP to end users

7.171 As set out at Table 68 below, RFTS subscription market shares have remained reasonably stable since the publication of the 2015 FACO Decision. Aside from Sky, which increased its market share by almost 5%, no other SP experienced changes of greater than 2%. On a national basis, Eircom continues to be substantially the largest provider of RFTS:

⁹³² As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, more recent data are currently unavailable.

⁹³³ Ibid.

Table 68: RFTS market shares, Q3 2015 – Q4 2020

	2015 Q3	2017 Q3	2018 Q3	2019 Q4	2020 Q4	Change
Eircom	40.4%	37.9%	38.8%	38.8%	40.3%	-0.1%
Virgin Media	24.7%	24.4%	24.3%	23.9%	22.6%	-2.1%
Vodafone	15.4%	14.7%	13.7%	13.9%	13.6%	-1.8%
Digiweb	4.2%	3.0%	2.2%			-2.2% ⁹³⁴
Sky	8.8%	12.3%	13.3%	13.9%	13.6%	+4.8%
Pure Telecom	2.1%	3.2%	3.4%	3.9%	3.9%	+1.8%
OAOs	4.6%	4.4%	4.3%	5.6%	6.1%	+1.5%

7.172 As set out at Table 68 above, larger SPs are typically capable of retaining their RFTS end users in a MGA where SB-WLR and WLV are no longer supplied on a merchant market basis, due to their capacity to migrate these end users to Managed VoIP.

Volume of RFTS subscriptions delivered over Managed VoIP

7.173 As set out in Section 6 above, on the basis of an indirect retail constraint, RFTS self-supply by means of Managed VoIP using upstream broadband inputs on a self-supply or merchant market basis has also been included in the Relevant FACO Markets. Over the period since the publication of the 2015 FACO Decision, as set out in Table 69 below, metrics relating to the provision of voice over FNA have declined, including the supply of FACO components by means of SB-WLR, FACO (or CPS), PSTN and ISDN access paths, RFTS revenue, and fixed voice traffic. The only fixed voice metrics which have grown over this time period are those relating to WLV access paths (which have, nevertheless, declined in consecutive quarters from a peak in Q3 2018), Managed VoB subscriptions, and business fixed voice subscriptions:

Table 69: Changes in QKDR Fixed voice metrics, Q3 2015 – Q4 2020

Access Paths ⁹³⁵	2015 Q3	2020 Q4	Change
Total Direct Fixed access paths	946,946	609,779	-55%
Carrier Pre-Select access paths	20,159	5,642	-257%
Wholesale Line Rental access paths	371,191	240,557	-54%
White Label Voice access paths	175,852	236,247	26%
<i>Total Indirect Fixed Access Paths</i>	567,202	484,738	-17%

⁹³⁴ ComReg only records individual SP market shares where an SP has a market share of at least 2%. All SPs having market shares below 2% are collectively accounted for under the 'OAOs' category.

⁹³⁵ See Table 1 for description of Lines, Access Paths and Subscriptions.

Total Direct & Indirect Access Paths	1,514,148	1,094,517	-38%
PSTN access paths	1,174,316	870,385	-35%
ISDN Basic access paths	125,328	86,662	-45%
ISDN Fractional access paths	54,544	33,808	-61%
ISDN Primary access paths	159,960	101,370	-58%
<i>Total ISDN Access Paths</i>	339,832	221,840	-53%
Total PSTN and ISDN Access Paths	1,514,148	1,094,517	-38%
Fixed Voice Retail Revenues (000's)	€160,666	€125,349	-28%
Fixed Voice Traffic (000 Minutes)	2015 Q3	2020 Q4	
Domestic Fixed to Fixed	553,518	283,067	-96%
Fixed International Outgoing	211,771	102,703	-104%
Domestic Fixed to Mobile	147,962	141,947	-4%
Fixed Other/Advanced	174,129	125,644	-39%
Total Fixed Voice Minutes	1,087,380	653,361	-66%
Fixed Subscriptions	2015 Q3	2020 Q4	
Voice-Over Broadband Subscriptions	387,581	523,988	26%
Fixed Voice Residential Subscriptions (incl. VoB)	1,279,158	1,128,214	-13%
Fixed Voice Business Subscriptions (incl. VoB)	172,416	198,786	13%
Total Fixed Voice Subscriptions	1,451,574	1,327,000	-9%

- 7.174 As set out above, Eircom provides 100% of FACO delivered over FNA to Access Seekers (and 99% of FACO delivered over FNA and broadband by means of White Label VoIP). Since the 2015 FACO Decision, however, demand for the provision of FNA FACO has been in decline, while Managed VoIP subscriptions delivered over CATV self-supply or wholesale NG Broadband inputs (including self-supply) have increased by a near corresponding amount.
- 7.175 Since Q3 2015, Managed VoB RFTS subscriptions have increased by 26% to 524,000 subscriptions, while over the same time period, total RFTS subscriptions delivered over FNA decreased by 9%. This suggests a trend away from the purchase of FNA FACO, and towards the use of broadband inputs on a self-supply basis or a merchant market basis to offer RFTS by means of Managed VoIP. In this regard, at Q3 2015, Managed VoB subscriptions accounted for 26% of total RFTS subscriptions, a figure which has increased to 39% as of Q4 2020.

- 7.176 Managed VoB lines account for approximately 99% of all Managed VoIP lines. Accordingly, Table 70 below provides a reasonably accurate approximation of total Managed VoIP lines across the Urban FACO Markets and Regional FACO Markets, although it is not possible to report accurate figures in respect of Managed VoIP lines on the Regional HL-FACO and Urban HL-FACO Markets.
- 7.177 It should also be noted that, while Virgin Media continues to be the largest provider of RFTS by means of Managed VoB, its Managed VoB subscriptions have declined by 16% since the 2015 FACO Decision, while total Managed VoB subscriptions overall have increased by 26%. ComReg data indicate that 82% of this growth is accounted for by increases in Eircom Managed VoIP (based on Eircom self-supply) and Vodafone Managed VoIP (based on purchases of VUA from WLA SPs such as SIRO and Eircom).
- 7.178 These data indicate that RFTS delivered by means of Managed VoIP over NG Broadband continues to grow, in contrast to RFTS delivered by means of FNA FACO, which has declined by 9%. Looking at the provision of Managed VoIP lines on the Urban FACO Markets and the Regional FACO Markets, as of Q4 2020, 19% of total Managed VoIP lines are provided in the footprint of the Regional FACO Markets, while 81% are provided in the footprint of the Urban FACO Market.

Table 70: Managed VoIP lines by Geographic FACO Market, Q4 2020 [REDACTED]

SP	Managed VoIP lines			
	Urban FACO	%	Regional FACO	%
Digiweb	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Eircom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Virgin Media	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
OAOs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

- 7.179 The data above indicate that, on both markets, Virgin Media accounts for the majority of Managed VoIP lines, with Eircom and Vodafone occupying the second and third places in both cases. On both the Urban FACO Markets and the Regional FACO Markets, Virgin Media, Eircom and Vodafone account for over 96% of Managed VoIP lines.

Respondents' Views

- 7.180 CE suggested that the Regional FACO Market is moving towards effective competition and considered that ComReg had underestimated the role of alternative SPs providing Managed VoB.

- 7.181 CE argued that Access Seekers will continue to have access to regulated wholesale broadband inputs, which affords them the opportunity to offer Managed VoB to end users, and that this was the case at the individual premises level, where that premises is served by NG Broadband. CE indicated that it believes ComReg's assumptions to be based on limited or non-transparent substantiation and appeared to contradict other available evidence on NGA coverage.
- 7.182 CE suggested that ComReg's assessment of the Urban FACO Markets may not fully reflect relevant market developments, and thus, the tendency of the market to develop towards effective competition for two key reasons.
- 7.183 First, the FACO market is not stagnant, but, rather, is characterised by significant investments in new competing networks across large parts of the country. In this regard, CE alluded to both the non-commercial rollout of NBI, and current and planned investments by Eircom, SIRO and Virgin Media in upgrading to very high capacity networks ('VHCN').
- 7.184 Second, CE argued that ComReg's conclusions about the size of the Urban FACO Markets are not based on transparent assumptions and not consistent with the available evidence on NGA coverage in Ireland. CE noted in particular that the European Commission's 2020 DESI report reported 96% NGA coverage in Ireland,⁹³⁶ which CE compared unfavourably with ComReg's proposal to deregulate the Urban FACO Market, consisting of 74% of premises. The DESI estimate includes VDSL, Cable-based DOCSIS 3.0 and DOCSIS 3.1, and FTTP capable of delivering at least 30 Mbps download speeds.
- 7.185 BT and ALTO suggested that the capacity of Access Seekers to deliver RFTS subscriptions over Managed VoIP was obstructed by Eircom and that, as a result, Criterion 2 of the 3CT should fail on both the Urban FACO Markets and the Regional FACO Markets.
- 7.186 BT and ALTO submitted that the 2020 Consultation indicated that Eircom was increasing its strength on the Relevant FACO Markets by transferring merchant market access paths from SB-WLR to WLW, noting that the growth of Eircom WLW mirrored the decline in WLR. This suggested to BT and ALTO that Access Seekers were continuing to use wholesale inputs making use of Eircom FACO (but switching from SB-WLR to WLW), rather than migrating to Managed VoIP, which BT argued appears counter to the premise that Managed VoIP is capable of lowering barriers to entry.

⁹³⁶ European Commission (2020c)

7.187 BT considered that Eircom has been able to substantially grow its Managed VoIP base whilst also hindering the growth of OAO Managed VoIP by migrating end users to its own Managed VoIP RFTS while erecting barriers to Access Seekers switching their own end users from RFTS delivered using FNA FACO, to RFTS delivered by means of Managed VoIP over wholesale NG Broadband. BT argued that Eircom was able to do so because the bulk migration product it offers is not fit for purpose, and acts as a barrier to Access Seekers switching their own end users to Managed VoIP effectively.

Fit for purpose bulk migration remedy

7.188 BT and ALTO both considered that the Eircom bulk migration facility mandated by ComReg in the 2018 WLA/WCA Decision is not fit for purpose, as the ability to use any of Eircom's automated facilities is not available once the migration occurs. Thus, if an error occurs in the bulk migration process, the automatic systems will not be able to reverse the transaction, potentially leaving RFTS end users stranded with no service. This means the order type cannot be trusted for bulk migrations and is largely unusable.

Regional FACO Market

7.189 BT agreed with ComReg's conclusion on the Regional FACO Markets, while noting that a new efficient fit for purpose bulk migration remedy was required.

Urban FACO Market 3CT

7.190 ALTO argued that the Urban FACO Market should pass Criterion 2, due to Eircom actively obstructing migration to VoIP, and due to the existing bulk migration facility not being fit for purpose.

7.191 BT indicated that, as a result, existing migration on the Urban FACO Markets is largely through customer churn and customer requested upgrade, rather than Access Seekers migrating their existing RFTS end users. Accordingly, migration will continue to be slow until an efficient fit-for purpose bulk migration facility is available.

7.192 In BT's view this meant that both Criterion 1 and Criterion 2 of the 3CT should pass on the Urban FACO Markets. Therefore, the Urban FACO Markets should continue to be regulated until an effective bulk migration facility is available.

7.193 BT considered the 3CT should pass on both the Regional FACO Markets and the Urban FACO Markets. Accordingly, the FACO Decision should remedy the barrier to bulk migrations by mandating an efficient, fit for purpose bulk migration remedy, to facilitate Access Seekers migrating existing SB-WLR customers to Managed VoIP delivered over NG Broadband as it is rolled out. Otherwise, BT argued that Access Seekers would experience a far slower migration to VoIP that ComReg envisages.

ComReg's Assessment of Respondents' Views and Position

- 7.194 In response to CE, ComReg concurs that Access Seekers have access to regulated wholesale broadband inputs (in the form of WLA on a national basis, and WCA in the Regional WCA Market) which would enable Access Seekers to provide Managed VoB to end users, where these inputs are available. However, in practice, WLA services are not availed of at a national level, given the deeper interconnection required to available of it, which means its commercial viability is not uniform. ComReg considers that, at levels below 80% wholesale NG Broadband coverage, there is an insufficient wholesale NG Broadband in the Regional FACO Markets to provide a sufficient degree of coverage for Access Seekers and a potential effective competitive constraint on the FACO markets. ComReg's assessment and underlying assumptions are set out in full at Section 5.2.9 of the Consultation, and ComReg has described its amendments to its modelling methodology – and the reasons for those amendments - at paragraphs 5.553 to 5.557 above.
- 7.195 ComReg further notes that it has assessed the tendency of the Urban FACO Markets towards effective competition and concurs with CE that the FACO market is not stagnant. ComReg specifically notes at paragraph 7.155 of the 2020 Consultation (and at paragraph 7.202 below):
- “...ComReg considers, on a preliminary basis, that, while the provision of FNA FACO is in decline across all four Relevant FACO Markets, constraints arising from the provision of Managed VoIP (predominantly at the retail level, but potentially also at the wholesale level) may point towards the emergence of a tendency towards effective competition on an ongoing basis in the Urban FACO Markets...”*
- 7.196 Indeed, it is for this specific reason that ComReg proposed (and in this Decision has decided) to remove regulation from the Urban FACO Markets, meaning that it effectively aims to deregulate 72% of the Relevant FACO Markets (as measured by lines). ComReg further notes that the MTA which it intends to carry out will afford a further opportunity to consider wholesale NG Broadband network rollout within the lifetime of this market review.

- 7.197 Finally, ComReg notes that it has addressed the DESI Report in paragraph 5.576 above, where it is specified that it is not entirely correct to draw a like-for-like comparison between the coverage conclusions of the DESI Report and the FACO geographic market assessment. In the first instance, the DESI definition of NG coverage includes CATV, which is excluded from the 80% wholesale NG Broadband coverage criterion for the reasons set out at paragraphs 5.542 to 5.549 above. Thus, the DESI Report NG coverage figure is greater than the ComReg figure because it includes an additional network technology which ComReg has excluded from the application of the geographic assessment criterion. The 96% NGA coverage figure is also somewhat questionable on the basis that NBI is due to provide services to 544,000 premises in the State on the basis of their being no commercially available broadband service of at least 30Mbps.
- 7.198 Furthermore, the FACO assessment is carried out at the EA level (with EAs grouped into the relevant markets), rather than at the individual premises level, for the reasons set out at paragraphs 5.484 to 5.486 above, and in accordance with the guidance set out in the 2014 BEREC Common Position, and the 2014 and 2020 Explanatory Notes. Analysing the market at a higher level of aggregation than the premises level will be very likely to produce different figures to a premises-level assessment. Moreover, the 80% coverage criterion will lead to some EAs being deregulated despite the presence of some premises which are not passed by wholesale NG Broadband, and some EAs continuing to be regulated, despite the presence of some premises which are passed by wholesale NG Broadband. This is an unavoidable consequence of distinguishing geographic markets on the basis of any wholesale NG Broadband coverage level below 100%, the reasoning for which is set out in detail at paragraphs 5.523 to 5.534 above.
- 7.199 In respect of the concerns set out by BT and ALTO in respect of the failure of effective competition to develop arising from the indirect retail constraint posed by Managed VoIP delivered over wholesale NG broadband, ComReg notes that these concerns substantially arise from what BT and ALTO regard as the ineffective application of the bulk migration remedy currently mandated in the 2018 WLA/WCA Decision.

- 7.200 The WLA Decision Instrument and the WCA Decision Instrument appended to the 2018 WLA/WCA Decision both mandate access obligations in respect of migrations, including bulk migrations. ComReg also notes that since the Consultation, it has issued a direction to Eircom in respect of soft migrations (including bulk migrations) under the 2018 WLA/WCA Decision, as further described at paragraphs 11.56 and 11.57 below. This direction applies to Soft Migrations carried out on the (national) WLA market, and also on the Regional WCA Market. With a view to assuring a smooth transition to Managed VoIP, ComReg has additionally imposed certain requirements on Eircom in respect of un-jumpering during the Urban FACO Markets sunset period, the details of which are set out at paragraph 11.58 below. Taken together, ComReg considers that these requirements placed on Eircom will assure that bulk migrations are carried out in an expeditious manner.
- 7.201 ComReg also notes that BT and ALTO's argument that Eircom has been transferring Access Seekers end users from SB-WLR to WLV does not appear to be supported by the available evidence, which indicates declines in Access Seeker purchases of both SB-WLR and WLV, as set out in greater detail in paragraphs 4.258 and 8.42.

Summary of conclusions on observable trends towards effective competition

- 7.202 Accordingly, ComReg considers that, while the provision of FNA FACO is in decline across all four Relevant FACO Markets, constraints arising from the provision of Managed VoIP (predominantly at the retail level, but potentially also at the wholesale level) may point towards the emergence of a tendency towards effective competition on an ongoing basis in the Urban FACO Markets only, where alternative NGA infrastructure capable of carrying Managed VoIP traffic has been rolled out to a sufficient and more predominant extent. However, there is insufficient evidence of a tendency towards effective competition in the footprint of the Regional FACO Markets. As set out at Section 5 above, the presence of such competition arising *inter alia* from indirect retail constraints is highly dependent on the presence of NG Broadband at EAs.

Potential Entry to the Relevant FACO Markets

- 7.203 Having regard to the assessment of observable trends of a tendency towards effective competition, ComReg now examines the likelihood, extent and timeliness of potential entry into each of the Relevant FACO Markets. This involves considering competitive constraints that may materialise over a medium to long term horizon, and entry into the Relevant FACO Markets is likely to require an SP to incur a range of upfront costs.

- 7.204 However, the barriers to entry faced by any individual SP are likely to differ, depending on whether or not the SP already has a significant RFTS customer base, or a NG Broadband network is available which is capable of delivering FACO (including the use of such networks by Access Seekers). ComReg therefore assesses the potential for entry and expansion on the Relevant FACO Markets by the following types of SPs:
- (a) **Greenfield Entrant(s):** These are SPs that do not have an existing RFTS customer base, or broadband infrastructure;
 - (b) **Non-Networked RFTS SPs:** These are SPs with an RFTS presence, but which purchase network access from third parties (e.g. Sky);
 - (c) **Large Networked RFTS SPs:** These are SPs with an RFTS presence which are capable of self-supplying upstream inputs over their own network assets (e.g. Eircom and Virgin Media); and
 - (d) **Wholesale-only Network Operators:** These are SPs which are rolling out, or intend to roll out, network infrastructure, but which are not currently, and do not intend to become, active at the RFTS level (e.g. SIRO and NBI).

Greenfield Entrant

- 7.205 ComReg has considered the likelihood, extent and timeliness of market entry by greenfield entrants – that is, entities that have no, or very limited, presence on the RFTS market, and no, or very limited, network infrastructure.
- 7.206 ComReg notes that, on all four Relevant FACO Markets, a greenfield entrant is likely to incur entry costs, including sunk costs associated with deploying network or interconnection infrastructure capable of delivering broadband network infrastructure on its own, or, together with a VoIP platform, FACO by means of White Label VoIP. ComReg is of the view that, for a greenfield entrant, the costs of deploying extensive infrastructure capable of delivering FACO may not be justifiable from a commercial perspective, given the need to generate sufficient traffic volumes to support the cost of infrastructure investment.
- 7.207 Accordingly, a greenfield entrant is likely to be dependent upon first gaining economies of scale by developing and expanding a customer base in the provision of, for instance, wholesale NG Broadband inputs, before aiming to move up the ladder of investment. Both eventualities require very significant infrastructural investment, and both suggest that greenfield entry is unlikely to occur on a significant scale within the lifetime of this market review on any of the four Relevant FACO Markets.

Non-Networked RFTS SP

- 7.208 ComReg has considered the likelihood, extent and timeliness of entry to the provision of FACO by a Non-Networked RFTS SP – that is, an SP with a non-trivial RFTS presence, which is reliant on merchant market purchases of network access inputs (e.g. Vodafone). In the first instance, it should be noted that any such non-networked SP which offers RFTS on the basis of wholesale NG Broadband inputs is already present on the Relevant FACO Markets by virtue of the indirect retail constraint set out at Section 5 above.
- 7.209 An SP aiming to backwards integrate into the Relevant FACO Markets by offering NGA FACO is likely to incur entry costs including sunk costs associated with deploying network or interconnection infrastructure.
- 7.210 Given general market trends away from the use of FNA and towards NG Broadband, ComReg discounts the possibility that an SP would roll out an FNA network for the purpose of providing FACO. However, even in the case of broadband infrastructure, it is not clear what incentive an SP currently making use of upstream wholesale NG Broadband or FACO inputs to provide RFTS has to backwards integrate into the provision of FACO, given the substantial costs that would be incurred in doing so, including costs associated with the development of wholesale billing and administration systems. If an RFTS SP were generating sufficient RFTS volumes that it would benefit from ceasing to purchase wholesale inputs from third parties (including Eircom FACO), the benefit would be most immediately realised by rolling out network infrastructure to engage in RFTS self-supply, rather than by providing FACO. The likelihood and extent of entry would, therefore, also be dependent on the SP's ability to achieve economies of scale in the self-supply of FACO.
- 7.211 ComReg considers that entry or – more accurately, backward integration into the supply of FACO - on any of the four Relevant FACO Markets by a Non-Networked RFTS SP, is not likely to occur over the lifetime of this market review, given that such an RFTS SP would be able to avoid the cost of purchasing Eircom FACO by instead purchasing wholesale NG Broadband inputs, allowing for the delivery of Managed VoIP.

Large Networked RFTS SPs

- 7.212 ComReg has considered the likelihood, extent and timeliness of entry by a large networked RFTS SP – that is to say, an SP which operates its own network, and also provides RFTS on a greater than local basis. Aside from Eircom, the only such SP is Virgin Media. In the first instance, it should be noted that, as with Non-Networked SPs, which offer RFTS on the basis of wholesale NG Broadband inputs, large networked RFTS SPs, such as Virgin Media, are already present on the Relevant FACO Markets by virtue of the indirect retail constraint set out at Section 5 above. Virgin Media's network rollout is concentrated in the footprint of the Urban LL-FACO Market. ComReg firstly notes that Virgin Media indicated to ComReg in an April 2019 response to an IIR that [REDACTED] [REDACTED] This suggests that Virgin Media is unlikely to commence the provision of FACO over the lifetime of this market review.
- 7.213 However, in a hypothetical scenario where Virgin Media considered commencing provision of FACO, ComReg notes that it would likely already have achieved sufficient economies of scale to warrant investment in additional infrastructure necessary to deliver FACO on a merchant market basis, within its network footprint on the Urban LL-FACO Market (noting that ComReg does not consider that Virgin Media acts as a competitive constraint on the Urban HL-FACO Market). In such circumstances, Virgin Media would likely face reduced upfront costs associated with entry into the Urban LL-FACO Market (rather than all of the entry costs identified above). In particular, it would likely already have incurred many of the sunk costs associated with infrastructure investment, and therefore could potentially leverage that infrastructure to supply FACO. However, ComReg notes that Virgin Media would have to invest in the necessary wholesale systems to support such FACO entry.
- 7.214 In such cases, ComReg considers that the cost that would be incurred by a Large Networked RFTS SP (such as Virgin Media) in diverting FACO for the purposes of RFTS self-supply, to the supply of merchant market FACO would be reduced, relative, for instance, to the costs that would be incurred by greenfield entrants.
- 7.215 Accordingly, **in principle**, ComReg considers that entry to the Urban LL-FACO Market by a Large Networked RFTS SP could potentially occur over the lifetime of this market review, given that a significant amount of the costs associated with providing FACO will already have been sunk. The costs associated with the development of wholesale billing and administration systems could be a relevant factor which might militate against such potential entry occurring. Entry would also depend on the attractiveness of FACO already being made available by existing suppliers (Eircom and BT), and the willingness of existing Access Seekers to switch SP.

7.216 **In practice**, however, ComReg considers that such market entry is currently unlikely, given that, apart from Eircom, Virgin Media is the only Large Networked RFTS SP present on the market, and Virgin Media [§< [REDACTED]
[REDACTED]
[REDACTED] §>].

Wholesale-only Network Operators

7.217 ComReg has also considered the likelihood, extent and timeliness of expansion by wholesale-only network operators (SIRO and, on a forward-looking basis, NBI) from the provision of WLA into the provision of FACO. In order to do so, it would be necessary for such an SP to buy or build a VoIP platform, package it with its existing WLA offering, and offered a wholesale Managed VoIP (White Label VoIP) service to Access Seekers.

7.218 In the first instance, it should be noted that wholesale-only network operators already facilitate an indirect retail constraint on the Relevant FACO Markets by providing wholesale NG Broadband inputs over which RFTS may be provided by means of Managed VoIP, as set out at Section 5 above. Accordingly, to offer RFTS by means of Managed VoIP, Access Seekers must purchase WLA from SIRO or NBI and then procure or develop their own VoIP platform. In such a scenario, SIRO or NBI offers the FA component of FACO, while the Access Seeker in question self-supplies the FVCO component.

7.219 ComReg notes that such an SP would likely already have incurred the costs associated with network rollout and would therefore only incur the additional incremental costs associated with building or buying a Managed VoIP calling platform. While SIRO appears to have taken a commercial decision not to offer a wholesale Managed VoIP FACO product, as set out at paragraph 5.163 above, NBI is entitled, subject to certain restrictions, to offer wholesale fixed voice telephony products.

7.220 ComReg understands, however, that neither SIRO nor NBI intends to offer wholesale Managed VoIP. ComReg is, therefore, of the view that wholesale-only network operators are unlikely to enter the Relevant FACO Markets from a merchant market perspective. Access Seekers using these networks may, however, self-supply Managed VoIP.

Respondents' Views

7.221 Eircom disagreed with ComReg's assessment of the Regional FACO Market under Criterion 2 that:

"...it is not clear at this stage that there is evidence of a tendency towards effective competition in the footprint of the Regional FACO Markets, however, this may change in due course, pending roll-out of NBI in the IA."⁹³⁷

⁹³⁷ At paragraph 7.180 of the 2020 Consultation.

- 7.222 Eircom noted that Criterion 2 requires an assessment of whether the market tends towards effective competition, **within the relevant time horizon** (emphasis added by Eircom), which, in Eircom's view, is 5 years from the publication of the Decision. However, ComReg excluded consideration of NBI rollout plans in its assessment and dismissed FWA and Imagine rollout. Eircom therefore argued that ComReg's Criterion 2 assessment was not conducted with the required forward-looking perspective.
- 7.223 Eircom noted that NBI rollout is an entirely foreseeable development over the time horizon linked to the market review, and that there should be a reasonable level of confidence that substantial rollout will occur during the lifetime of this review. In this regard, Eircom noted that, in its comments on the ACM's notified measures for the FACO market in 2017 (Case NL/2017/1958-1959), the Commission considered that
- “the existence of any market developments that might increase a likelihood of the relevant market tending towards effective competition, such as access agreements between operators, should have been duly considered in ACM's analysis”.*
- 7.224 Eircom was unclear as to why, in its view, ComReg failed to adequately consider NBI rollout in its Criterion 2 assessment, and had merely stated that evidence of a tendency towards effective competition “*may change in due course, pending rollout of NBI in the IA.*”⁹³⁸ Eircom considered that this statement, by its very nature, contradicted the purpose of the Criterion 2 assessment, given that the very thing ComReg should be analysing is whether the competitive dynamics may change in due course and over the period of the review.

ComReg's Assessment of Respondents' Views and Position

- 7.225 ComReg notes that it has assessed whether the Regional FACO Markets tend towards effective competition on a forward-looking basis, and within the relevant time period. Contrary to Eircom's view, ComReg has not excluded consideration of NBI rollout or failed to consider the roll out of FWA and Imagine. In its assessment of indirect constraints at the product market definition stage, ComReg has concluded that Managed VoIP RFTS delivered over wholesale NG Broadband inputs (including, on a forward-looking basis, NBI) warrants inclusion in the Relevant FACO Markets.
- 7.226 While NBI's rollout, as of May 2021, is extremely geographically limited, ComReg notes, consistent with Article 67(1)(b) of the EECC that its assessment should be of whether the Regional FACO Markets are tending towards effective competition within the relevant time horizon. The EECC does not define the duration of a 'relevant time horizon', but the 2020 Explanatory Note indicates (at p.9) that:

⁹³⁸ At paragraph 7.180 of the 2020 Consultation.

“The market definition also depends on the prospective time horizon considered. As ex ante regulation addresses the lack of effective competition that is expected to persist over a time horizon in accordance with the duration of the review period, NRAs’ market analyses have to be forward-looking.”

7.227 The 2020 Explanatory Note further indicates that the standard review period is now five years. Accordingly, five years is likely to be a relevant time horizon.

7.228 However, ComReg notes that NBI’s premises-specific rollout forecasts are not yet sufficiently definitive [X [REDACTED] X] Accordingly, the timing of NBI availability at EAs beyond the initial two-year horizon is uncertain.

7.229 In that regard, while ComReg concurs with Eircom that NBI rollout is a foreseeable development over the time horizon linked to the market review, ComReg disagrees that there is a reasonable and sufficient level of confidence as to the timing for specific premises roll-out during the overall lifetime of this review, due to the facts that: [X [REDACTED]

- (a) [REDACTED]
- (b) [REDACTED]
- (c) [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] X].

7.230 For these reasons, even if ComReg were, at this stage, to include NBI as indicative of the market tending towards potential competition, this would be on an indicative basis at some over the next seven years in the case of EAs falling outside of the two-year horizon currently committed to by NBI.

7.231 ComReg also notes that, were it to consider that the Regional FACO Markets were tending towards effective competition on the basis of forward-looking NBI rollout, it would then be obliged to conclude that Criterion 2 had failed, and that the Regional FACO Markets were therefore effectively competitive. Given uncertainty regarding specific premises level NBI rollout timelines, ComReg considers that this is not a tenable proposition, given the manifest absence of even existing competitive constraints on the provision by Eircom of FACO in the Regional FACO Markets both now, and also until some indeterminate date in future when NBI rollout will be sufficiently commenced.

7.232 For these reasons, and as set out at Section 11 below, and as alluded to by Eircom, ComReg is due to carry out a MTA after a period of 24 months from the date of this Decision. ComReg considers that there is likely to be greater uncertainty regarding NBI future premises rollout at this stage (while also taking account of any existing roll-out at that time).

Summary of conclusions on potential entry

7.233 ComReg has considered the potential for different types of SP to enter the Relevant FACO Markets. ComReg's conclusions in respect of each category of potential entrant are as follows:

- (a) Greenfield entrants are likely to be dependent on gaining economies of scale by developing and expanding a customer base, before moving up the ladder of investment. This is likely to be a pre-requisite for entry into any of the four Relevant FACO Markets, and suggests that greenfield entry is unlikely to occur within the lifetime of this market review;
- (b) Non-networked RFTS SPs are already present on the Relevant FACO Markets, where they purchase wholesale NG Broadband inputs to offer RFTS by means of Managed VoIP. Backwards integration to offer NGA FACO by a Non-Networked RFTS SP is unlikely to occur over the lifetime of this market review. This is because such an SP could instead purchase wholesale NG Broadband inputs to deliver Managed VoIP RFTS, rather than incurring the cost of network rollout to both self-supply and offer merchant market FACO;
- (c) Large Networked RFTS SPs such as Virgin Media are already present, predominantly on the Urban LL-FACO Market, by virtue of the indirect retail constraint set out at Section 5 above. In practice, entry to the Urban HL-FACO Market or the Regional FACO Markets, or backwards integration into the provision of NGA FACO on the Urban LL-FACO Market by Virgin Media is highly unlikely, due to the fact that, apart from Eircom, Virgin Media is the only Large Networked RFTS SP present on the market, and [redacted]; and
- (d) ComReg is of the view that wholesale-only network operators are unlikely to enter the Relevant FACO Markets, given their intent to offer wholesale NG Broadband inputs only, which allows them to avoid the additional costs associated with procuring or developing a VoIP platform.

Expected or foreseeable technological and economic developments

7.234 This section identifies anticipated technological or economic developments that may alter the competitive dynamic of the Relevant FACO Markets, and considers how such developments might impact on the market. Two key developments are of relevance in this instance – firstly, Eircom's proposed network modernisation programme, and, secondly, the ongoing rollout of NGA networks capable of delivering RFTS by means of Managed VoIP.

Eircom network modernisation

- 7.235 In March 2021, Eircom set out its proposed approach to decommissioning its legacy FNA network ('**copper switch-off**') in its White Paper.⁹³⁹ The White Paper envisages a three-stage approach to copper switch-off, with the copper network to be replaced in the next five to seven years with high capacity networks largely based on FTTP technologies.⁹⁴⁰ Following the completion of the Ireland's Fibre Network programme in 2024, open eir envisages that it make a formal announcement by 2025 regarding the withdrawal of access to copper-based services and associated timelines.⁹⁴¹ Once copper switch-off occurs, Eircom would, subject to any regulatory obligations, cease to offer FACO in the form of SB-WLR, and wholesale fixed telephony would likely only be capable of being delivered by means of Managed VoIP over WLA or WCA.
- 7.236 However, as set out at paragraph 5.35 above, Eircom has proposed to implement an MSAN technology solution which would effectively lengthen the useful lifetime of its FNA network by routing traffic through an IP core network. This proposal, if adopted, could have the effect of pushing further out any timeline for copper switch-off. A possible exception to this timeline could be Eircom's ISDN BRA network. As indicated in correspondence and meetings in September and October 2019, Eircom wishes to decommission its ISDN BRA network due, in part, to production of ISDN BRA chips ceasing in 2015. Eircom accordingly proposes an end of sale date for ISDN BRAs of 1 January 2021, and an end of support date for ISDN BRAs of 31 December 2024. Eircom proposes to support BRAs on FNA technology for the period up to its proposed end of support date.⁹⁴² ComReg's position on phasing out of ISDN BRA is outlined in paragraphs 10.90 to 10.110, and is set out in an Information Notice issued in December 2020.⁹⁴³

Ongoing rollout of NG networks capable of delivering Managed VoIP

- 7.237 As set out in detail at paragraphs 7.30 to 7.31 above, Virgin Media, SIRO, and Eircom all continue to roll out their respective NG networks, while NBI commenced rollout of its NG network in the footprint of the IA in 2021.

⁹³⁹ See Information Note 21/35 for ComReg's initial response to Eircom's Copper Switch-Off White Paper

⁹⁴⁰ Copper Switch-Off White Paper, p.5.

https://www.openeir.ie/wp-content/uploads/2021/03/White-paper_Leaving-a-Legacy.pdf

⁹⁴¹ Ibid., p.15.

⁹⁴² See paragraphs 10.90 to 10.93 for further discussion on this point.

⁹⁴³ Information Notice: Eircom's request to withdraw access to Integrated Services Digital Network (ISDN) Basic Rate Access (BRA), ComReg Document 20/118, dated 09 December 2020.

7.238 As set out at paragraphs 5.66 to 5.70 above, standalone FACO may not be commercially provided over broadband, due to the preference of SPs for offering an end-to-end call origination and transmission service over broadband – that is, White Label VoIP (although it is technically feasible to do so). This development will also likely lead to a reduction in the number of switching/interconnection points between networks, as interconnection of voice traffic occurs at more centralised IP peering points, where the costs of interconnecting with other networks will be lower. Movement towards the provision of end-to-end calling services delivered over broadband may, in future, call into question the appropriateness of FACO product definitions based on FNA technologies on all four Relevant FACO Markets.

Summary of conclusions on expected or foreseeable technological and economic developments

7.239 Accordingly, ComReg considers that constraints arising from the provision of Managed VoIP (predominantly at the retail level, but potentially also at the wholesale level) may point towards the emergence of a tendency towards effective competition on a forward-looking basis in the Urban FACO Markets, where NG infrastructure capable of carrying Managed VoIP traffic has already been rolled out. However, it is not clear at this stage that there is evidence of a tendency towards sufficiently effective competition in the footprint of the Regional FACO Markets. This may change in due course, as NBI rollout in the IA progresses. The presence of competition arising *inter alia* from indirect retail constraints, is highly dependent on the sufficient presence of NG Broadband networks at EAs.

Conclusions on tendency towards effective competition

7.240 In paragraphs 7.164 to 7.239, ComReg has examined whether the Relevant FACO Markets are likely to tend towards effective competition within the relevant time horizon, having regard to:

- (a) Any observable trends towards effective competition;
- (b) Whether alternative SPs are in a position to roll out infrastructure, to the extent that they would be able to effectively compete with Eircom in the Relevant FACO Markets; and
- (c) Any expected or foreseeable technological and economic developments that will impact on competition within the time period of the market review.

7.241 ComReg's assessment is that the Urban FACO Markets are likely to be tending towards effective competition on a forward-looking basis. Eircom's provision of FNA FACO is in decline and supports a somewhat declining downstream FNA-based RFTS market. Moreover, the presence of Eircom and SIRO NG networks in the footprint of the Urban FACO Markets allows Access Seekers to move away from the purchase of FNA FACO to the delivery of Managed VoIP using wholesale NG Broadband.

- 7.242 In respect of technological and economic developments, ComReg notes that the provision of FNA FACO is in decline across the Urban FACO Markets, arising from increasing provision of Managed VoIP, which likely points towards the emergence of a tendency towards effective competition on a forward-looking basis in the Urban FACO Markets, having regard to the availability of alternative NG infrastructure capable of carrying Managed VoIP traffic.
- 7.243 ComReg considers that the dynamics of competition on the Relevant FACO Markets are likely to change over time, due to end user behaviour and technological developments. However, based on current market dynamics, ComReg's view is that the Urban FACO Markets fail Criterion 2 of the 3CT on the basis that they are tending towards effective competition.
- 7.244 The trends identified above suggest that the Urban FACO Markets are characterised by greater levels of competition, arising predominantly from indirect constraints generated at the retail level, rather than effective direct demand-side constraints. Where broadband rollout has occurred, SPs are able to offer a suite of services to end users, including Managed VoIP, on the basis of purchases of WLA or WCA from Eircom, or SIRO (together with Virgin Media on a self-supply basis on the Urban LL-FACO Market), and can therefore avoid the costs of purchasing FNA FACO from Eircom.
- 7.245 In contrast, ComReg's assessment is that the Regional FACO Markets are not likely to be tending towards effective competition, based on insufficient observable trends towards effective competition, the lack of potential entry, and limited technological developments, in comparison to the Urban FACO Markets. In particular, ComReg notes that Eircom retains a high and stable market share on the Regional FACO Markets, and also notes that, despite a 39% decline in fixed voice traffic from Q3 2015 to Q4 2019, Eircom sales of indirect access lines have declined by only 4% on the Regional FACO Markets,⁹⁴⁴ which indicates that demand for FACO is 'sticky' and does not respond immediately, or proportionately, to changes in demand for RFTS.

Respondents' Views

- 7.246 On this particular point, ALTO argued that ComReg did not appear to have assessed why demand for FACO is 'sticky' and requested further analysis on this point.

⁹⁴⁴ As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, more recent data are currently unavailable.

ComReg's assessment of Respondents' Views and Position

- 7.247 NG Broadband network rollout in the footprint of the Regional FACO Markets has been comparatively limited. Accordingly, it is unlikely, on the basis of network coverage, that effective competition will be provided by means of FACO or RFTS using wholesale NG Broadband inputs, pending rollout of NBI in the IA (which would need to be assessed). In this respect, demand for FACO is comparatively sticky in the footprint of the Regional FACO Markets due to the comparatively lower levels of wholesale NG Broadband rollout capable of facilitating delivery of Managed VoIP. Accordingly, Access Seekers wishing to provide RFTS to end users in the footprint of the Regional FACO Markets will have a greater reliance on Eircom FACO, than in the Urban FACO Markets, where there are greater opportunities for Access Seekers to deliver RFTS by means of Managed VoIP.
- 7.248 ComReg's overall view is that, within the relevant time horizon for this market review, the Regional FACO Markets are not likely to tend towards effective competition, although effective competition may arise over a longer time horizon, based on evolving consumer preferences and technological developments. ComReg's position is, therefore, that the second 3CT criterion is likely to pass in relation to the Regional FACO Markets. This may change on the basis of ComReg's MTA, where additional wholesale NG Broadband rollout may fall to be considered.

Criterion 3: The insufficiency of competition law alone to adequately address the market failure(s) concerned

- 7.249 *Ex ante* regulation should only be imposed where competition law remedies are likely to be insufficient to address identified competition problems. Criterion 3 therefore assesses the sufficiency of competition law by itself to deal with any market failures identified in the market analysis, in the absence of *ex ante* regulation.
- 7.250 In this respect, *ex ante* regulation should only apply in markets where an NRA is satisfied on the basis of its analysis, and the evidence available to it, that national and EU competition law are unlikely to be sufficient to redress market failures where they arise, and to ensure effective and sustainable competition.

- 7.251 *Ex ante* regulation may, in general, be more appropriate to markets which, due to underlying structural characteristics (such as, for example, the presence of natural monopoly), or due to repeated patterns of behaviour, are deemed more likely to exhibit ongoing competition problems which would, ultimately, lead to persistent harm to end users which the market would be unlikely to remedy, due to the absence of the self-correcting mechanisms which are normally present in competitive markets, and which typically discipline efforts by firms present on a market to exercise market power. Accordingly, regulation may be appropriate to markets where it can be predicted, with a high level of probability, that competition problems are likely to occur.
- 7.252 In contrast, *ex post* competition law may be more appropriate to markets which are not structurally prone to competition problems or characterised by repeat patterns of anticompetitive behaviour. In such markets, competition may be generally presumed to be working well, due to the presence of sufficient competitive constraints which are capable of disciplining market participants, to the ultimate benefit of end users. Competition law may be a more appropriate means of assuring competitive outcomes in such markets, on the assumption that anti-competitive conduct is likely to be the exception, rather than the rule. In such cases, it may not be reasonable to impose an ongoing burden of compliance with regulatory obligations on a firm or firms designated with SMP, and it may be preferable instead to rely on the protections afforded by *ex post* competition law.
- 7.253 Competition law requires the commission and detection of an anti-competitive act. A National Competition Authority ('**NCA**'), or NRA, must then assess the allegedly anti-competitive act to determine whether it likely breaches the Competition Act 2002, or Articles 101 or 102 of the Treaty on the Functioning of the European Union (**TFEU**). In order to apply effective sanctions, an NCA or NRA may then need to initiate court proceedings, which may or may not be successful. This is a lengthy process which would likely be less effective in deterring and preventing anti-competitive conduct in the short to medium term in markets which are structurally prone to anticompetitive conduct.
- 7.254 Accordingly, ComReg is of the view that competition law is unlikely to be sufficient to adequately address market failures on the Relevant FACO Markets.

Respondents' Views

- 7.255 BT agreed that competition law is not efficient at dealing with wider issues relating to wider infrastructure competition.

7.256 CE noted that SMP regulation or deregulation is not irreversible, and that competition law provides a safeguard to pre-empt any exploitative or exclusionary conduct. CE conceded that, in some cases, competition law can be inadequate (compared to regulation) to address structural and persistent barriers to effective competition. However, CE suggested that, in light of FACO market developments, it seemed questionable whether any such barriers would persist.

ComReg's Assessment of Respondents' Views and Position

7.257 ComReg considers that SMP regulation is necessary due, in part, to the failure of competition law alone to protect the interests of Access Seekers and end users. ComReg notes at paragraph 7.253 above that investigating and litigating breaches of competition law involves a lengthy process which is not likely to be effective, absent regulation, in deterring and preventing anti-competitive conduct in the short to medium term in markets which are structurally prone to anticompetitive conduct. For this reason, competition law may only act as an additional safeguard, alongside the imposition of *ex ante* regulation, in the Regional FACO Markets, as market conditions are not deemed to be sufficiently competitive so as to mitigate the risk of any anti-competitive behaviour from the SMP SP.

7.258 For the reasons set out above, ComReg is of the view that competition law alone would not be adequate to address market failures which may arise on the Relevant FACO Markets. Accordingly, Criterion 3 passes on both the Urban FACO Markets and the Regional FACO Markets.

Conclusions on the 3CT

7.259 Accordingly, ComReg has formed the view that, in respect of the candidate Regional FACO Markets, all three of the 3CT criteria pass. ComReg therefore has insufficient evidence to conclude that the Regional FACO Markets are characterised by sufficient levels of competition to immediately withdraw *ex ante* regulation. ComReg is therefore required to carry out a competition assessment of the Regional FACO Markets, to determine whether any SP, or SPs, on those markets hold positions of SMP.

7.260 In contrast, ComReg has formed the view that, in respect of the Urban FACO Markets, at least one of the 3CT criteria fail. This suggests that the Urban FACO Markets should not be susceptible to *ex ante* regulation, because they exhibit characteristics consistent with well-functioning and competitive markets. Where markets are deemed to fail the 3CT, ComReg has no discretion to carry out an SMP assessment. It follows that ComReg cannot impose or maintain SMP remedies on the market, and that any SMP remedies already present on the Urban FACO Markets must be withdrawn (subject to the implementation of any sunset period), as described in further detail at Section 11 below.

Other NRA approaches to the 3CT

7.261 ComReg notes that, as of May 2021, six NRAs⁹⁴⁵ have assessed their national FACO or FVCO markets and found that the markets passed the 3CT test. All six NRAs concluded that all three 3CT criteria were met. The following table sets out the key reasons why each NRA found that the relevant FVCO or FACO market should, in principle, continue to be subject to *ex ante* regulation, in respect of **barriers to entry**, and **effective competition**:

Table 71: NRA grounds for passing 3CT Criteria 1 and 2

Criterion 1 – Barriers to Entry	Criterion 2 – Tendency towards effective competition
SA RFTS is important market segment	High, stable incumbent market share
High sunk costs / investments required	Lack of mobile constraint
Alternative infrastructure not constraint	Lack of VoIP constraint
Incumbent network not easy to duplicate	Importance of CPS and WLR
Other	Other
Low returns given PSTN phase-out	Lack of bundles constraint
High / stable incumbent market share	Rollout of NGA insufficient
80% of exchanges not yet unbundled	Control of bottlenecks
PSTN-dependent devices	Incumbent network not replicable
Need to access incumbent network to service multi-site businesses	Limited fixed-mobile substitution
	Limited CBP
	Lack of OTT pressure
	Low switching from incumbent
	Given PSTN phase-out, OAO focus instead on bundles

7.262 Table 71 indicates that the most prevalent (though by no means the only) barriers to entry to the FACO/FVCO markets are the continuing importance of the downstream standalone RFTS market, and the high sunk costs of investment.

⁹⁴⁵ FACO in Ireland, Croatia, the Netherlands, and Spain, and FVCO in the case of France and Italy.

7.263 There is a much greater variety of reasons for the FACO/FVCO market not tending toward effective competition, although the high and stable market share of the incumbent, and the ineffectiveness of constraints from mobile telephony and VoIP are identified by multiple NRAs.

Respondents' Views

7.264 ALTO noted that ComReg had suggested that a stable incumbent RFTS market share is a reason for the 3CT to pass but suggested that the 2020 Consultation had not provided evidence of what is occurring within Eircom. ALTO considered that this was a problem with regard to the analysis and basis for the assumptions within the 2020 Consultation.

7.265 Eircom noted that ComReg referenced the approaches of 8 other NRAs to the FACO/FVCO 3CT listed at footnote 791 of the 2020 Consultation "*in an apparent attempt to justify its position as being in line with EU precedent*".

7.266 Eircom noted that two of the NRAs who continue to regulate Market 2 of 2007 were, at the time of its Submission, in the process of reviewing the market. Eircom understood that Greece intended to deregulate Market 2 of 2007, while the UK intended to publish its final Decision by April 2021.

7.267 Of the remaining NRAs that continue to regulate the FACO market, Eircom noted that reviews of these markets were imminent and that, given the comments provided by the European Commission on the previously notified measures (detailed at Table 7 of Eircom's Submission), it was likely that ComReg would be an outlier among NRAs in continuing to regulate part of the FACO market, particularly bearing in mind that 18 NRAs have already ceased to regulate the FACO market.

ComReg's Assessment of Respondents' Views and Position

7.268 ComReg notes that it is unclear what ALTO is referring to when it suggests that the 2020 Consultation has not provided evidence of what is occurring "*within Eircom*". However, ComReg notes that its assessment of Eircom's RFTS market shares is outlined at Section 6 of the 2020 Consultation and at paragraphs 6.97 to 6.114 of this Decision. ComReg further notes that Table 71 of the 2020 Consultation outlined that other NRAs, based on their own national market circumstances, have, in some cases, concluded that the 3CT should pass based, *inter alia*, on RFTS market share. In doing so, ComReg is merely outlining this fact and cannot draw the same 3CT conclusions on the Regional FACO Markets in Ireland, based on other NRAs' analyses.

- 7.269 ComReg notes that Eircom has failed to substantiate its suggestion that the reference at footnote 791 of the 2020 Consultation is an attempt to justify its position as being in line with EU precedent, and would add that this inference is inherently self-contradictory, given market review outcomes across EEA NRAs. ComReg notes, again, that this information is set out with the view of indicating what other NRAs have based their assessment on. ComReg does not, and does not seek to, justify its approach to the 3CT assessment based on this information.
- 7.270 ComReg notes that regardless of whether it is deemed to be an outlier among NRAs in continuing to regulate part of the FACO market, it must carry out its assessment on the basis of the evidence and data available to it in respect of the duly-defined relevant market or markets. In this regard, ComReg proposes to retain regulation on the Regional FACO Markets, while deregulating the Urban FACO Markets which account for 72% of lines in the State.

7.2 Framework for assessing SMP

- 7.271 Having defined the Relevant FACO Markets, ComReg is required to determine whether each market is effectively competitive, having regard to whether or not any of the SPs operating within those defined markets have SMP. ComReg's 3CT analysis suggests that regulation no longer continues to be warranted on the Urban FACO Markets. Accordingly, it is not necessary to proceed to an SMP analysis of the two Urban FACO Markets, and the remainder of this section therefore consists of an SMP assessment of the Regional LL-FACO and HL-FACO Market only.
- 7.272 The EU regulatory framework for electronic communications has aligned the concept of SMP with the competition law definition of dominance advanced by the Court of Justice of the European Union in *United Brands v. Commission*:⁹⁴⁶
- “The dominant position referred to [by Article 102 of the Treaty on the Functioning of the European Union] relates to a position of economic strength enjoyed by an Undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers.”*
- 7.273 Regulation 25(1) of the Framework Regulations⁹⁴⁷ (and Article 63(2) of the EECC which repeals and replaces the Framework Directive) effectively mirrors this definition of dominance and states that:

⁹⁴⁶ Case 27/76 *United Brands v European Commission* [1978] ECR 207, paragraph 65, and paragraph 70 of the SMP Guidelines.

⁹⁴⁷ Transposed by Regulation 25(1) of the Framework Regulations, which is mirrored at Article 63 of the EECC.

“An Undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers.”

7.274 Arising from this definition, ComReg assesses whether any Undertaking has SMP in the Regional FACO Markets, in accordance with the EC framework.

7.275 The SMP Guidelines, of which ComReg is required to take utmost account,⁹⁴⁸ refer to a range of criteria that may be considered by NRAs when seeking to establish whether an Undertaking(s) has SMP in a relevant market.

7.276 The SMP Guidelines state that, according to established case law, very large market shares (that is, in excess of 50%) are in themselves, except in exceptional circumstances, evidence of the existence of a dominant position.

“According to established case-law, very large market share held by an Undertaking for some time — in excess of 50 % — is in itself, save in exceptional circumstances, evidence of the existence of a dominant position. Experience suggests that the higher the market share and the longer the period of time over which it is held, the more likely it is that it constitutes an important preliminary indication of SMP.”⁹⁴⁹

7.277 Market shares in excess of 50% therefore give rise to a strong presumption of SMP. However, the SMP Guidelines also state that the existence of a high market share alone is not sufficient to establish the existence of SMP. Rather, it means that the SP concerned may be in a dominant position, and this needs to be considered alongside other potentially relevant criteria for assessing the existence of SMP, which are set out at paragraph 7.279 below.

7.3 Approach to assessing SMP in the Regional FACO Markets

7.278 In assessing whether an SP has SMP in the Regional FACO Markets, ComReg carries out a forward-looking analysis on the basis of existing and likely future market conditions,⁹⁵⁰ and considers the range of factors that are of most relevance to these markets.

⁹⁴⁸ In accordance with Regulation 25(2) of the Framework Regulations, which is mirrored at Article 63 of the EECC.

⁹⁴⁹ Paragraph 55 of the SMP Guidelines.

⁹⁵⁰ Paragraph 25 of the SMP Guidelines states that “Market definition is not a mechanical or abstract process but requires the analysis of all available evidence of past market behaviour and an overall understanding of the mechanics of a given sector. In particular, a dynamic rather than a static approach is required when carrying out a prospective, or forward-looking, market analysis”.

Relevant SMP Criteria

7.279 For the purposes of the analysis of the Regional FACO Markets, ComReg considers the following criteria to be most relevant to the assessment of SMP:⁹⁵¹

- (a) Overall size of the SP;
- (b) Control of infrastructure not easily duplicated;
- (c) Technological advantages or superiority;
- (d) Absence of, or low, countervailing buyer power ('CBP');
- (e) Product/services diversification (e.g. bundled products or services);
- (f) Economies of scale and scope;
- (g) Easy or privileged access to capital markets/financial resources;
- (h) Vertical integration;
- (i) Absence of potential competition; and
- (j) Barriers to entry and expansion.

7.280 The relative importance of each factor may vary with the characteristics or dynamics of the relevant market. Consequently, flexibility is required when applying the above criteria. Moreover, aspects of these factors, while presented separately, may in fact be interrelated, and all available evidence is considered by ComReg as a whole before forming a view on whether SMP is likely to be present on a market. Thus, the SMP Guidelines note:⁹⁵²

"If taken separately, the above criteria may not necessarily be determinative of a finding of SMP. Such a finding must be based on a combination of factors."

7.281 ComReg also considers that factors such as historical and likely pricing behaviour are relevant considerations.

⁹⁵¹ Other factors identified in paragraph 7.279 which could be used to assess the existence of market power have been considered but, for the reasons set out in Annex: 10 are considered of no or less relevance for the purposes of the SMP assessment in these Regional FACO Markets.

⁹⁵² Paragraph 58 of the SMP Guidelines.

Approach to Existing Regulation

7.282 Where an SP active on a duly-defined relevant market is deemed to possess SMP, its behaviour may be restricted by way of SMP regulatory obligations. It is necessary, however, when applying the MGA, to consider the potential ability of that SP to exert market power absent *ex ante* SMP regulation⁹⁵³ on the relevant markets. Otherwise, the failure to consider the ability and incentive of an SP to exercise its market power absent SMP regulation could lead to a circular finding of no SMP on the basis of the presence of SMP regulatory remedies designed to prevent the exercise of SMP. In that case, SMP remedies would cease to apply following the completion of a market analysis and the SP in question could have the ability and the incentive to exert its market power. In the context of an SMP assessment of the Regional FACO Markets, the key hypothetical questions are how the SP in question would be likely to behave in the relevant markets:

- (a) If it were not subject to current or potential SMP regulatory constraints; and
- (b) Having regard to of SMP and other obligations in related markets which could impact in the Regional FACO Markets.

7.4 Assessment of SMP

7.283 Each of the relevant factors identified in paragraph 7.279 above are considered in detail below. ComReg combines its assessment of these factors under the following three broad headings:

- (a) Existing competition in the Regional FACO Markets: factors such as vertical integration, market shares, relative strength of existing competitors, barriers to expansion, indirect constraints, and pricing behaviour (paragraphs 7.284 to 7.327);
- (b) Potential competition in the Regional FACO Markets: factors such as control of infrastructure not easily duplicated, technological advantages or superiority, barriers to entry in the Regional FACO Markets, as well the overall strength of potential competitors (paragraphs 7.330 to 7.348); and
- (c) Strength of any CBP: the impact posed by strong buyers of FACO on the competitive behaviour of the provider (paragraphs 7.349 to 7.407).

⁹⁵³ The Modified Greenfield Approach ('MGA') discounts SMP regulation in the market concerned, while other obligations (such as relevant SMP remedies existing in other markets, or obligations relating to general consumer protection or interconnection) are assumed to be in place.

Existing competition on the Regional FACO Markets

- 7.284 ComReg's assessment of existing competition draws, in part, on the 3CT assessment, which, *inter alia*, considers levels of existing competition in the context of assessing barriers to entry, noting that the 3CT overlaps with the factors considered under SMP analysis.
- 7.285 ComReg considers the relative strength of any existing competitors, market shares, and pricing, in assessing levels of existing competition. In Section 5, ComReg also identified indirect retail constraints generated by RFTS providers offering services using wholesale NG Broadband inputs. These constraints are also considered in this sub-section.

Market shares

- 7.286 Eircom is the only commercial supplier of the HL-FACO and LL-FACO focal products to third parties, while BT and Eircom offer the only demand-side substitute. ComReg is of the view that there are no supply-side substitutes on the relevant markets, but that the relevant product markets include:
- (a) Indirect retail constraints arising from RFTS delivered as Managed VoIP over wholesale NG Broadband inputs having regional or national coverage,
 - (b) RFTS delivered as Managed VoB over CATV inputs (in the case of LL-FACO),
 - (c) RFTS delivered as Managed VoIP over wholesale NG Broadband inputs having regional or national coverage, and
 - (d) SIP Trunking and Hosted PBX over WLA/WCA (in the case of HL-FACO).
- 7.287 In calculating relevant market shares, ComReg has considered notional FACO market shares, were the indirect retail constraints set out above to be included in the Regional FACO Markets.
- 7.288 Taking account of the MGA, in the case of LL-FACO, Table 73 below shows the market shares for FNA paths (PSTN and ISDN BRA) in the LL-FACO Markets, including self-supply by OAOs, and use of non-FACO wholesale inputs. Market shares are assigned on the assumption that no regulation is present on the Relevant FACO Markets, and that Eircom accordingly withdraws merchant market supply of SB-WLR. This would mean that Access Seekers purchasing SB-WLR or WLV (which relies on SB-WLR inputs) would no longer be able to offer RFTS to their own end users. In such a scenario, Access Seekers may be able to retain their RFTS customers if they can switch to the use of alternative inputs within a reasonable timeframe. If not, if the affected RFTS customers wish to continue using RFTS, they will need to revert to Eircom, or switch to an RFTS SP which does not make use of Eircom FACO inputs.

- 7.289 As set out at Section 5 above, the Regional FACO Markets are characterised by the comparatively lower incidence of NG Broadband network rollout, or a lower presence of such networks relative to the EAs in the Urban FACO Markets (i.e. at less than 80% cumulative wholesale NG Broadband coverage). Where Eircom FNA is the only significant network present, in an MGA scenario, end users will revert back to Eircom. Where NG Broadband has been rolled out at an EA to the extent that it is capable of generating an effective competitive constraint, there will likely be greater scope for delivery of wholesale or retail Managed VoIP.
- 7.290 Accordingly, where NG Broadband networks are present, it does not automatically follow that, under the MGA, all RFTS end users currently reliant on Eircom FACO will revert to Eircom. When the self-supply of vertically-integrated RFTS SPs using LL-FACO inputs, and the purchase by RFTS SPs of non-FACO wholesale inputs is included in the Regional LL-FACO Market, Eircom would have a market share of [██████████], as set out at Table 73 below.⁹⁵⁴ This figure includes switching to self-supply, where possible, for each SP.
- 7.291 The Regional LL-FACO Market appears to exhibit characteristics which suggest that, under the MGA, Access Seekers would have less in the way of alternative sources of service provision (including self-supply of Managed VoIP using wholesale NG Broadband inputs), and that RFTS end users would likely revert to Eircom, as set out in detail at Table 73 below.
- 7.292 In respect of the HL-FACO markets, even if both the self-supply of vertically-integrated RFTS suppliers using HL-FACO inputs, and the purchase by RFTS suppliers of non-FACO wholesale inputs were included within the Regional HL-FACO Market, Eircom would have a high and stable market share of [██████████], as set out at Table 73 below.⁹⁵⁵
- 7.293 The Regional HL-FACO Market therefore also appears to exhibit characteristics which suggest that, under the MGA, Access Seekers would have little in the way of alternative service provision, and that RFTS end users would accordingly likely revert to Eircom.
- 7.294 ComReg's view, therefore, is that Eircom's high market shares in each of the Regional FACO Markets are suggestive (but not determinative in themselves) that it has the ability to behave, to an appreciable extent, independently of competitors, customers and consumers.

⁹⁵⁴ 60-70%, as of Q4 2019. As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, more recent data are currently unavailable.

⁹⁵⁵ 70-80%, as of Q4 2019. As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, more recent data are currently unavailable.

Respondents' Views

- 7.295 Eircom noted that, since SB-WLR is a regulated legacy product, it is difficult to estimate hypothetical market shares under an MGA. It suggested that, while purchases of SB-WLR have already declined, absent regulation, the decline would likely have been much larger. This has led to overly narrow market definitions and, accordingly, erroneous inferences of market power.
- 7.296 Eircom also considered that the combination of FA and FVCO as one focal product results, due to the imposition of regulatory remedies, in a high market share for the incumbent, failing to account for the fact that the market has now evolved and FNA is no longer necessary to provide call origination. Eircom also noted that narrowly defined markets may give rise to a perception of high market share by the nature of their definition, and that this approach has been criticised by the EC in the past.

ComReg's Assessment of Respondents' Views and Position

- 7.297 ComReg notes that Eircom has not provided any evidence, or reasoning, to suggest that, absent regulation, the decline in SB-WLR purchases would have been much larger than has, in fact, been the case. ComReg also notes that while it has assessed Eircom's comments on market definition in Section 5 above, Eircom, again, fails to substantiate its argument that any potential decline in SB-WLR has led to ComReg's definition of an overly narrow market.
- 7.298 ComReg notes that it has addressed Eircom's assertions, set out in paragraph 7.296 above. Eircom's submission on this topic is set out in paragraphs 5.71 to 5.77 above, while ComReg's consideration, and response, to this comment is set out above in paragraphs 5.83 to 5.98 above. In respect of the contention that defining a combined FACO focal product fails to account for the fact that the market has now evolved and that FNA is no longer necessary to provide call origination, ComReg does not follow the logic of this argument. The FACO focal product forms only part of the Relevant FACO Markets, which also include the direct and indirect constraints identified at Section 5 above. In this regard, neither the direct constraint (White Label VoIP) nor the indirect constraint (Managed VoIP delivered over NG Broadband) – nor, for that matter, the call origination components of those substitute products - makes uses of FNA, and Eircom is accordingly fully in agreement with ComReg's assessment.

Indirect constraints

- 7.299 Even in the absence of existing competition, an SP supplying RFTS without FACO inputs (either on a self-supply basis, or on the basis of wholesale NG Broadband inputs) could pose a competitive indirect constraint in the FACO Markets if it were shown that its presence on the downstream RFTS market exercised a sufficiently strong indirect pricing constraint on FACO.

- 7.300 However, ComReg's view is that any indirect constraint arising from the associated downstream RFTS market would be attenuated on the Regional FACO Markets by the following factors:
- (a) Most critically, a significant proportion of affected end users have limited switching options, due to the limited network coverage of SPs in the Regional FACO Markets (pending NBI rollout);
 - (b) Given the price-cost ratio, a SSNIP of FACO would (assuming pass-through) translate into a diluted retail price increase. Fewer end users are therefore likely to respond to such a diluted retail price increase, compared to a situation where a SSNIP is applied directly to RFTS;⁹⁵⁶ and
 - (c) In a MGA scenario, ComReg assumes that Eircom would likely hold its prices constant whilst applying a SSNIP of FACO. In such cases, Eircom would likely gain a significant proportion of end users switching away from SP FACO-based RFTS (assuming that SP NGA networks are unable to exert a sufficient competitive constraint on the Regional FACO Markets). Increased revenues accruing to Eircom from such switching could potentially contribute to off-setting any loss in wholesale revenue, thereby mitigating the effects of any indirect retail constraint that otherwise may have been present.⁹⁵⁷
- 7.301 ComReg considers that these factors are likely to remain of relevance when assessing the effectiveness of the impact of any indirect constraints on existing competition in the Regional FACO Markets. For the reasons set out above, ComReg's view is that, over the period covered by this market review, vertically-integrated RFTS SPs are unlikely to provide an effective indirect competitive constraint in the Regional FACO Markets, such that it would prevent Eircom from behaving, to an appreciable extent, independently of competitors, customers or consumers.

Respondents' Views

- 7.302 CE noted that ComReg had concluded in its geographic market definition assessment that Virgin Media's presence at an EA, on its own and in the absence of 80% wholesale NG Broadband coverage, would be unlikely to generate sufficiently competitive conditions, and that such an EA would be akin to a duopoly. CE noted that this scenario is likely to apply only to a small subset of EAs, or even a subset of premises.

⁹⁵⁶ See paragraph 5.227.

⁹⁵⁷ See paragraphs 5.350 to 5.358.

- 7.303 CE noted that the SMP Guidelines do not specifically address market structures where the criteria of joint dominance are not met, and that it is not clear-cut that a duopolistic market would necessarily result in collusive market outcomes. CE added that ComReg had concluded that the market is duopolistic at the level of the EA, rather than at the market level, and suggested that this overlooked the competitive pressure exerted from outside an EA. Therefore, it does not, in CE's view, appear appropriate to regulate certain geographic regions on the basis that only two SPs are present in a particular (very small) area. CE argued that, instead, for regulation to be warranted, ComReg would have to prove that there is risk of joint dominance, based on whether market circumstances were conducive to tacit collusion.
- 7.304 While conceding that ComReg did not claim that Eircom and Virgin Media are collectively dominant, CE stated that the presence of a duopoly does not in itself justify the imposition of regulation and, ultimately, argued that Virgin Media should not have been excluded from the application of the criterion, and that ComReg's approach risked setting a precedent on the treatment of alternative networks in other market reviews.

ComReg's Assessment of Respondents' Views and Position

- 7.305 ComReg noted at paragraph 5.419 of the 2020 Consultation that
- "(...) in a scenario where, for example, only Eircom FNA and Virgin Media were present at an EA, there would be no possibility of an Access Seeker offering Managed VoIP on the basis of wholesale inputs at that EA. In an MGA scenario, this EA would effectively be akin to a duopoly."*
- 7.306 ComReg does not base its assessment on the contention that a duopolistic market would specifically result in collusive market outcomes, or that the Relevant FACO Markets are duopolistic at the level of the EA, rather than at the market level. ComReg's assessment of the duly-defined markets is at no stage based on the assumption of the presence of a duopoly. Moreover, ComReg notes that, for regulation to be warranted, it is not required to prove that there is risk of joint dominance, based on whether market circumstances were conducive to tacit collusion. Regulation will be warranted where, on the basis of the evidence available to it, ComReg forms the views that one (or more) operator on a duly-defined market holds a position of SMP.
- 7.307 ComReg also notes that it has not simply excluded Virgin Media from the 80% coverage criterion on the basis of any potential to form a duopoly with Eircom in EAs where no other SP is present. ComReg's reasoning for excluding Virgin Media from the application of the 80% cumulative coverage criterion is set out at paragraphs 5.542 to 5.549 above. On that basis, ComReg is satisfied that it would be inappropriate to include Virgin Media's network as part of the 80% coverage criterion, while recognising that Virgin Media will provide a degree of constraint on RFTS markets.

Pricing behaviour

- 7.308 The development and extent of competition over time may be evident in the pricing of FACO products, services and facilities. In an SMP assessment, the ability of an SP to behave, to an appreciable extent, independently of the pricing behaviour of its competitors may be suggestive (but not determinative in itself) of SMP, when considered alongside other factors. Accordingly, ComReg has reviewed trends in the FACO pricing over time.
- 7.309 However, the prices for the FVCO component of Eircom's SB-WLR product are currently subject to a cost orientation obligation and are calculated based on a Top-Down Forward-Looking Long Run Average Incremental Cost-plus pricing ('LRAIC+') model. Additionally, WLR is subject to cost orientation based on a combination of Bottom-up LRAIC+ and Top-down Historical Cost Accounting ('HCA') costing methodologies.⁹⁵⁸
- 7.310 Table 33 above sets Eircom's regulated prices for the FVCO component of Eircom's SB-WLR product (as published in the Eircom RIO Price List), which have been unchanged since July 2012. The fact that Eircom FVCO pricing has remained unchanged for over 7 years suggests that Eircom faces little or no downward pricing pressure arising from competitive constraints.
- 7.311 Table 72 below sets out the evolution of Eircom's regulated prices for the WLR component of Eircom's SB-WLR product (as published in the Eircom RIO Price List) in period since 2015. ComReg addresses below the discounts and promotions applied from time to time to these prices.

Table 72: Eircom's published WLR monthly rental prices 2016-2021

WLR product	Monthly Rental Price	Effective from
PSTN	€18.02	May 2008 – June 2016
	€15.91	July 2016 – June 2017
	€16.20	July 2017 – June 2018
	€16.41	July 2018 – June 2019
	€16.59	July 2019
ISDN BRA	€27.95	May 2008
ISDN FRA	€143.18	May 2008
ISDN PRA	€238.25	May 2008

⁹⁵⁸ Retail PSTN line rental charges are subject to a price cap pursuant to ComReg's 2014 RFVA Decision.

- 7.312 The list price of PSTN-based WLR has changed four times since 2016, and is currently lower than in 2016, though it has increased year-on-year since 2016, following a sharp downward adjustment in July 2016 when Eircom's charges became subject to the cost oriented price control set out above. In contrast, the prices of ISDN-based WLR have remained unchanged since 2008. It should also be noted that, at certain points, Eircom applied discounts or promotions to its list prices prior to the publication of the 2015 FACO Decision, when it was subject to a price control obligation of retail minus. From May 2008 to June 2016, Eircom applied a discount of 14% on SB-WLR, as set out at Table 1 of Service Schedule 401 of the RIO Price List. Additionally, at various points during that timeframe, Eircom offered short-term promotions or discounts (for example, a discount of 100% on the SB-WLR line rental for a period of a number of months) on 12 occasions during that time period.
- 7.313 The existence of SMP-based price controls and the impact of non-SMP based obligations (such as Eircom's USO) make an MGA assessment of Eircom's pricing behaviour difficult. However, it should be noted that the price controls identified in paragraph 7.309 set a maximum price, and therefore do not prevent Eircom from offering the FVCO and WLR components of SB-WLR at a lower price (subject to compliance with SMP obligations in this market and other markets, including non-discrimination obligations, obligations not to cause a price/margin squeeze, as well as *ex post* competition law).⁹⁵⁹
- 7.314 Given the lack of effective existing competition in the Regional FACO Markets, it is ComReg's position that, absent regulation, Eircom would currently have both the ability and incentive⁹⁶⁰ to increase prices charged to Access Seekers for FACO above the competitive level. ComReg's position is that Eircom would not be likely to have retained the price of the FVCO and/or WLR components of SB-WLR (or reduced to the same extent), but for the existence of regulation. ComReg also notes that Eircom has charged at the maximum permissible level, and has not reduced its prices for FVCO, WLR, or SB-WLR below the level mandated by ComReg.
- 7.315 Accordingly, ComReg concludes that there is no firm evidence to suggest that Eircom faces effective pricing constraints in the provision of FACO in the Regional FACO Markets.

⁹⁵⁹ This may require Eircom to adjust its prices in other regulated markets in order to ensure that sufficient 'economic space' exists between various products in the so-called ladder of investment.

⁹⁶⁰ These abilities and incentives are discussed in Section 9 dealing with competition problems.

Respondents' Views

- 7.316 Eircom argued that ComReg placed too much weight on the theoretical economic abuse of foreclosure and had not adequately considered whether Eircom actually has sufficient market power at the wholesale level to follow such a pricing strategy, and has failed to adequately consider the dynamics at the retail level to make such a strategy a commercial success.
- 7.317 ComReg considers that, as WLR has followed the regulated price path since 2016, there are no existing competitive pressures, stating at paragraph 7.297 of the 2020 Consultation that *“the regulated prices which Eircom is obliged to charge are price ceilings, and Eircom is free, if it wishes – or if in response to CBP – to charge at levels below that price ceiling”*. Eircom stated that this miscategorises the price control for WLR which, pursuant to the 2016 Pricing Decision, is *“clearly a price point and not a maximum price”*. Eircom added that the 2016 Pricing Decision removes the ability to provide promotions or discounts on WLR, which Eircom had offered prior to the 2016 Pricing Decision coming into effect.
- 7.318 In order to reduce the regulated price of WLR Eircom must, through a Regulatory Approval Mechanism, apply to ComReg using a margin squeeze test. Eircom therefore considered that it does not have the WLR pricing freedom suggested by ComReg.
- 7.319 Eircom also held that noting that ISDN WLR has not changed since 2008 misrepresented the facts, noting that the pricing review ComReg conducted in the 2016 Pricing Decision concluded that setting prices below the level of costs may discourage migration to IP-based solutions and undermine investment incentives in newer technologies. Eircom suggested on that basis that maintaining the existing wholesale prices encourages customers to migrate to more efficient networks.
- 7.320 Eircom also argued that it cannot negotiate FACO rates, as they are currently regulated. As such, ComReg’s conclusion that *“No such instances were provided to ComReg”* is an outcome that should already have been self-evident. Similarly, ComReg’s preliminary view that *“Eircom would not be likely to have retained the price of the FVCO”* was, in Eircom’s view, simply wrong, on the grounds that any attempted exclusionary conduct would be unsuccessful, due to the declining importance of the RFTS market, and the ongoing rollout of NG broadband capable of delivering substitutes to the focal FACO product.

ComReg’s Assessment of Respondents’ Views and Position

- 7.321 ComReg has already addressed Eircom’s comments on the theory of foreclosure and its application to the Regional FACO Markets at paragraphs 7.135 to 7.139 above.

- 7.322 In respect of SB-WLR, D03/16 set a price point for SB- WLR for each year of the price control period (2016-2021). That price point is the cost oriented price and for the last two years of the price control, the price point is indicative and it is for Eircom to ensure that it is cost oriented.
- 7.323 As indicated in its Submission, Eircom cannot offer promotions or discounts on SB-WLR for the reasons set out at 12.74 to 12.78 of the 2016 Pricing Decision,⁹⁶¹ notably, that compliance with the cost orientation is difficult to check in the presence of discounts. However, Eircom can reduce the price of SB-WLR, subject to ComReg approval, but by means of the Regulatory Approvals Mechanism described in Section 12 of the 2016 Pricing Decision. Accordingly, it is clearly not the case that Eircom is not permitted, under any circumstances, to reduce the price of SB-WLR, and such an eventuality is provided for in the 2016 Pricing Decision. Moreover, ComReg is not aware of any instances of Eircom having attempted to reduce the price of SB-WLR by means of the Regulatory Approvals Mechanism.⁹⁶²
- 7.324 In respect of ISDN SB-WLR, Eircom has suggested that the 2016 Pricing Decision gives support to the contention that maintaining (that is, not reducing) ISDN SB-WLR prices is justified as it encourages migration to more efficient networks. The point being made in that text (at paragraphs 6.140 to 6.152 of the 2016 Pricing Decision) is that pricing which deliberately undervalues assets or which is set below the efficient level of costs may undermine investment incentives in new technologies. This is not an argument in favour of maintaining price levels; indeed, it is clear from how ComReg characterised the risks in question that price reduction which do not undervalue the asset, or which are still above efficient levels of costs are not, in this context, problematic. Eircom therefore appears to have mischaracterised this text.

Conclusions on existing competition

- 7.325 Having regard to the assessment in paragraphs 7.284 to 7.315 above, ComReg's position is that, absent regulation in the Regional LL-FACO Market and Regional HL-FACO Market, it is unlikely that Eircom would be sufficiently constrained by existing competition, such that it would be prevented from behaving, to an appreciable extent, independently of competitors, customers and consumers.
- 7.326 Eircom's persistently high market shares, the lack of effective indirect pricing constraints, and the absence of notable evidence of competition materially impacting Eircom's pricing behaviour is indicative of Eircom having SMP in the Regional FACO Markets.

⁹⁶¹ ComReg Decision No. D03/16, Pricing of Eir's Wholesale Fixed Access Services: Response to Consultation Document 15/67 and Final Decision. ComReg Document 16/39, 18 May 2016. See <https://www.comreg.ie/publication-download/pricing-of-eiras-wholesale-fixed-access-services-response-toconsultation-document-1567-and-final-decision> (the '2016 Pricing Decision').

⁹⁶² See also paragraphs 10.353 to 10.362.

7.327 Below, ComReg considers other relevant factors (potential competition and CBP) which form part of its assessment of whether the Regional FACO Markets are likely to be characterised by presence of SMP.

Respondents' Views

7.328 Eircom considered that ComReg's analysis of existing competition may rely on flawed assumptions that prevailing prices and conditions are akin to those that would exist absent regulation. Eircom considered that this would be unlikely, given the long-standing regulation of the FACO market and the nature of the price control. ComReg's assessment appears to suggest that present choices and pricing behaviour provide evidence of insufficient competitive constraints on Eircom.

ComReg's Assessment of Respondents' Views and Position

7.329 ComReg notes that its assessment of existing competition is based on an absent regulation scenario, consistent with the MGA, as detailed at paragraphs 7.288 to 7.293 above. In respect of pricing assumptions, the MGA asks what price the regulated entity would charge, absent regulation; an inherently speculative and difficult exercise, as set out at paragraph 7.313 above. ComReg nevertheless notes that the regulated prices which Eircom is obliged to charge are designed to mimic, as far as possible, the prices that ComReg would expect a reasonably efficient operator to charge on a competitive market. Accordingly, given that the regulated prices are intended to be as close a proxy as possible to competitive prices, ComReg considers that the assumptions on which its assessment of pricing behaviour are based are reasonable and well-founded.

Potential competition on the Regional FACO Markets

7.330 Noting the absence of an effective competitive constraint posed by existing competition in the Regional FACO Markets, ComReg now assesses the likely effectiveness of any constraints stemming from potential competition in those markets. This assessment considers whether entry (and expansion) in the Regional FACO Markets is likely, timely, and credible, to such an extent that it would effectively constrain Eircom's ability to act independently of its competitors, customers and consumers over the medium term.⁹⁶³

⁹⁶³ See paragraph 74 of the SMP Guidelines.

7.331 In considering constraints posed by potential competition, ComReg first examines the presence of barriers to entry and expansion, insofar as they may impact upon the effectiveness of the constraints posed by potential competitors. Having done so, ComReg assesses the strength of such potential competition, having regard to identified barriers to entry and expansion. The analysis in this sub-section relies heavily on the Relevant FACO Markets 3CT assessment of potential competition set out above, in respect of Criteria 1 and 2 of the 3CT.

Barriers to Entry and Expansion

7.332 The assessment of barriers to entry and expansion in the context of potential competition on the Regional FACO Markets is, analytically, the same as the assessment of barriers to entry and expansion set out at the discussion at paragraphs 7.11 to 7.163 above in respect of Criterion 1 of the 3CT – whether the markets are characterised by high and non-transitory barriers to entry. Accordingly, rather than repeating this analysis, ComReg notes instead that the assessment of Criterion 1 of the 3CT suggested that the Regional FACO Markets are characterised by the presence of high and non-transitory barriers to entry which, in the context of the present SMP assessment, are likely to sufficiently inhibit the emergence of effective potential competition within the timeframe of this market review.

Strength of Potential Competitors

7.333 ComReg now examines the likelihood, extent, and timeliness of potential entry into the Regional FACO Markets over the lifetime of this market review, and whether such potential entry would mitigate Eircom's potential SMP position.

7.334 In the context of an SMP assessment, the effectiveness of potential direct and indirect competitive constraints is considered over a medium to longer term horizon. Below, ComReg considers the competitive constraint arising from potential entry under each of these scenarios.

Conclusion on Potential Competition in the Regional FACO Markets

7.335 In paragraphs 7.330 to 7.334 above, ComReg has considered the extent to which potential competition would, over the lifetime of this market review, be likely to effectively constrain Eircom's behaviour in the Regional FACO Markets, such that it would mitigate Eircom's suggested SMP position. Overall, ComReg's position is that, absent regulation in the FACO Markets, it is unlikely that Eircom would be sufficiently constrained by potential competition, such that it would be prevented from behaving, to an appreciable extent, independently of competitors, customers and consumers.

7.336 The following types of potential competition were considered:

- (a) Build an independent network to offer FACO;
- (b) Adapt an existing network to provide FACO; and

(c) Deploy Managed VoIP-based FACO (and associated systems) using wholesale NG Broadband inputs provided by Eircom and SIRO.

- 7.337 ComReg notes that barriers to entry to the Regional FACO Markets may, to some extent, be avoidable for SPs which currently operate networks, either on a wholesale-only basis (e.g. SIRO), or on an RFTS self-supply basis (e.g. Virgin Media). However, in practice, ComReg's position is that these SPs would not be in a position to offer an effective alternative FACO product that would likely meet the expectations of FACO Access Seekers, without incurring significant sunk costs. ComReg also considers that alternative RFTS SPs would be unlikely to enter the Regional FACO Markets over the period of this review, and are therefore unlikely to represent a sufficient competitive constraint on Eircom in the FACO Markets.
- 7.338 In an MGA scenario, ComReg notes that, in the absence of regulated FACO products, SPs are likely to have increased incentives to deliver FACO or RFTS by means of Managed VoIP using wholesale NG Broadband inputs. However, demand for SB-WLR and WLW (which makes use of SB-WLR inputs) while slowly beginning to decline, remains high. Given the lower incidence of NG Broadband coverage in the Regional FACO Markets, Managed VoIP, while growing in general, is unlikely to be deployed to the extent that it is likely, absent regulation, to ultimately result in an effective direct or indirect constraint in the Regional FACO Markets over the lifetime of this market review.

Respondents' Views

- 7.339 Eircom noted that the SMP Guidelines specifically call out the fact that market power can be constrained by the existence of potential competitors. In this respect, Eircom argued that ComReg had failed to adequately consider the constraint that will be exercised by NBI in the medium term, given that the FACO market is in decline, and that the NBP contract has been finalised.
- 7.340 In CE's view, ComReg is overly cautious in assessing the role of NBI in constraining Eircom's ability to behave independently of its customers. CE noted, *inter alia*, that service delivery has commenced, and the rollout period may be shortened from seven to five years. CE therefore argued that NBI rollout will take place with a relative amount of certainty based on its deployment plans, and consumers, businesses and, notably, Eircom will be likely to take it into account in their decisions. CE therefore argued that "*NBI rollout does not represent just 'potential competition'*".
- 7.341 CE further argued that NBI will alleviate market failures associated with the rural deployment of NG Broadband, and that ComReg gave limited weight to NBI's role as a competitive constraint. Given the impact NBI will have in the coming years, ComReg ought, in CE's view, to assess how the planned rollout will affect Eircom's incentives to increase retail prices or foreclose wholesale customers.

- 7.342 NBI, by design, targets those markets where customers benefit most from alternative means of accessing NG Broadband. According to Eircom's forecast, 876 EAs accounting for 90% of premises should be competitive by 2023 (the expected mid-point of the review period, assuming a five-year span), on the basis of forecast NBI rollout alone.
- 7.343 BT agreed that NBI should not be included in the FACO market analysis, as it would be prudent to assess what will be available to the market when it is rolled out. BT added that ComReg should base its findings on what network infrastructure is in place, rather than what is planned.

ComReg's Assessment of Respondents' Views and Position

- 7.344 ComReg concurs with Eircom that, as set out in the SMP Guidelines, market power may be constrained by potential competition, but disagrees with both Eircom and CE that it has failed to adequately consider the constraint arising from NBI in the medium term. ComReg has set out at paragraphs 7.217 to 7.230 above its reasoning as to why NBI should not be accounted for in terms of potential entry when assessing Criterion 2 of the 3CT, and those arguments are equally applicable when considering potential competition at SMP assessment stage. In particular, ComReg reiterates that NBI the expected dates of NBI rollout to EAs within the IA are unclear for points beyond the initial two-year horizon.
- 7.345 ComReg firstly notes that NBI is unlikely itself to offer a wholesale Managed VoIP product over its own NG Broadband network in direct competition with the FACO focal product. However, NBI could facilitate an indirect retail constraint where an Access Seeker made use of NBI inputs in retailing Managed VoIP to its own end users. ComReg also notes that, as set out in the 2018 SMP Guidelines, potential competition should be assessed over a longer time horizon arising, for instance, from the sunk costs the potential entrant must incur.⁹⁶⁴ Even allowing for this longer-term time horizon (compared to the time horizon allowed for in respect of supply-side substitution), ComReg considers that Eircom is currently unlikely to trammel its conduct on the Regional FACO Markets due to the potential competition arising from NBI rollout at a point in time up to seven years in future.

⁹⁶⁴ At paragraph 28.

- 7.346 This is particularly the case in circumstances where, in large parts of the IA, end users are not yet clear on, once rollout occurs, what RFTS SPs will offer Managed VoIP over NBI, what standalone or bundled Managed VoIP options will be available, and at what price points. NBI is capable of facilitating (but not itself providing) the Managed VoIP RFTS indirect retail constraint on the FACO focal product. However, given the lack of certainty on what Managed VoIP RFTS will be available to end users in the IA, ComReg considers that NBI does not, at this stage, offer sufficiently strong potential competition to Eircom on the Regional FACO Markets. As part of the MTA which is scheduled to take place after two years from the Effective Date of this Decision, ComReg may, *inter alia*, assess additional wholesale NG broadband rollout at that stage.
- 7.347 While NBI rollout plans have been provided to ComReg, and very limited customer acquisition have commenced in Cork and Cavan, ComReg notes that NBI rollout is scheduled to occur over a seven-year period. While some discussion has arisen concerning a shorter five-year rollout period, ComReg has not seen detailed indicative proposals for this shorter rollout. ComReg considers that it would be appropriate to reconsider this finding as part of the MTA, given that, with the effluxion of time, NBI rollout plans are likely to have time horizons attached to them by that stage.
- 7.348 Overall, ComReg's position is that, absent regulation, it is unlikely that Eircom would be sufficiently constrained by potential competition in the Regional FACO Markets, such that it would prevent Eircom from behaving, to an appreciable extent, independently of competitors, customers and end users.

Strength of any Countervailing Buyer Power ('CBP')

- 7.349 In addition to the preceding analysis of barriers to entry and potential competition, it is also necessary to consider CBP, and whether bargaining power on the buyer side of the Regional FACO Markets could impose a sufficiently effective⁹⁶⁵ competitive constraint on Eircom, such that it would credibly offset Eircom's potential capacity to behave, to an appreciable extent, independently of competitors, customers and, ultimately, consumers.
- 7.350 In so doing, ComReg examines whether CBP would result in Eircom being unable to sustain FACO prices above the levels which would be reasonably expected to occur in a competitive market. Thus, CBP is exercised 'effectively' where it results in FACO prices being constrained to such levels.

⁹⁶⁵ The existence of *some* level of CBP does not, in itself, suffice. Rather, CBP must be sufficiently strong to prevent FACO prices from rising above a level that would pertain in a competitive market outcome.

- 7.351 The concept of CBP is not absolute,⁹⁶⁶ and some degree of CBP may be present in FACO negotiations between parties. Given that FACO negotiations are usually bilateral in nature, it is reasonable to assume that the level of any CBP exercised will vary between parties, having regard to their circumstances.
- 7.352 In assessing CBP, ComReg takes account of the **economic framework** and the **regulatory context** within which a market operates, as well as any other criteria relevant to the CBP assessment.

Economic Framework for CBP assessment

- 7.353 The effectiveness of CBP in FACO negotiations is highly dependent on the strength of the purchaser's bargaining power. The EC's 2009 enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings⁹⁶⁷ (the '**2009 Enforcement Priorities**') are informative on CBP in competition assessments, noting⁹⁶⁸ that:

“Competitive constraints may be exerted not only by actual or potential competitors but also by customers. Even an Undertaking with a high market share may not be able to act to an appreciable extent independently of customers with sufficient bargaining strength. Such countervailing buying power may result from the customers' size or their commercial significance for the dominant Undertaking, and their ability to switch quickly to competing suppliers, to promote new entry or to vertically integrate, and to credibly threaten to do so. If countervailing power is of a sufficient magnitude, it may deter or defeat an attempt by the Undertaking to profitably increase prices. Buyer power may not, however, be considered a sufficiently effective constraint if it only ensures that a particular or limited segment of customers is shielded from the market power of the dominant Undertaking.”

- 7.354 In its 2004 Horizontal Mergers Guidelines,⁹⁶⁹ the EC notes that:

“Countervailing buyer power should be understood as the bargaining strength that the buyer has vis-à-vis the seller in commercial negotiations due to its size, its commercial significance to the seller and its ability to switch to alternative suppliers.”

⁹⁶⁶ The question to be addressed is not whether or not CBP has been exercised, but rather the strength of CBP exercised, and whether this is sufficient to constrain the exercise of SMP, in particular, by preventing a FACO supplier from pricing call origination rates above the competitive level.

⁹⁶⁷ Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant Undertakings (2009/C 45/02). Available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:045:0007:0020:EN:PDF>.

⁹⁶⁸ Paragraph 18 of the 2009 Enforcement Priorities.

⁹⁶⁹ European Commission *Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between Undertakings*, [Official Journal C 31, 05.02.2004](#), para 64, (the '**2004 Horizontal Mergers Guidelines**').

- 7.355 Accordingly, effective CBP results from customers being of sufficient size or importance to the seller and having the ability to credibly switch to alternative sources of supply, such that it deters the seller from profitably increasing its prices. Effective CBP therefore arises where buyers:
- (a) Account for a significant proportion of the supplier's total output;
 - (b) Are well-informed about credible alternative sources of supply; and
 - (c) Can switch to other suppliers at little cost to themselves, or to self-supply relatively quickly, and without incurring substantial sunk costs.
- 7.356 The above factors are considered below (noting that (b) and (c) are considered together), along with any evidence of effective CBP being exercised in negotiations between Eircom and Access Seekers. It is also of note that effective CBP has a broader market impact beyond the limited segment of customers benefiting from better terms and conditions.

Regulatory Context for CBP Assessment

- 7.357 In assessing CBP it is also necessary to consider the impact of existing or future potential regulation. In this regard, ComReg sets out its approach to:
- (a) Existing SMP regulation in the Regional FACO Markets;
 - (b) Existing SMP regulation in markets other than the Regional FACO Markets; and
 - (c) Other non-SMP regulation, and the role of dispute resolution.

Existing SMP regulation on the Regional FACO Markets

- 7.358 The bargaining position of a FACO SMP SP will likely be weakened in negotiations with an Access Seeker if its supply of FACO is subject to SMP price regulation, or other SMP obligations governing the requirement to meet reasonable requests for access and not to discriminate, and this is the logic of the MGA.
- 7.359 The provision of FACO by Eircom is currently subject to a number of SMP regulatory obligations, including an obligation of price control. In these circumstances, Eircom, in its FACO negotiations with Access Seekers, is unable to credibly threaten to retaliate with an increase in call origination charges, and its bargaining power relative to Access Seekers is likely to be lessened, compared to the counterfactual in which it is not subject to SMP obligations. Eircom's bargaining power is therefore likely constrained in FACO negotiations with Access Seekers.

7.360 However, insofar as existing SMP regulation in the Regional FACO Markets is concerned, ComReg applies the MGA, whereby SMP regulation in the market under consideration is discounted. In assessing the existence of any effective CBP, ComReg considers the potential bargaining outcomes if Eircom were not designated with SMP on the Regional FACO Markets and were therefore not subject to SMP obligations. This is to avoid drawing conclusions regarding the competitive structure of a particular market which may be influenced by, or indeed premised on, existing or potential regulation on that market. Considering how the Regional FACO Markets may function absent regulation helps to ensure that regulation is only applied (or withdrawn) where it is truly justified and proportionate to do so. To do otherwise could result in a circularity of argument whereby, for example, the Regional FACO Markets are found to be effectively competitive only by virtue of constraints arising from existing or potential SMP obligations. Once found to be effectively competitive, SMP obligations would be withdrawn, thereby undermining the original finding of effective competition on those markets.

Existing SMP regulation outside the Regional FACO Markets

7.361 ComReg has imposed SMP obligations on Eircom on a number of other regulated markets.⁹⁷⁰ The bargaining position of an SP with SMP obligations in markets other than the Regional FACO Markets may potentially be weakened in any FACO negotiations. This is because the SMP obligations on those other markets may limit the credibility of, for example, threats to increase wholesale prices in those markets – but not, in an MGA scenario, the credibility of threats of price increases in the Regional FACO Markets.

7.362 Conversely, a number of Eircom's FACO customers are also subject to SMP regulation in other markets, which constrains their own bargaining positions. For instance, BT and Vodafone (in respect of fixed voice call termination), and Vodafone (in respect of mobile voice call termination) are subject to SMP obligations pursuant to the 2019 Termination Decision, and the 2019 Termination Rates Decision.⁹⁷¹

⁹⁷⁰ This includes WLA, WCA (on the Regional WCA market only), FVCT, MVCT and leased lines. While Eircom is also designated with SMP in the downstream Retail Fixed Voice Access (RFVA) market by means of the 2014 RFVA Decision, for the purpose of the CBP assessment, ComReg discounts this finding of SMP, given the definition of the Relevant FACO Markets at Section 5 and the imposition of associated remedies discussed at Section 10.

⁹⁷¹ Market Review - Fixed Voice Call Termination and Mobile Voice Call Termination (D10/19), and Decision - Price Control Obligations for Fixed & Mobile Call Termination Rates (D11/19), 23 May 2019.

7.363 It is ComReg's position that the bargaining positions of Access Seekers purchasing FACO from Eircom are, in some cases, somewhat strengthened by the fact that Eircom is unable to exercise its SMP on other markets. However, a number of caveats are in order. First, the comparative strengthening of bargaining power is unlikely to amount to a position of 'effective' CBP; rather it may marginally increase bargaining power, but still at a low level. Second, some Access Seekers may themselves be subject to SMP obligations on other markets and are therefore similarly restricted in their bargaining responses. Third, the capacity to leverage bargaining strength in respect of other markets applies only in the case of Access Seekers who are also active on other markets where Eircom is designated with SMP. Overall, Access Seekers in the Regional FACO Markets are not likely to strengthen their bargaining power in negotiations with Eircom, despite the fact that Eircom's SMP position in such other markets undermines the credibility of any threat to retaliate by, for example, imposing price increases or denying access to wholesale services provided in these markets.

ComReg's investigative and dispute resolution powers

- 7.364 ComReg has also considered the role of dispute resolution (and own initiative investigations) in the context of general interconnection obligations, and how this might impact bargaining dynamics between parties in FACO negotiations and CBP. Regulation 31⁹⁷² of the Framework Regulations empowers ComReg to resolve disputes between authorised Undertakings, not only in relation to specific SMP obligations, but also with respect to general obligations, including those governing interconnection. Furthermore, Section 10 of the Communications Regulation Act 2002 (as amended) affords ComReg the power to carry out investigations into matters relating to the supply of access, either on its own initiative, or following a complaint from an Undertaking.
- 7.365 SMP obligations may only be imposed on an SP that is designated as holding SMP. Where ComReg exercises its dispute resolution powers or its powers to initiate investigations on its own initiative, it must also do so having regard to its objectives under Section 12 of the Communication Regulation Act 2002 (as amended) and Regulation 16 of the Framework Regulations.
- 7.366 In the event that SPs are unable to reach a commercially negotiated arrangement regarding the interconnection of their networks, including in relation to the call origination rates levied or proposed to be levied by a FACO supplier (absent SMP), it would potentially be open to one of the parties to seek to have the matter resolved by ComReg through the dispute resolution process provided for under Regulation 31 of the Framework Regulations.

⁹⁷² Articles 25 and 26 of the EECC similarly endow NRAs with dispute resolution powers.

- 7.367 ComReg does not consider that its dispute resolution function, and its resulting power to determine call origination rates in the context of an interconnection dispute, would negate Eircom's potential SMP position in the provision of FACO. Dispute resolution is a regulatory function which operates in parallel to, rather than as a substitute for, market analysis functions.
- 7.368 ComReg also does not consider that such a scenario is contemplated by the European Regulatory Framework, and this has been borne out in a number of recent decisions by the EC under Article 7 of the Framework Directive concerning the imposition by NRAs of both SMP obligations pursuant to findings of SMP following a market analysis, and the imposition of SMP-type obligations on non-SMP SPs pursuant to the exercise of dispute resolution functions. These EC decisions⁹⁷³ highlight the EC's view that regulatory intervention in the conduct of non-SMP SPs through dispute resolution, while appropriate in certain scenarios as a short-term measure, is no substitute for the conduct of a market analysis and, where appropriate, the imposition of permanent price control remedies.
- 7.369 Overall, ComReg considers that the actual or potential impact of dispute resolution is not a factor for consideration in terms of the bargaining dynamic between Eircom, as a supplier of FACO, and Access Seekers.

Assessment of CBP in the Regional FACO Markets

- 7.370 Having set out the economic framework and the regulatory context for assessing CBP, ComReg now examines the possibility of the exercise of CBP in the purchase of FACO from Eircom on the Regional FACO Markets, with regard to the following considerations:
- (a) Responses to the April 2019 IIRs, and meetings with SPs;
 - (b) The size of purchasers of FACO, and their relative importance to Eircom;
 - (c) Whether credible alternative sources of FACO exist for a purchaser who wishes to exert CBP; and
 - (d) Evidence of price-setting behaviour, and negotiations between SPs.

Responses to Information Requests and meetings

- 7.371 ComReg has considered whether evidence from bargaining in FACO negotiations between Eircom, on the one hand, and Access Seekers, on the other, is indicative of the effective exercise of CBP. In this respect, ComReg sought evidence of the exercise of bargaining power and CBP from Access Seekers by means of an information request. However, no such information was made available to ComReg.

⁹⁷³ See, for example, Cases PL/2012/1280, PL/2012/1378 and IT/2016/1885.

7.372 ComReg notes the responses of Access Seekers, which appear to suggest that any CBP is ineffective in terms of its ability to constrain Eircom in setting FACO charges above the level consistent with a competitive market outcome (in an MGA scenario). This suggests that effective CBP is not, nor is likely to be, capable of constraining Eircom's behaviour in the Regional FACO Markets.

Size of the buyer and its relative importance to the seller

7.373 The strength of CBP can be influenced by the relative size of the buyer, measured by its share of total purchases of FACO from Eircom, relative to total purchases of FACO. The degree to which high shares of FACO purchases are concentrated amongst one or more buyers may be relevant.

7.374 The size of the buyer and its relative importance to the seller may be dynamic over time, having regard to growth in the subscriber bases of the respective parties, and trends in the buyer's purchases of FACO. For example, as a FACO Access Seeker's customer base grows, it may become more difficult for Eircom (in an MGA scenario) to refuse or delay interconnection with that Access Seeker, given that it will likely have an increasing need for its subscribers to be able to contact the Access Seeker's subscribers.

7.375 Arising from the above, relative to an established SP, a new entrant Access Seeker would find it more important to ensure that it had obtained interconnection to other SPs that have large customer bases. Recognising this asymmetry, the bargaining power of Eircom in supplying FACO in interconnection negotiations with new entrant Access Seekers could potentially be enhanced.

7.376 In determining the sizes of buyers and their relative importance to the seller, ComReg measured purchases of FACO from Eircom by Access Seekers on the Regional FACO Markets. The larger the share of FACO a given Access Seeker purchases from Eircom, the more likely it is that that Access Seeker may be able to exert its CBP. Conversely, an Access Seeker which accounts for a small proportion of FACO purchases from Eircom is unlikely to exert effective CBP.

7.377 To identify the largest purchasers of FACO from Eircom and their relative importance to Eircom on the Regional FACO Markets, ComReg considers:

- (a) The share of FACO supplied by Eircom purchased by individual Access Seekers directly interconnected with Eircom, and trends over time; and
- (b) The size of each of the FACO Access Seekers' subscriber bases, relative to Eircom's subscriber base, and trends over time.

- 7.378 ComReg carries out this assessment on an MGA basis, which assumes that regulation is not present on the Regional FACO Markets, and that Eircom therefore no longer offers merchant market SB-WLR to Access Seekers. Under this assumption, the RFTS end users of Access Seekers switch to Eircom retail (or an SP which is not reliant on Eircom wholesale inputs) if their SP is unable to offer RFTS by means other than SB-WLR.
- 7.379 The Regional FACO Markets are characterised by the absence of, or limited rollout of, NG Broadband networks. Accordingly, in an MGA scenario, a significant proportion of RFTS end users would either cease to purchase RFTS, or switch to Eircom retail. Each course of action would have the effect of increasing, in absolute and proportionate terms, the share of FACO accounted for by Eircom self-supply. Accordingly, the actual LL-FACO purchase figures set out below represent a competitive best-case scenario, given an alternative scenario where SB-WLR is not offered on a merchant market basis, and alternative RFTS provision is not widely available, given that NG Broadband networks are not widespread in the footprint of the Regional FACO Markets.

Table 73: FNA-only FACO Market Shares, measured by FNA lines (%), Q4 2019

[REDACTED]⁹⁷⁴

	Urban FACO Markets				Regional FACO Markets			
	Absent regulation		In presence of regulation		Absent regulation		In presence of regulation	
	LL-FACO	HL-FACO	LL-FACO	HL-FACO	LL-FACO	HL-FACO	LL-FACO	HL-FACO
BT								
Digiweb								
Eircom								
Pure Telecom								
Virgin Media								
Vodafone								
OA0								
Total	100%	100%	100%	100%	100%	100%	100%	100%

- 7.380 Table 73 above shows the relative share of each Access Seekers' purchases of LL-FACO and HL-FACO SB-WLR and WLV, as of Q4 2020. It illustrates that, in the presence of regulation, Eircom purchases an absolute majority of FNA lines. In a MGA, Eircom's market share increases on both the Regional LL-FACO Market and the Regional HL-FACO Market. The largest merchant market purchasers are BT and Vodafone.

⁹⁷⁴ As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, more recent data are currently unavailable.

- 7.381 In respect of CBP in the provision of wholesale Managed VoB (that is, White Label VoIP), it should be noted that Eircom White Label VoIP has a very limited presence on the Regional FACO Markets.⁹⁷⁵ Eircom has [X [REDACTED] [REDACTED] [REDACTED] X], but their purchases of wholesale Managed VoB are dwarfed by Eircom Managed VoB self-supply – [X [REDACTED] X]⁹⁷⁶ of Eircom Managed VoB channels are delivered on a self-supply basis.
- 7.382 Therefore, the largest purchaser of FACO on the Regional FACO Markets, by a significant margin, is Eircom’s own downstream retail arm. In the case of merchant market supply, BT and Vodafone are the largest purchasers, based on BT purchases of SB-WLR, and Vodafone purchases of WLV. These figures suggest the possibility that either, or both, BT and Vodafone could potentially exert CBP. However, this is attenuated by the fact that Vodafone and BT together account for considerably less than Eircom’s own purchases on the Regional LL-FACO Market.
- 7.383 A buyer is likely to be better positioned to exert CBP if it is large in absolute or relative terms, and if it is a relatively large customer of the seller. ComReg assesses whether an Access Seeker, which is an important FACO customer of Eircom, is capable of leveraging its importance to exercise CBP.
- 7.384 As of Q4 2020, Eircom accounts for 40% of all RFTS subscriptions, similar to its market share at the time of the 2015 FACO Decision. OAO RFTS market shares have also – generally – remained stable over the same time period. Accordingly, Eircom remains the largest provider of RFTS, and its relative importance compared to its RFTS competitors has remained stable.
- 7.385 Based on the evidence available to it, ComReg has formed the view that most Access Seekers are unlikely to be of enough importance to Eircom to sufficiently constrain its ability to delay or impede FACO access or to set charges above an efficient level, absent regulation.

⁹⁷⁵ As of Q4 2019, the most recent quarter for which data are available, [X [REDACTED] X] reported two wholesale Managed VoIP lines in the footprint of the Regional FACO Markets.

⁹⁷⁶ 60-70%. For Q4 2020, ComReg only has data on [X [REDACTED] X] sales of Managed VoB RFTS to its own end users. However, even hypothetically assuming that all of these sales were dependent on [X [REDACTED] X] purchases of Eircom White Label VoIP, those purchases would still be dwarfed by Eircom self-supply of Managed VoB.

7.392 ComReg has examined whether a buyer of FACO on the Regional FACO Markets could exercise its CBP by credibly threatening to switch to alternative sources of FACO. This threat would be most credible where there would be no (or only minimal) disturbances arising from switching to an alternative for the FACO purchaser and its customers. As set out at paragraphs 7.288 to 7.294 above, there is limited scope for Access Seekers to switch to alternative sources of FACO in the Regional FACO Markets, due to the insufficient presence of alternatives, including the absence of sufficient NG Broadband network rollout.

Evidence of price-setting behaviour & negotiations between Service Providers

7.393 The development and extent of competition in a market over time may be observed by reference to pricing behaviour. In an SMP assessment context, the ability of an SP to behave, to an appreciable extent, independently of the pricing behaviour of its competitors may be suggestive (but not determinative in itself) of SMP, when considered alongside other factors. ComReg assesses this factor when considering the effectiveness of CBP.

7.394 Eircom publishes its SB-WLR and call origination charges as part of its RIO. The call origination charges of other SPs (which are not subject to SMP regulation) are published in the open eir STRPL.⁹⁷⁷

7.395 ComReg has assessed whether there is evidence of price-setting behaviour. ComReg sought details of any negotiations that took place regarding the setting of call origination rates, as well as any instances of the exercise of CBP in such negotiations. No such instances were provided to ComReg.

7.396 ComReg also examined Eircom's FACO pricing behaviour and set out its view that there is no firm behavioural evidence to suggest that Eircom is facing effective pricing constraints in the provision of FACO. ComReg also notes that the regulated prices which Eircom is obliged to charge are price ceilings, and Eircom is free, if it wishes – or if in response to CBP – to charge at levels below that price ceiling. ComReg understands that Eircom has not done so in respect of regulated FACO pricing. This further suggests that Eircom pricing behaviour is constrained by regulation but is not further constrained by CBP.

Respondents' Views

7.397 Eircom considered that ComReg's assessment of CBP was flawed in that it erroneously assumed that limited network coverage limits an SP's ability to credibly exert CBP.

⁹⁷⁷ open eir Switched Transit Routing and Price List (STRPL), version 169.0, 15 June 2021. Available online at https://www.openeir.ie/wp-content/uploads/2021/06/STRPL-Issue-V169_0-Unmarked-15062021.pdf

- 7.398 Eircom argued that it is constrained by regulation to respond to CBP, since it cannot negotiate with individual customers. ComReg should therefore have carried out its assessment bearing in mind that, prior to the 2016 Pricing Decision, Eircom offered promotions and discounts to its wholesale customers on WLR. Similarly, absent regulation Eircom can offer and negotiate discounts with customers in the Urban WCA and Call Transit markets. Eircom therefore argues that, absent regulation, it has the incentive to enter into commercially negotiated deals on FVCO, FA, or FACO, particularly where viable substitutes exist, and the market is in continual decline.
- 7.399 Eircom also argued that ComReg's geographic market definition exercise led to the definition of a Regional FACO Market consisting of a small number of EAs. This approach failed to give proper consideration to factors indicating the strength of CBP constraints from the Urban FACO Market into the Regional FACO Market. Eircom therefore argues that it is incorrect to define separate geographic FACO markets, as separate relevant economic markets only exist if the competitive conditions in each are "*appreciably different*".
- 7.400 In particular, Eircom argued that 'regional competitors' in the Urban FACO Markets (which it does not specifically identify) are so large (75% of all WLR lines) that the ability of Eircom to act independently in the much smaller Regional FACO Markets is not a regulatory risk. Eircom therefore surmised that ComReg has defined a geographic market that is so small that it leads – incorrectly - to the presumption of SMP.

ComReg's Assessment of Respondents' Views and Position

- 7.401 Eircom considered that ComReg's assessment failed to have proper regard to CBP exerted by and over other networks, despite their limited rollout. Eircom argued that Access Seeker CBP in the Urban FACO Markets could be leveraged to countervail attempts to price differentiate in the Regional FACO Markets. Specifically, Eircom argued that, on the Urban FACO Market, Access Seekers account for 75% of all WLR lines and that, accordingly, there is no risk that Eircom would act independently in the Regional FACO Markets.

- 7.402 ComReg does not agree with Eircom's analysis. In the first instance, ComReg notes that, for CBP to be effective, it will not suffice for a negotiation to lead to a better deal for an individual customer. Rather, to constrain the behaviour of Undertakings in a market, CBP must be equivalent in effect to a competitive market outcome; it will therefore not suffice for one individual customer to be capable of negotiating a favourable deal for competition assessment purposes. ComReg notes that Eircom also appears to rely on reasoning set out by the European Commission at page 14 of the 2014 Explanatory Note to justify its argument that ComReg's CBP analysis is flawed. However, the text which Eircom quotes describes the capacity of a regional competitor to exercise competitive pressure beyond the area in which it is present in the context of a geographic market definition exercise. The text therefore concerns competitors to a candidate SMP operator and does not apply to the consideration of CBP at competition assessment stage.
- 7.403 Eircom also argues that it cannot price as it wishes on the Regional FACO Market, as it faces the risk of retaliatory CBP from the same Access Seekers on the Urban FACO Markets. This argument relies on the assumption that Eircom faces credible CBP on the Urban FACO Markets. In addition, Eircom has not provided any information regarding the means for which it calculated that Access Seekers account for 75% of all WLR lines in the Urban FACO Markets. ComReg notes that as of Q4 2020, Access Seekers only accounted for 45% of all lines in the Urban FACO Markets.
- 7.404 Moreover, ComReg notes that, regardless of the size of an Access Seeker's purchases from Eircom, CBP can only credibly be exercised where that Access Seeker can move its FACO purchases quickly, and without incurring sunk costs, to an alternative supplier. ComReg notes that no other SP offers FNA FACO. Therefore, in order to exercise its CBP on the Urban FACO Markets in retaliation for an increase in Eircom FACO prices on the Regional FACO Markets, an Access Seeker would have to migrate either to White Label VoIP (delivered by Eircom or BT), WLA (offered by Eircom or SIRO), or WCA (offered by Eircom or BT) and switch from delivery of RFTS by means of FNA FACO, to Managed VoIP RFTS. This is not a costless exercise and is also likely to take time. Accordingly, given the time and cost involved in doing so, an Access Seeker will have little incentive to use its CBP on the Urban FACO Markets in this fashion, so long as the increased cost of FNA FACO on the Regional FACO Markets is lower than the cost of switching to Managed VoIP RFTS on the Urban FACO Markets. Accordingly, Eircom is unlikely to be disciplined on the Regional FACO Markets by the threat of CBP on the Urban FACO Markets, as long as, for instance, it keeps price increases on the Regional FACO Markets at a level that is not high enough to induce the loss of Access Seeker custom on the Urban FACO Markets.

- 7.405 In respect of the pricing point made by Eircom at paragraph 7.398 above, this issue is addressed by ComReg in greater detail at paragraphs 7.321 to 7.324 above. In respect of the geographic market definition point made by Eircom, these issues are addressed in greater detail at Section 5.2 above.
- 7.406 In paragraphs 7.349 to 7.396 above, ComReg has carried out an assessment of the impact posed by strong buyers on the competitive behaviour of Eircom in the Regional FACO Markets. Having regard to this analysis, ComReg's position is that it is unlikely that Eircom would be sufficiently constrained by CBP in the Regional FACO Markets, such that it would prevent it from behaving, to an appreciable extent, independently of competitors, customers and consumers.
- 7.407 Based on the analysis above, including evidence of pricing behaviour, it is unlikely that any Access Seeker would, absent regulation, be capable of exercising an effective CBP constraint on Eircom supply of FACO, or its ability to set FACO charges at a supra-competitive level, on the Regional FACO Markets.

7.5 Overall Conclusions on FACO Market Analysis and SMP Designations

- 7.408 In this section, ComReg has considered whether any of the four Relevant FACO Markets are characterised by any SP having the ability to behave, to an appreciable extent, independently of its competitors, customers and consumers, which would justify designating any such SP with SMP on any of those markets. Given that the Relevant FACO Markets are not included in the 2014 Recommendation, it is first necessary to carry out a 3CT to determine whether any of the markets should, in principle, be subject to *ex ante* regulation. ComReg has formed the view that the following markets fail the 3CT and therefore exhibit characteristics consistent with markets that are tending towards effective competition over the lifetime of this market review:
- (a) The Urban LL-FACO Market; and
 - (b) The Urban HL-FACO Market.
- 7.409 ComReg's position is that no Undertaking has SMP on the Urban FACO Markets. It follows that the SMP remedies currently imposed on those markets must therefore be removed, subject to the appropriate sunset periods, as discussed at Section 11 below.
- 7.410 In contrast, ComReg has formed the view that the following markets pass the 3CT and are, therefore, susceptible to *ex ante* regulation:
- (a) The Regional LL-FACO Market; and
 - (b) The Regional HL-FACO Market.

- 7.411 ComReg then carried out an SMP assessment on these markets, taking into account, *inter alia*, existing competition, potential competition, and CBP. On the basis of these assessments, ComReg has formed the position that Eircom would not be sufficiently constrained by the above factors such that it would be prevented from behaving, to an appreciable extent, independently of competitors, customers and consumers in those markets.
- 7.412 Where ComReg determines, based on market analysis carried out by it in accordance with Regulation 27 of the Framework Regulations,⁹⁷⁸ that a given market identified in accordance with Regulation 26 of the Framework Regulations is not effectively competitive, ComReg is obliged to designate an Undertaking under Regulation 27(4) of the Framework Regulations with SMP.
- 7.413 ComReg's position, therefore, is that Eircom should be designated with SMP on both the Regional LL-FACO Market and the Regional HL-FACO Market.

⁹⁷⁸ This provision is mirrored at Article 67(4) of the EECC.

8 Assessment of the RFTS Market absent regulation in the Urban FACO Market

- 8.1 In paragraph 4.496 above, ComReg defined the Relevant RFTS Markets in the presence of upstream FACO regulation nationally, although in doing so, ComReg has had regard to the regulatory outcomes on the Relevant FACO Markets set out later in this Decision.
- 8.2 ComReg has designated Eircom with SMP in the Regional FACO Markets (see paragraphs 7.408 to 7.413) and in Section 10 has imposed obligations on Eircom in those markets. ComReg also concluded that the 3CT failed on the Urban FACO Markets, and therefore withdraws SMP regulation from those markets (subject to any sunset period and conditions outlined in Section 11). ComReg accordingly now examines the Relevant RFTS Markets in the presence of regulation in the Regional FACO Markets, but absent regulation in the Urban FACO Markets. Henceforth, these markets are referred to as the Modified RFTS Markets (the '**Modified RFTS Markets**').
- 8.3 Four of the five Respondents to the 2020 Consultation expressed views on ComReg's analysis of the Modified RFTS Markets. Vodafone queried a technical aspect of the analysis. Eircom concurred with the analysis and findings, while BT and ALTO disagreed with ComReg's preliminary findings. BT asserted that, if the Urban FACO Markets were deregulated, the Modified RFTS Markets would pass a 3CT, as competition in the provision of RFTS in the footprint of the Urban FACO Markets would be distorted and impeded.

8.1 Modified RFTS Product Markets

- 8.4 The RFTS Product Markets, as outlined at paragraph 4.428 remain unchanged, having regard to the presence of regulation on the Regional FACO Markets, and the removal of regulation from the Urban FACO Markets.

8.2 Modified RFTS Geographic Markets

- 8.5 The purpose of this section is to reconsider the geographic scope of the Modified RFTS Markets in the presence of upstream regulation in the Regional FACO Markets, but absent regulation on the Urban FACO Markets. It is therefore appropriate to consider whether, given the definition of sub-national geographic Relevant FACO Markets, it is similarly appropriate to define sub-national geographic Modified RFTS Markets downstream. ComReg's approach is consistent with that set out in the EC's 2020 Recommendation.

- 8.6 In assessing the geographic scope of the Modified RFTS Markets, ComReg assesses whether conditions of competition across the State are sufficiently homogenous. If so, it is likely that a national geographic market exists. However, if, in the provision of RFTS, there are sufficient and stable differences in competitive conditions across different geographic areas of the State, this may warrant defining sub-national geographic markets.
- 8.7 Below, ComReg assesses the geographic aspects of the Modified RFTS Markets, given the presence of regulation on the upstream Regional FACO Markets, and the absence of regulation on the Urban FACO Markets, compared to a counterfactual in which a single national FACO market is defined, on the basis that there are no appreciable differences in competitive conditions in the provision of FACO across the State. ComReg carried out this counterfactual analysis having regard to the following issues:
- (a) Geographic variation in entry conditions and the availability of services (paragraphs 8.8 to 8.12);
 - (b) Geographic differences in evolution of SP market shares (paragraphs 8.13 to 8.15); and
 - (c) Geographic variances in products and pricing (paragraph 8.16).

Geographic variation in entry conditions and the availability of services

- 8.8 In considering the geographic scope of the Modified RFTS Markets, ComReg assesses the extent to which differences in competitive conditions may evolve in particular areas (as set out in Section 5, ComReg uses the Eircom EA as the unit of geographic assessment) over the lifetime of this market review, given sub-national FACO geographic markets. In doing so, ComReg assesses, *inter alia*, the coverage and market share evolution of wholesale NG Broadband networks over time as a means of identifying any existing or potential variances in entry and competitive conditions across different geographic areas.
- 8.9 ComReg's assessment indicates that RFTS delivered over NG Broadband (CATV, FTTC/eVDSL and FTTP networks) is a sufficiently close substitute to the RFTS FNA focal products in terms of product characteristics, pricing and intended use, where available. As set out in detail in Section 5 above, the presence or absence in an EA of wholesale NG Broadband, at an appreciable level of coverage, is the key determinant in distinguishing differences in competitive conditions between EAs. In the paragraphs below, ComReg assesses the network coverage and market share distributions of these alternative platforms.

- 8.10 As set out in detail in Section 5 and Annex: 11, the availability of NG Broadband to a given RFTS end user varies across EAs, and will therefore depend on that end user's location. In general, NG Broadband availability is likely to be greater in areas of greater population or premises density.
- 8.11 As set out in detail in Section 5, aside from Eircom's ubiquitous FNA network, a number of SPs have rolled out NG Broadband infrastructure to varying degrees across the State, including SIRO, Eircom FTTx, Virgin Media and, on a forward-looking basis, NBI. A number of other SPs offer both wholesale and retail Managed VoIP over these NG Broadband networks.
- 8.12 Accordingly, ComReg considers that as wholesale NG Broadband coverage and market shares vary across geographic areas, there may also be differing competitive conditions.

Geographic differences in evolution of SP market shares

- 8.13 As discussed in Section 5, RFTS SP market shares vary in the footprints of the Urban FACO Markets and the Regional FACO Markets, driven, *inter alia*, by the differing availability of NG Broadband in these markets.
- 8.14 Table 74 below provides a breakdown of the number of EAs by the number of SPs capable of providing services (including RFTS) on their own network, or using wholesale inputs, absent regulation in the Urban FACO Markets, but in the presence of regulation in the Regional FACO Markets. Table 74 indicates that a number of SPs have invested in providing Managed VoIP-based RFTS, either on their own networks (e.g. Eircom, Virgin Media), or using upstream wholesale NG Broadband inputs at EAs where those inputs are available (e.g. Vodafone, Pure Telecom). This suggests that there are differences in the conditions of competition at EAs, depending on the presence or absence of wholesale NG Broadband capability.
- 8.15 ComReg further assessed geographic differences in market shares in its assessment of the Relevant FACO Markets at Section 5 above.

Table 74: Number of SPs (including Eircom) capable of providing RFTS using own network inputs and/or wholesale NG Broadband by number of EAs and SP Market Share, Q4 2020 [REDACTED]

Number of SPs ⁹⁷⁹	Number of EAs	Market share (Measured by lines)					
		Eircom	Virgin Media	BT (Sky etc.)	Vodafone	Pure Telecom	Other
1	█	███	██	██	██	██	██
2	█	███	██	██	██	██	██
3	█	███	██	██	██	██	██
4	██	███	██	██	██	██	██
5	██	███	██	██	██	██	██
6	██	███	██	██	██	██	██

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⁹⁷⁹ 'Number of SPs' measures the number of SPs which are capable of providing RFTS absent FACO regulation.

Geographic variances in products and pricing

- 8.16 ComReg's views on geographic variances in RFTS products or pricing of RFTS are as set above in paragraphs 4.472 to 4.485, where ComReg concluded that there is little behavioural evidence to suggest that sufficiently different competitive conditions exist in the provision of RFTS between different geographic areas.

Conclusions on geographic market

- 8.17 Having considered the above, it is ComReg's position that some factors indicate that it may be appropriate to define separate Modified Relevant RFTS Geographic Markets, based on the presence or absence at an EA of NG Broadband, the number of competing SPs present, and market share differences between different geographic areas. However, other evidence such as uniformity of retail pricing and product functionalities is not indicative of sub-geographic markets.
- 8.18 Overall, ComReg does not discount the possibility that there may be separate geographic markets for the Modified Relevant RFTS Markets on the basis of sub-geographic Relevant FACO Markets. However, ComReg makes no firm conclusions in this regard and leaves this question open, as it would not have a material bearing on the regulatory outcome with respect to the retail market assessment, for the reasons set out at subsection 8.3 below, which suggest that any such distinction is, ultimately, rendered moot.
- 8.19 The issue of upstream sub-geographic markets is considered in detail in the assessment of the Relevant FACO Markets in Section 5 and Annex: 11. In conducting this assessment, ComReg takes into account the retail dynamics referred to above.

8.3 Modified RFTS Markets 3CT, having regard to the Relevant FACO Markets

- 8.20 Having undertaken a 3CT and competition assessment of the Relevant FACO Markets in Section 7, ComReg carries out a 3CT assessment of the Modified RFTS Markets in the presence of the differing regulatory outcomes arising from those assessments of the Relevant FACO Markets, and having regard to the remedies applied to the Regional FACO Markets in Section 10.

- 8.21 In general, the Modified RFTS Markets 3CT in the footprint of the Regional FACO Markets will closely mirror the Relevant RFTS Markets 3CT set out at Section 6 above. This is because, in both instances, the need for any regulation in these markets takes account of the presence of any appropriate regulation in the upstream Relevant FACO Markets. In this respect, given that the Urban FACO Markets are not susceptible to regulation in light of the 3CT, and having regard to the imposition of regulatory obligations in the Regional FACO Markets, ComReg re-examines the 3CT for the Modified RFTS Markets.

Criterion 1: High and non-transitory barriers to entry

- 8.22 ComReg's position on barriers to entry to the Relevant RFTS Markets in the presence of FACO regulation is outlined in paragraphs 6.13 to 6.93 above. ComReg's position on barriers to entry to the Modified RFTS Markets, in the presence of regulation in the Regional FACO Markets and the absence of regulation in the Urban FACO Markets, remains unchanged.
- 8.23 Eircom is obliged to make FACO products (including SB-WLR) available to Access Seekers on a regulated basis in the Regional FACO Markets. The Urban FACO Markets are to be deregulated (subject to the relevant sunset periods) on the basis of lowered barriers to entry, including in relation to the ability of SPs to self-supply FACO, and thereby provide RFTS by means of Managed VoIP.
- 8.24 As noted above, RFTS may be provided by means of Managed VoIP delivered over wholesale NG Broadband inputs. In that regard, Eircom WLA is made available on a regulated basis nationwide, pursuant to the 2018 WLA/WCA Decision, while Eircom WCA is made available on a regulated basis in the Regional WCA Market, and on a commercial basis in the Urban WCA Market. SIRO and – on a forward-looking basis, NBI – will offer WLA on a commercial basis to Access Seekers in the footprint of their respective network rollouts.
- 8.25 Accordingly, Access Seekers may procure upstream inputs either on a regulated basis, or on a commercial basis, which suggests that barriers to entry on the Modified RFTS Markets are likely to be low. This suggests that the first 3CT criterion is likely to fail.

Respondents' Views

- 8.26 In respect of the presence of WLA and WCA, Vodafone queried whether there is full or partial overlap between the Urban WCA Market and the Urban FACO Market, noting that if the overlap was only partial, then Access Seekers would need to deploy WLA or procure WCA on a commercial basis in the areas of overlap, in order to provide RFTS.

- 8.27 ALTO and BT both asserted that Criterion 1 should pass. They argued that the failure by Eircom to offer a fit-for-purpose SB-WLR to VoIP bulk migration facility, combined with the additional work required at the end user premises, including the automated management of bulk transfer and service modification costs created a high barrier for the mass migration of Access Seeker end users from SB-WLR to VoIP, such that the RFTS market will move to competitiveness at a much slower rate than if an effective bulk migration facility were present.
- 8.28 ALTO and BT also alluded to difficulties in the past in assuring the provision by Eircom of a seamless migration facility from bitstream to LLU, which, in their view, stymied the growth of LLU.

ComReg's Assessment of Respondents' Views and Position

- 8.29 In respect of Vodafone's query, ComReg construes this to revolve around the fact that WCA is not available on a regulated basis in the footprint of the Urban WCA Market.
- 8.30 To address Vodafone's query, the Urban FACO Market consists of the 407 EAs set out in Annex: 12 below. The Urban WCA Market consists of the 154 EAs listed in Annex 11 of the 2018 WLA/WCA Decision. 154, or 38%, of the EAs in the Urban FACO Market are also in the Urban WCA Market.
- 8.31 ComReg does not consider that the presence or absence of an overlap calls into question the failure of Criterion 1. For those EAs falling into both the Urban FACO Markets and the Urban WCA Markets, SPs will, in a MGA scenario, be capable of offering Managed VoIP on the basis of WLA inputs made available by Eircom on a regulated basis or SIRO (or, on a forward-looking basis, NBI) on a commercial basis, and WCA inputs made available by BT or Eircom on a commercial basis. For those EAs falling into both the Urban FACO Markets and the Regional WCA Markets, SPs will, in a MGA scenario, be capable of offering Managed VoIP on the basis of WLA inputs made available by Eircom on a regulated basis or SIRO on a commercial basis, and WCA inputs made available by Eircom on a regulated basis or BT on a commercial basis. In both instances, Access Seekers will be able to secure wholesale inputs capable of facilitating delivery of RFTS to their own end users, even in a scenario where Eircom withdraws merchant market provision of SB-WLR.
- 8.32 BT and ALTO suggested that ComReg oversimplifies the assessment of barriers to entry, particularly if the end user migrates to Managed VoIP.

- 8.33 ComReg notes that whether a customer site visit is required will depend on the SPs involved in the switching process. Most SPs offer Managed VoIP to new customers joining their network where NG Broadband is available and all FTTP broadband bundles that include RFTS offer the latter over Managed VoIP.⁹⁸⁰ In any case, if a customer is switching SP from a CG broadband bundle to a NG Broadband bundle, it will inevitably be the case that a site visit is required to set up the connection. Thus, ComReg considers this point by ALTO to be ambivalent, depending on the circumstances of the migration and the SP(s) involved. ComReg also does not dismiss the possibility that the customer may not want NG Broadband.
- 8.34 ALTO and BT stated that the absence of an effective bulk transfer migration facility creates a high barrier for the mass migration of customers to Managed VoIP. ComReg has considered Respondents' views in relation to Eircom's bulk migration processes in Section 11 below. ComReg agrees that, for effective switching to occur in the Modified RFTS Markets, it is important that a migration process is in place which allows Access Seekers to migrate customers off the Eircom network and onto their own network, or the network which they are accessing. In this regard, ComReg has outlined the proposed bulk migration process in greater detail at Section 11 below.
- 8.35 ComReg does not agree that Criterion 1 should pass, and has demonstrated at paragraphs 8.22 to 8.25 above that barriers to entry to the Relevant RFTS Markets have sufficiently fallen since the 2014 RFVA Decision, including in relation to self-supplying FACO via Managed VoIP and, consequently, providing the ability to provide RFTS where NG Broadband exists.
- 8.36 In respect of BT and ALTO's comments on migration from bitstream to LLU, ComReg considers that these comments do not raise material issues relevant to the assessment of competitive conditions on the Modified RFTS Markets.

Criterion 2: Is the market tending towards effective competition within the relevant time horizon?

- 8.37 ComReg's views and reasoning on Criterion 2, in the presence of FACO regulation, are outlined in paragraphs 6.94 to 6.165 above. ComReg's position on the tendency towards effective competition in the Modified RFTS Markets remains unchanged.

⁹⁸⁰ See Vodafone broadband bundles with 'broadband voice' as an add-on: <https://n.vodafone.ie/shop/broadband.html>

- 8.38 In the footprint of the Urban FACO Markets, Access Seekers are likely to be able to offer RFTS to end users delivered using wholesale NG Broadband, even in an MGA where Eircom withdraws supply of SB-WLR. In contrast, on the Regional FACO Markets, where NG Broadband rollout is less advanced, ComReg requires Eircom to continue to provide SB-WLR to Access Seekers, thereby ensuring their capacity to provide RFTS to end users. ComReg accordingly concludes that the second 3CT criterion is likely to fail on the Modified RFTS Markets in these circumstances.

Respondents' Views

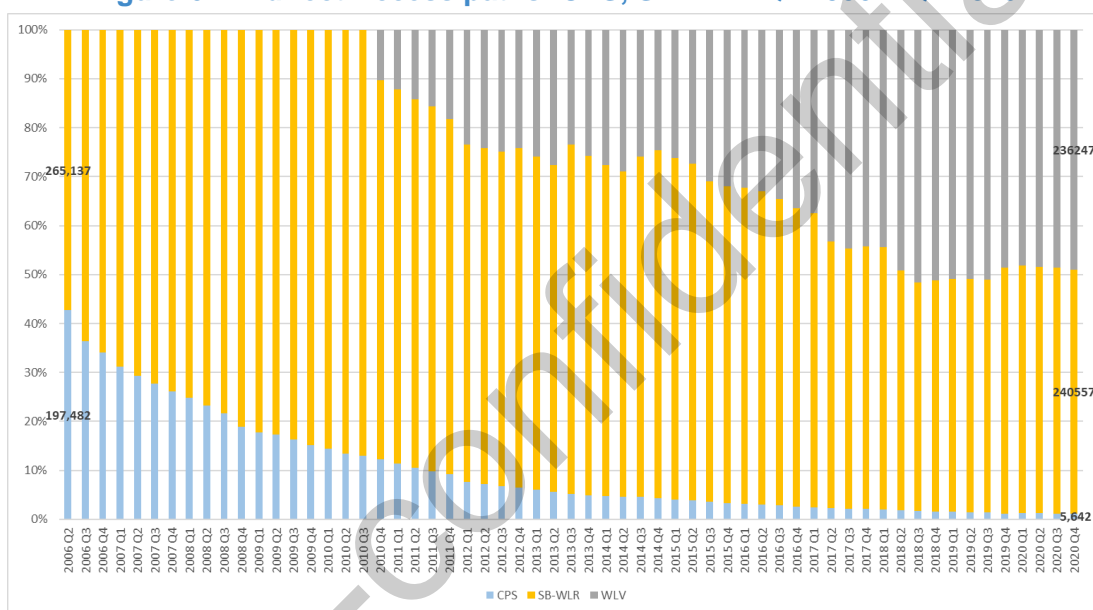
- 8.39 ALTO and BT submitted that Criterion 2 should pass, given that the lack of adequate facilities and offerings to facilitate competitive migration was, in their view, preventing the market from tending towards effective competition within the relevant time horizon. BT referred to specific issues with Eircom's migration facilities, for example the ability to use Eircom's automated facilities, to report faults if the migration fails, are not available once the migration happens. BT suggested that this amounted to a competitive barrier which was evidenced by the continuing high reliance by Eircom's RFTS competitors on Eircom wholesale inputs (SB-WLR, WLV, and VoIP), which indicated that SPs with their own VoIP platforms encounter difficulties in migrating their SB-WLR user base to VoIP, and also demonstrated Eircom increasing wholesale market share.
- 8.40 ALTO and BT also considered that Criterion 2 should pass on the grounds that Eircom's position in the FACO market has been consolidated by Access Seekers choice to migrate from SB-WLR to WLV, rather than losing market share. ALTO and BT suggested that data presented by ComReg in the 2020 Consultation (at Figure 36) indicated that Access Seekers are migrating to WLV rather than self-supplying Managed VoIP, which they expected would have been the case where NG Broadband is available. BT and ALTO contended that Eircom had been able to switch Access Seeker custom from SB-WLR to WLV due, at least in part, to the absence of an effective bulk migration facility.
- 8.41 BT also expressed concerns that ComReg's proposals to deregulate WLR price controls (on the Urban FACO Markets only) would jeopardise the workable margin for investment in VoIP. BT added that these proposals would leave Access Seekers at risk of a margin squeeze, such that WLR prices would fall and migration of the WLR base to VoIP would not be viable in the short to medium term. The knock-on impact to the RFTS market could, in BT's view, be significant, with the migration of the WLR base to VoIP impeded, and competition limited.

ComReg's Assessment of Respondents' Views and Position

- 8.42 BT asserted that Criterion 2 should pass, *inter alia*, on the grounds that Eircom has been growing its position on the FACO market as measured by increasing take-up of WLV as SB-WLR declines. Figure 62 below plots the trend in SB-WLR and WLV in recent quarters. ComReg notes that uptake of WLV has declined for 9 successive quarters starting in Q4 2018, while SB-WLR has declined for 21 of the last 24 quarters. Provision of SB-WLR and WLV access paths together has declined for 12 consecutive quarters and has fallen by 16% since Q4 2017. Accordingly, recent evidence indicates that Eircom has not, in fact been successful in growing take-up of either SB-WLR or WLV for at least the last two years.
- 8.43 SPs have indicated various reasons to ComReg as to why they have not yet migrated some of their RFTS customer base to Managed VoIP including issues around certain home and medical alarms being dependent on PSTN, as well as an unwillingness of customers to engage when a customer site visit is required. This is coupled with the fact that WLV avoids the need to invest in circuit switched interconnection, which is a cost being sunk and potentially redundant with a move to IP Interconnection could explain why operators are choosing to use WLV. ComReg would note, however, that, since the publication of the 2020 Consultation, Eircom has launched its VIX via WEIL product which Access Seekers may use to migrate to Managed VoIP delivered over NG Broadband technology, rather than remaining on WLV delivered over 10.308. VIX via WEIL is discussed in greater detail at paragraph 10.303 below.
- 8.44 ComReg agrees that an efficient RFTS migration process is important for smooth customer switching in the market. ComReg has discussed Eircom's migration processes in Section 11, paragraphs 11.54 to 11.61.
- 8.45 In response to BT's concern about a price control between the regulated price of WLR and WLA NG Broadband, ComReg has responded to concerns raised by BT and others about margin squeeze in 10.300 to 10.314.

8.46 ComReg does not share BT’s concerns about the impact of a margin squeeze on end user migration to Managed VoIP. Firstly, the standalone LL-RFTS market is in decline, falling by an average of 8,000 customers per quarter (over 2014 to 2020), many (but not all) of which are switching to bundles of RFTS with broadband and/or other products. In the Bundled-LL-RFTS Market, 45% of subscriptions are delivered over Managed VoIP while 55% are delivered over PSTN. SPs have indicated to ComReg that, for new customers on bundles of NG Broadband with RFTS, Managed VoIP is provided, and this is particularly the case for greenfield HL-RFTS customers.⁹⁸¹ For greenfield FTTH connections, it is likely that customers will be provided with Managed VoIP-based RFTS, as legacy CG infrastructure over which FNA RFTS could be delivered, in some cases will not be present.

Figure 62: Indirect Access paths: CPS, SB-WLV Q2 2006 – Q4 2020



Criterion 3: The insufficiency of competition law alone to adequately address the market failure(s) concerned

8.47 ComReg’s position in relation to Criterion 3 is unchanged (as set out at paragraphs 6.167 to 6.178 above) by the presence of different regulatory outcomes on the Urban FACO Markets and the Regional FACO Markets. ComReg does not consider that competition law is likely to be sufficient to effectively address any market failures in the Modified RFTS Markets, should they arise, and that Criterion 3 should therefore pass.

⁹⁸¹ Responses to April 2019 Informal Information Requests ('IIR(s)') from [redacted]

- 8.48 BT and ALTO both agreed with ComReg's preliminary conclusion that Criterion 3 should pass, on the grounds that competition law is an *ex post* remedy that takes too long to resolve and is limited in its scope to address wider competition matters, which are better addressed through regulation. Accordingly, ComReg's position is that Criterion 3 passes for the Modified RFTS Markets.

8.4 Overall Conclusions on the Modified RFTS Markets

- 8.49 Having concluded in Section 7 that it is appropriate to impose SMP remedies on the Regional FACO Markets, but to remove SMP remedies from the Urban FACO Markets, ComReg has further considered how this may impact the Modified RFTS Markets.
- 8.50 ComReg notes that there are some grounds to support defining sub-national RFTS geographic markets, in the presence of separate FACO geographic markets. However, on the basis of a 3CT of the Modified RFTS Markets, ComReg has formed the view that this conclusion is rendered moot, given that the 3CT fails, both in the footprint of the Urban FACO Markets, and in the footprint of the Regional FACO Markets.

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9 Regional FACO Markets Competition Problems and Impacts

9.1 Overview

- 9.1 In this Section, ComReg identifies those competition problems which, absent SMP regulation,⁹⁸² could potentially arise in both the Regional HL-FACO and Regional LL-FACO Markets (together, the '**Regional FACO Markets**'). ComReg proceeds in Section 10 to set out its position on the imposition of appropriate remedies in order to address the identified competition problems.
- 9.2 ALTO, BT, Copenhagen Economics (on behalf of Eircom) ('**CE**'), Eircom, and Vodafone submitted comments in response to Question 9⁹⁸³ in the 2020 Consultation. ALTO, BT, and Vodafone, in their Submissions, either generally agreed with the competition problems identified, or made no objections to ComReg's assessment of them. Eircom disagreed in a number of respects with ComReg's preliminary analysis. ComReg has considered all Respondents' Submissions pertaining to specific sub-sections of Section 9 of the 2020 Consultation and, having regard to these Submissions, sets out its final position below. However, of the comments received, those which are more appropriately addressed in, or which specifically refer to, sections other than Section 9 of the 2020 Consultation, are outlined below at a high level, with further detail provided in the sections indicated:
- (a) **ALTO** stated that a lack of a fit for purpose bulk migration product for Access Seekers to migrate end users from WLR to Next Generation VoIP services is a significant issue. This is addressed in Section 10 below concerning remedies.
 - (b) **BT** considered that competition problems exist in the Urban FACO Markets. BT asserted that regulation needs to be applied to prevent a Margin Squeeze ('**MS**') and to introduce a fit for purpose bulk migration process.

⁹⁸² FACO has, to date, been provided by Eircom pursuant to the regulatory obligations imposed under the 2015 FACO Decision. The assessment in this Section applies the MGA to determine what competition problems could potentially arise, assuming that such regulatory obligations were not in place.

⁹⁸³ Question 9: "Do you agree that the competition problems and the associated impacts on competition end users identified are those that could potentially arise in the Regional FACO Markets? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views."

- (c) **CE** took issue with ComReg's approach to the FACO geographic market definition and, in that context, asserted that ComReg had failed to provide sufficient evidence of competition problems, specifically in EAs where just Eircom and Virgin Media are present. ComReg notes that this has been more appropriately addressed in Section 5 above, while also noting that in this Section, ComReg sets out the competition problems which are likely to occur in the Regional FACO Markets as a whole, having already determined in Section 5 those EAs which fall therein. ComReg also notes that, in Section 10, it has justified a range of proportionate obligations that it is imposing to address such problems.
- (d) **CE** stated that ComReg had not provided analysis to demonstrate whether the February 2020 Proposals offered by Eircom are "insufficient in addressing any prospect of harm to retail or wholesale customers", or whether they "are impractical or otherwise impossible to monitor".⁹⁸⁴ **CE** asserted that, as part of its decision not to accept them, ComReg should indicate the reasons why they fail to address the competition problems identified. Eircom's February 2020 Proposals are addressed in Section 10.4 and, as indicated in paragraph 10.39, ComReg notes that, as of May 2021, it is not legally entitled to accept Proposals from Eircom under the regulatory regime currently in force in the State, in the specific circumstances of this market review.
- (e) **CE** stated that the sub-set of Eircom's customers in the Regional FACO Market, for which there is no alternative RFTS provider, would likely be afforded additional protection by the USO imposed on Eircom, should it wish to engage in anti-competitive behaviour. ComReg notes that the USO is a regulatory measure imposed at the retail level and, accordingly, has limited discernible material impact on the assessment of competition problems in the wholesale market. The USO is discussed in Section 6.

9.3 As set out in paragraphs 7.410 to 7.413, ComReg concludes that the Regional FACO Markets are not effectively competitive and, in accordance with Regulation 27(4) of the Framework Regulations, has designated Eircom as having SMP on the Regional LL-FACO Market and the Regional HL-FACO Market, meaning that it has the ability to act independently of its competitors, customers, and end users. In accordance with Regulation 27(4) of the Framework Regulations, where an Undertaking is designated as having a position of SMP on a relevant market, ComReg is required to impose on that Undertaking such of the remedies set out in Regulations 9 to 13 of the Access Regulations, as it considers appropriate to address identified competition problems.

⁹⁸⁴ *CE "Is There A Case For Ex Ante Regulation In The Irish FACO Market? A Review of ComReg's Consultation and Draft Decision" Chapter 3, p. 27.*

- 9.4 As set out in the 2020 Explanatory Note, the underlying purpose of the *ex ante* regulatory framework is to deal with predictable competition problems that have their origin in structural factors in the market. For example, a finding of an absence of effective competition in the Regional FACO Markets indicates the potential for competition problems to arise over the review period in question, and justified the imposition of *ex ante* regulation in Section 10, having considered the potential for such problems to arise in this Section.
- 9.5 This Section discusses the competition problems which would be likely to arise on the Regional HL-FACO and Regional LL-FACO Markets, absent regulation. In this respect, it is ComReg's position that the underlying ability and incentives for Eircom to engage in conduct leading to such competition problems arise, ultimately, from the lack of effective competition in the Regional FACO Markets, coupled with Eircom's position as a vertically-integrated SMP SP that competes with its wholesale customers in downstream markets. In this type of market configuration, it is common for the same types of competition problems to manifest. Therefore, for the avoidance of doubt, and unless otherwise specified on an individual basis, ComReg considers the competition problems and impacts which are discussed in this section to apply to both the Regional HL-FACO Market and Regional LL-FACO Market.
- 9.6 As noted in the 2020 Consultation, it is neither necessary to catalogue examples of actual abuse, nor to provide exhaustive examples of potential abuse. Rather, ComReg notes that the purpose of *ex ante* regulation is to prevent the possibility of such abuses arising, given that an SMP SP has been identified in the Regional FACO Markets, and thus has both the ability and incentive to engage in specific practices, to the detriment of competition and, ultimately, end users.

Respondents' Views

- 9.7 **Eircom** asserts that ComReg faces a higher burden of proof to produce concrete evidence and examples of anti-competitive effects and abuse of dominance on the Regional FACO Markets, given the removal of the FACO market from the European Commission's 2014 Recommendation. Eircom considered that the 2020 Consultation over-relied on theoretical examples of abuse of dominance and stated that this has resulted in the potential impact on competition being overstated, with ComReg accordingly proposing regulatory pricing remedies which are disproportionate to the potential market failures which might occur.

ComReg's Assessment of Respondents' Views and Position

- 9.8 Eircom has suggested that ComReg faces a higher burden of proof, because the FACO market is not listed in the 2014 Recommendation. The corollary of this statement is that a lower burden of proof is required in respect of markets which are listed in the 2014 Recommendation. Eircom has not grounded its proposition by reference to guidance issued by the European Commission, ComReg, or any other body. ComReg therefore surmises that Eircom's reasoning is that, where a market is not included on the EC list of recommended markets, the contention that such a market be regulated at national level is inherently more open to question, and therefore requires a higher burden of proof.
- 9.9 ComReg notes that, according to section 2.3 of the 2020 Explanatory Note:
- "NRAs should always carry out the three criteria test when they intend to regulate a market which is not listed in the Recommendation but which, in the light of specific national circumstances and having conducted an analysis of competition at retail level, could be susceptible to ex ante regulation."*
- 9.10 The 2020 Explanatory Note gives no support to Eircom's contention that the burden of proof on ComReg in terms of competition problems and impacts on the defined Regional FACO Markets is higher than is the case in respect of markets included on a European Commission list of recommended markets. Rather, it notes that, in light of national circumstances, an NRA is obliged to carry out a three criteria test ('3CT') to determine whether or not the markets under consideration are susceptible to *ex ante* regulation. As identified in Section 7 of this Decision, the 3CT in respect of the Regional FACO Markets passes, meaning ComReg must then carry out a full competition assessment. This does not impact, or indeed increase, the burden of proof on ComReg when assessing the potential competition problems and impacts which may occur on the market due to its finding of SMP in the Regional FACO Markets. ComReg is required only to assess the potential competition problems and impacts which would be likely to occur on the Regional FACO Markets, absent regulation. ComReg is not required to provide actual evidence of the occurrence of such problems.
- 9.11 In summary, having considered the Respondents' views above, ComReg is satisfied with its position that the burden of proof, in respect of competition problems and impacts, remains the same regardless of whether markets are included in the list of recommended markets or not. ComReg therefore considers that its approach is valid and rejects Eircom's arguments on this.

Types of Competition Problems

- 9.12 ComReg has identified three types of competition problems which are likely to occur, absent regulation, in the Regional FACO Markets. These include:

- (a) **Exclusionary practices:** where an SMP SP has the ability and incentive to act in a manner which could prevent potential competitors from entering the market, restrain actual competitors from further growth in the market, or induce them to exit the market;
- (b) **Leveraging:** where a vertically integrated SP with SMP in one market has the ability and incentive to leverage its SMP in order to exert undue influence in other adjacent markets, either at the same level (horizontal leveraging), or at a different level (vertical leveraging) in the distribution chain; and
- (c) **Exploitative practices:** where an SP with SMP has the ability and incentive to engage in exploitative behaviours, such as excessive pricing or practices leading to inefficiency/inertia, to the detriment of both competition and end users.

9.13 Each of the above competition problem types is discussed in detail below with regard to the Regional FACO Markets.

9.2 Exclusionary practices

- 9.14 ComReg considers that Eircom, as an SP designated with SMP in the Regional FACO Markets, has both the ability and incentive to behave in a manner that would delay or deter network investment, entry into the FACO markets, and, ultimately, entry into downstream RFTS markets. Exclusionary practices are the means of achieving such an outcome, and refer to a specific set of actions carried out by an SMP SP in an attempt to defend or consolidate its position in a relevant market, by constructively or actively blocking potential competitors from entering the market, by inhibiting or preventing actual competitors from growing in the market, or by inducing or forcing competitors to exit the market, where they are already present.
- 9.15 The SMP SP may also decide to withhold investment in related markets to delay or impede the development of competition in those markets, e.g. where the SMP SP has control over certain key inputs necessary for Access Seekers to compete in neighbouring markets, and delays upgrading those inputs or providing newer, potentially more cost effective inputs, in line with technological developments.
- 9.16 ComReg furthermore considers that, absent regulation, Eircom, having been designated with SMP in the Regional FACO Markets, would have the ability and incentive to wield its SMP to engage in these practices, to the detriment of its competitors, customers and, ultimately, end users. In ComReg's view, the exclusionary practices most likely to occur in the Regional FACO Markets include, but are not limited to:

- (a) Refusing to supply access, applying unreasonable or discriminatory terms and conditions of access, and/or creating or exploiting information asymmetries;
- (b) Engaging in predatory pricing of FACO to discourage entry by other potential FACO suppliers;
- (c) Concluding exclusivity contracts with Access Seekers, and engaging in exclusionary conduct generally aimed at raising Access Seekers' or end users' switching costs, thereby impacting on potential competition; or
- (d) Raising the costs of downstream competitors that rely on Eircom FACO inputs to provide RFTS, making it more difficult for those SPs to expand their customer base and attain the economies of scale/scope necessary for deeper infrastructural investment, and to deter entry into the Relevant FACO Markets.

9.17 Some of the exclusionary practices outlined above are more usefully characterised as leveraging conducts. This is where a vertically-integrated SP with SMP in one market, leverages its power to exert influence in other either vertically or horizontally-related markets, thereby enabling it to either strengthen its position in these markets, or further consolidate its position in the current market, in which it has SMP.

Respondents' Views

9.18 **Eircom** stated that it would be highly unlikely that exclusionary or predatory pricing behaviour on the Regional FACO Market would be successful for a number of reasons:

- (a) Eircom is unlikely to have the ability or incentive to delay or deter network investment and entry into the FACO Markets as:
 - (i) Barriers to entry in the Urban FACO Markets have been already been eroded; and
 - (ii) ComReg has not adequately considered the constraint placed on Eircom in the Regional FACO Markets due to the commencement of NBI rollout.
- (b) FACO is a legacy product which is unlikely to be the subject of much future investment, as the focus of network investment is now NG Broadband services. Given SIRO and NBI also offer NG Broadband services, it is unclear what ability Eircom would have to deter network investment;
- (c) A number of large, well-resourced operators are present on the Regional FACO Markets which could constrain Eircom from engaging in anti-competitive behaviour; and

- (d) Any financial gains from engaging in exclusionary or predatory pricing behaviour would be offset by competition law penalties.

9.19 **CE** also stated that the significance of NBI, and its ability to constrain Eircom's behaviour even prior to full network rollout, was not given due consideration by ComReg when assessing whether Eircom would be commercially incentivised to engage in exclusionary conduct. In particular, CE argued that

- (a) The potential profit from increasing prices in the short run, before an alternative is in place, for Eircom is likely outweighed by the risk of losing these customers in the long run once the alternative is in place. ComReg's consumer survey is indicative of somewhat elastic demand (31% of end users with a standalone landline and 26% of end users with a bundle say they would change their behaviour in response to a 10% price increase). While this is indicative of attractive substitutes available to retail customers at present, it also indicates that any price increase can trigger wholesale customers switching to NBI rather than staying with Eircom. ComReg has not considered Eircom's pricing incentives on such a forward-looking basis.
- (b) Since NBI is gradually rolling out, Eircom would continuously have to adjust its (wholesale and retail) pricing accordingly. FACO (and associated retail products) is a small and decreasing market; thus, insofar as Eircom's pricing is national in scope, it is not clear that Eircom would have an incentive or the ability to profitably adjust its local-level prices in line with the gradual roll-out. CE also notes that NBI is obliged to offer wholesale products for sale at a uniform price.

9.20 CE claimed that ComReg's final decision would benefit from a more in-depth analysis of the impact that NBI would have over the course its network rollout, on a forward-looking basis, and in advance of a premises even being passed by the network.

ComReg's Assessment of Respondents' Views and Position

9.21 ComReg agrees with Eircom's observation that barriers to entry have been reduced in the Urban FACO Markets. This, along with its assessment of the other criteria in Section 7, has led ComReg to conclude that the 3CT fails and that, accordingly, *ex ante* regulation is no longer warranted on the Urban FACO Markets. The competition problems identified by ComReg are in reference to the Regional FACO Markets, where Eircom is found to have SMP, therefore, the erosion of barriers to entry to the Urban FACO Markets is of little relevance in this particular case.

- 9.22 ComReg disagrees with Eircom's and CE's statements suggesting that it did not give due consideration to the rollout of NBI and its potential capacity to constrain Eircom from engaging in exclusionary behaviour in the Regional FACO Markets. ComReg set out its preliminary proposals in respect of the FACO product market definition and competition assessment at Sections 5 and 7 of the 2020 Consultation, which are finalised above at Sections 5 and 7 of this Decision. Stemming from this analysis, it was concluded that the network coverage of NBI would not be sufficiently material in the lifetime of this review to either warrant its inclusion, or act as a sufficiently effective constraint on Eircom, in the Regional FACO Markets. Taking account of this outcome, NBI's impact when assessing the potential competition problems has been considered in this Decision. The purpose of this Section is to look at issues that might occur, absent regulation, and not to re-assess a potential constraint which has already been analysed in previous Sections.
- 9.23 ComReg also notes Eircom's assertion that FACO is a legacy product which is unlikely to be the subject of additional future investment, as the focus of network investment is now on NG Broadband services. However, as detailed in Section 5.1, ComReg observes that Eircom has, in fact, indicated its intention, by means of its MSAN technology proposal, to make a significant capital investment in its FNA network in order to extend its useful working life. ComReg also notes that Eircom continues to use CG FACO to supply RFTS, even in cases where NG Broadband is also available to the same premises which could be used to deliver RFTS by means of Managed VoB.
- 9.24 The first exchange migrated to MSAN technology in November 2020, and the full rollout was due to commence in February 2021, with a scheduled completion date in Q3 2024. Eircom has since issued a white paper on copper switch-off (the '**White Paper**').⁹⁸⁵ As of May 2021, it is unclear what impact the copper switch-off proposal will have on the MSAN migration project. ComReg does not, however, foresee the completion of copper switch-off over the lifetime of this market review.
- 9.25 Furthermore, ComReg notes that NG Broadband is classified as an input into the delivery of FACO. NG Broadband is an access path, rather than a FACO product, and is therefore located in the WLA and WCA Markets. ComReg's assessment of competition problems and impacts on the WLA and WCA markets is set out in Section 9 of the 2018 WLA/WCA Decision, and ComReg's position in respect of Eircom's ability and incentive to delay or deter network investment in the provision of NG Broadband is set out in Section 9 of the 2018 WLA/WCA Decision.

⁹⁸⁵ https://www.openeir.ie/wp-content/uploads/2021/03/White-paper_Leaving-a-Legacy.pdf

- 9.26 Eircom has described large alternative operators as being present on the market which, in its view, would be capable of “withstanding” any attempt by Eircom to engage in a predatory pricing strategy. While large well-resourced operators may indeed be present on the Irish market at a general level, ComReg’s analysis leads to a finding that such operators are not deemed to have a significant enough presence on the Regional FACO Markets to provide a sufficient constraint on Eircom in order to not only render the market competitive, but also deter its ability and incentive to engage in anti-competitive behaviour. ComReg also notes that, in these markets, many OAOs rely solely on key wholesale inputs from Eircom for the delivery of its downstream RFTS. Having considered this, ComReg concludes that the OAOs are only capable of providing a sufficient competitive constraint on the Urban FACO Markets (by means of their capability to offer Managed VoIP, using wholesale broadband inputs), which has, in turn, contributed to its decision to remove regulation from these markets.
- 9.27 The ability of *ex post* competition law to sufficiently deter Eircom from engaging in anti-competitive behaviour in the Regional FACO Markets is examined in Section 7 above, as part of the 3CT assessment. This assessment determined that competition law alone is inadequate to address market failures which may arise on the Relevant FACO Markets. This is primarily due to the lengthy time it would take from the point of detection of an anti-competitive act and the initiation of court proceedings, to the formation of a legal decision. Given that competition law proceedings take too long to have a sufficient deterrent effect, it follows that the same issue applies to any penalties which would be issued at the conclusion of such proceedings. For these reasons, competition law is deemed to be insufficient in deterring and preventing anti-competitive conduct in the short to medium term in the Regional FACO Markets, which are structurally prone to potential anticompetitive conduct.
- 9.28 Having considered the Respondents’ views above, ComReg is satisfied with its position that, absent regulation, Eircom, having been designated with SMP in the Regional FACO Markets, could wield its SMP to engage in exclusionary practices, to the detriment of its competitors, customers and, ultimately, end users.

9.3 Leveraging

- 9.29 As detailed in sub-section 9.2 above, where a vertically-integrated SP which has SMP in one market, and also has close links with other adjacent markets, either at a similar (e.g. horizontal), or different (e.g. vertical) level in the production or distribution chain, the SMP SP may attempt to transfer (leverage) its SMP to those related markets. This could enable the SMP SP to strengthen its position in those related markets and/or potentially reinforce its existing SMP on the market in question.

- 9.30 Given the close relationship between the Regional FACO Markets, other horizontally related markets (e.g. WLA, WCA, transit, and FVCT),⁹⁸⁶ and vertically related products and services (e.g. RFTS and WLV),⁹⁸⁷ absent regulation, Eircom has the opportunity and incentive to engage in both means of leveraging. Each type of behaviour has the potential to raise rivals' costs, reduce competitive pressures on related wholesale and retail services, and enable Eircom to extract additional revenues from its competitors, customers, and, ultimately, end users. This could also have the effect of delaying upstream entry and protecting or reinforcing Eircom's SMP in the Regional FACO Markets (a practice described as 'defensive leveraging').

Respondents' Views

- 9.31 **Eircom** stated, in response to paragraph 9.27 of the 2020 Consultation, that the key assumption ComReg made in this instance is that such a firm (an SMP SP) who could engage in this leveraging behaviour is not subject to any regulatory remedies in any of the markets concerned.
- 9.32 Eircom then asserts that ComReg cannot merely have regard to an "*extensive hypothetical list of abusive conduct*", whilst further claiming that ComReg has failed to adequately assess the current and prospective competitive conditions in the market.

ComReg's Assessment of Respondents' Views and Position

- 9.33 ComReg notes, in response to Eircom's assertion, that it has considered regulation in place in other horizontally-related markets, specifically at paragraph 9.32 of the 2020 Consultation and paragraph 9.57 of this Decision, noting that:

"...both FVCT and WLA are currently regulated nationally, pursuant to the 2019 Termination Decision and the 2018 WLA/WCA Decision. WCA is regulated at a regional level (also under the 2018 WLA/WCA Decision), whilst the transit market⁹⁸⁸ was deregulated under the 2015 FACO Decision. Premised on these Decisions, ComReg has formed the preliminary view that horizontal leveraging, in the case of the Regional FACO Markets, would be most likely to occur with respect to the deregulated transit market and Urban WCA Market, rather than on the aforementioned regulated markets, as specific remedies are currently in place in these markets to prevent such predatory behaviour."

⁹⁸⁶ For the purpose of this discussion, FACO, WLA, WCA, transit and FVCT are deemed to be at the same (horizontal) level in the production or value chain.

⁹⁸⁷ WLV incorporates FVCO, WLR and other wholesale inputs, and is an end-to-end product which enables Access Seekers to resell RFTS to retail customers, without the need for their own interconnection infrastructure.

⁹⁸⁸ ComReg Decision 05/15, Wholesale Fixed Voice Call Origination and Transit Markets Response to Consultation and Decision, (the '**2015 FACO and Transit Decision**').

- 9.34 Having considered this, ComReg then outlined the type of leveraging behaviour which is likely to take place in unregulated adjacent markets at paragraph 9.33 of the 2020 Consultation.
- 9.35 Accordingly, contrary to Eircom's claims, ComReg notes that it did not assume that Eircom, as the SMP SP, is not subject to any regulatory remedies in any of the other markets concerned and, in fact, gave this due consideration when assessing whether any regulation present elsewhere would affect Eircom's abilities and incentives to engage in horizontal or vertical leveraging behaviour.
- 9.36 ComReg reiterates the point made at paragraph 9.10 above, namely that ComReg is required only to assess the ability and incentive for an SMP Undertaking to engage in *potential* anti-competitive behaviours and impacts which would be likely to occur on the Regional FACO Markets, absent regulation. In contrast to an *ex post* competition law assessment of abuse of dominance, ComReg is not required to provide actual evidence of competition problems as its *ex ante* assessment is forward-looking in nature.
- 9.37 Having considered the Respondents' views above, ComReg concludes that, absent regulation, Eircom, having been designated with SMP in the Regional FACO Markets, has the ability and incentive to transfer (leverage) its SMP to the, deregulated, transit market and Urban WCA Market. This could enable Eircom to strengthen its position in those related markets and/or potentially reinforce its existing SMP on the market in question.

Vertical Leveraging

- 9.38 Vertical leveraging arises where a vertically-integrated SP has the ability to leverage its SMP position at one level in the production or distribution chain into downstream markets, in which it is also active. This behaviour can take the form of either non-price-based or price-based vertical leveraging. In the context of the Regional FACO Markets, ComReg's position is that vertical leveraging could occur, given that Eircom, as a vertically-integrated SP with SMP, has both the ability and the incentive to use its market power to influence competitive conditions in downstream wholesale and/or retail markets, in particular, through its ability to control the key inputs used by Access Seekers which compete against Eircom in the Relevant RFTS Markets (which ComReg is deregulating, as set out at Section 6 above). This could result in the distortion of, or a reduction in, competition in these downstream markets, which would ultimately result in harm to end users, potentially in the form of higher prices, lower output or sales, and reduced quality in consumer choice. Both types of vertical leveraging are discussed below.

Non-Price Based Vertical Leveraging Behaviour

9.39 Eircom could engage in vertical leveraging in a number of ways, absent regulation in the Regional FACO Markets. Perhaps the most obvious example would be an outright refusal to provide FACO inputs to its competitors on downstream markets which rely on those inputs. However, other examples of non-price based vertical leveraging, which may be closely related, can amount to constructive, rather than outright, denial of access, and may include:

- (a) **Delaying tactics:** this includes conduct such as protracted negotiations in respect of the supply of new or existing FACO products, services or associated facilities to downstream competitors, whilst also encompassing actions which seek to impair the smooth transition of Access Seekers, or end users, to a competitor's product, service, or associated facilities;
- (b) **Quality discrimination:** providing downstream competitors with FACO at a lower QoS (or inferior information) to that which Eircom provides to its own downstream arm (or to certain other favoured competitors);
- (c) **Creating or exploiting information asymmetries, and the withholding of relevant information:** where downstream competitors are dependent on Eircom to provide FACO and require certain (quality or technical) information in order to effectively compete in the Relevant RFTS Markets, a lack of transparency, or asymmetry in the provision of relevant information, can impede effective competition on downstream RFTS markets;
- (d) **Unwarranted withdrawal of access already granted:** Eircom could seek to unreasonably withdraw access to facilities already granted; and
- (e) **Unreasonable product bundling/tying:** this could include the bundling/tying of FACO products in such a manner that impedes the ability of Access Seekers to compete in downstream markets.

Delaying tactics

9.40 A vertically-integrated SMP SP could be incentivised to frustrate the retail or wholesale switching process, through which end users can ultimately switch to an alternative product, or an alternative SP. Access Seekers may wish to migrate to alternative wholesale products to provide RFTS to their downstream customers, and may need to carry out a single or bulk migration of their customer base, in order to do so. This should involve minimal disruption or delay from the end user's perspective, but the SMP SP may be incentivised to delay or inhibit the switching and migration process. Examples of conduct which could disrupt the migration process include:

- (a) Rejecting migration orders on the basis of technicalities which were not made known to the requesting Access Seekers;

- (b) Obstruct the migration of WLR customers to Next Generation VoIP services;
- (c) Requesting additional customer authorisation mechanisms; or
- (d) Preventing the uplift of a large number of RFTS end users to alternative service provision. This type of action would impose an additional, artificial switching cost on Access Seekers, and, ultimately, on end users.

9.41 Unreasonable RFTS contract terms could also be used to effectively dissuade an end user from moving to a competing SP in a timely manner, thereby undermining the effectiveness of access to FACO. For example, RFTS contract terms requiring unreasonable minimum advance notice periods for service cancellation, which have no objective justification, could be used by a vertically-integrated SMP SP to prevent an Access Seeker from availing of an alternative FACO product in a timely and effective manner.

Respondents' Views

9.42 **BT** noted that, even with regulation in the WLA market, Eircom, as the SMP SP, still has the opportunity to obstruct the migration of WLR customers to Next Generation VoIP services. BT stated that an additional remedy should be put in place to prevent any delaying or obstruction of this migration process.

ComReg's Assessment of Respondents' Views and Position

9.43 ComReg notes BT's comments on the migration of WLR customers to Next Generation VoIP services. ComReg has addressed the issue of migrations in paragraphs 11.49 to 11.62 below.

Quality discrimination

9.44 Given that Eircom is vertically integrated, it may be difficult to compare FACO products (and associated facilities) supplied to its own downstream arm, with those offered to other Access Seekers on a merchant market basis. A lack of transparency surrounding any differences between those products could facilitate an environment where Eircom has both the ability and incentive to engage in a number of non-price-based means of leveraging its SMP. For example, in terms of product development, absent regulation in the Regional FACO Markets, Eircom, as a vertically-integrated SMP SP, could launch new downstream retail and/or wholesale products using FACO inputs, with which Access Seekers could not compete because no wholesale equivalent has been made available to them. In terms of product implementation, if Access Seekers are not aware of all the features of the wholesale products which are available to Eircom's own downstream arm, they will be unable to request these features themselves, and, ultimately, may find themselves offering a product of inferior quality to end users.

- 9.45 Absent regulation in the Regional FACO Markets, Eircom, as the SMP SP, also has the ability to make more cost-efficient, FNA FACO products (or associated facilities) available to its own downstream retail arm, whilst either refusing access to, or charging higher prices for, the same products to other Access Seekers in the market. Regardless of whether the FNA equivalent product(s) remained available to Access Seekers, this type of discriminatory conduct would still create a barrier to entry to the Regional FACO Markets, by deterring investment from Access Seekers due to the cost inefficiencies associated with aging technologies, and the competitive advantage gained by Eircom through raising its rivals' costs.

Creating or exploiting information asymmetries, and withholding relevant information

- 9.46 A vertically-integrated SMP SP may also create or exploit information asymmetries to impede downstream competition. For example, this may arise due to variations in IT system access rights for the SMP SP's downstream arm, compared to Access Seekers in the market. As these IT systems support the infrastructure associated with Operational Support Systems ('OSS') and Business Support Systems ('BSS'), and are likely to evolve over time, Access Seekers who do not have visibility of (or input into) these systems are unlikely to be in a position to effectively contribute, make a request for service, or make the informed decisions necessary for future planning and investment. Furthermore, an issue could arise where operational changes are not implemented simultaneously, or to the same standard, for Eircom's downstream arm on the one hand, and Access Seekers, on the other hand.
- 9.47 A lack of transparency in the terms and conditions of supply of FACO on a self-supply basis on the one hand, and on a merchant market basis on the other hand, could also make it difficult for Access Seekers to make effective commercial or operational decisions, where those decisions involve the use of FACO inputs in the provision of RFTS to their own end users. In this context, Access Seekers are unlikely to have reasonable confidence that FACO is provided on a non-discriminatory basis.

- 9.48 Information asymmetries may also apply to future planning by the SMP SP. For example, changes by Eircom to its network topography, such as migration to VoIP traffic switching/routing, or IP Interconnection, may have significant implications for SPs using FACO inputs. Insufficient notice of network or process changes relevant to the delivery of downstream services (such as RFTS or White Label VoIP), could significantly impede the ability of SPs to launch equivalent RFTS or wholesale products which would enable them to compete with the incumbent in downstream markets. A lack of information, and associated uncertainty, could potentially discourage Access Seekers from investing in, or expanding upon, their downstream footprint. Furthermore, such information asymmetries may lead to delayed consideration of Access Seekers' wholesale requirements, as part of such network developments, which is likely to delay or impede their ability to respond to any new retail offerings by the SMP SP.
- 9.49 A final example of information asymmetries could include situations where Access Seekers require metrics on order processing, service delivery, and fault repair, in order to view the overall performance of Eircom FACO from a provisioning and service assurance perspective. Failure by Eircom to provide such data to its Access Seekers would likely inhibit any efforts at transparency around variances in Eircom's performance, when comparing its process for self-supply of FACO, to its process for supplying FACO to Access Seekers on a merchant market basis. The uncertainty for Access Seekers (and their retail and/or wholesale customers) around the performance and quality of FACO inputs, relative to the services and information made available internally to Eircom's downstream arm, could potentially discourage investment in markets which are dependent on Eircom's wholesale products.

Unwarranted withdrawal of access already granted

- 9.50 Absent regulation of the Regional FACO Markets, ComReg's position is that Eircom could withdraw access to current product offerings, including, but not limited to, SB-WLR, which it is obliged to make available to Access Seekers. If Eircom were to withdraw access to SB-WLR, this would likely have a detrimental impact on the Relevant RTFS Markets, as Access Seekers could no longer offer RFTS to end users on the basis of upstream SB-WLR (or, for that matter, White Label Voice (WLV)) inputs. ComReg is also of the view that the uncertainty alone, caused by the mere possibility of the withdrawal of access, is enough to negatively impact the investment incentives of Access Seekers, therefore potentially impeding the competitiveness of the market.

Unreasonable product bundling/tying

- 9.51 Unreasonable product bundling occurs when a product or service which is purchased by an Access Seeker is unreasonably packaged with other products or services that are deemed unnecessary by the Access Seeker to meet its requirements. In purchasing services bundled in this manner, the Access Seeker is likely to incur extra, unnecessary costs, which will impair its ability to compete effectively in downstream markets. For example, if Eircom were to require Access Seekers who use FACO to also purchase additional and unnecessary services, this would likely raise their costs of providing downstream services, such as RFTS, and could have the effect of damaging their ability to compete with the incumbent.
- 9.52 ComReg considers that, absent regulation, the conducts outlined above could arise in the Regional FACO Markets, since Eircom, as a vertically-integrated SMP SP, is competing in downstream markets on which Access Seekers also either compete, or seek to compete, as a potential entrant.

Price-based Vertical Leveraging Behaviour

- 9.53 Vertical leveraging may also be evident in the pricing behaviour of vertically-integrated SMP SPs. In the context of the Regional FACO Markets, absent regulation, ComReg's position is that Eircom could utilise its SMP position in an attempt to foreclose competition in downstream markets, by offering RFTS (or FACO) at a price that would prevent an efficient Access Seeker from earning a sufficient margin to recover its incurred costs, ultimately resulting in the foreclosure of competition.
- 9.54 In the context of this market review, any form of margin squeeze is likely capable of distorting competition across the supply chain, including at the wholesale and retail levels, to the detriment of end users, and reinforce Eircom's SMP position in the Regional FACO Markets.

Horizontal Leveraging

- 9.55 Horizontal leveraging arises where an SP which holds SMP in one market is able to exert undue influence in other markets, which are at a similar level in the production or distribution chain. Examples of horizontal leveraging include certain tying/bundling practices, cross-subsidisation and predatory-type behaviour, or conduct whereby the SMP SP may seek to foreclose infrastructure-based competitors, by impairing their ability to earn sufficient profit margins, through predatory pricing.⁹⁸⁹

⁹⁸⁹ Predatory pricing involves the SMP SP undercutting the prices of comparable products (so that they are lower than the SMP SP's costs of production), which would likely prevent the competitor from making a sufficient margin to cover relevant costs (including, but not limited to, CAPEX and OPEX associated with infrastructural investment and maintenance).

- 9.56 In the context of this market review, horizontal leveraging could occur where Eircom, as the SMP SP in the Regional FACO Markets, is competing in adjacent wholesale markets (or example, WLA, WCA, transit and FVCT), and has both the ability and incentive to negatively impact the position of its competitors in these markets.
- 9.57 Of these adjacent markets, both FVCT and WLA are currently regulated nationally, pursuant to the 2019 Termination Decision⁹⁹⁰ and the 2018 WLA/WCA Decision. WCA is regulated on the Regional WCA Market (also under the 2018 WLA/WCA Decision), whilst the transit market was deregulated under the 2015 FACO Decision. Premised on these Decisions, ComReg has formed the position that horizontal leveraging, in the case of the Regional FACO Markets, would be most likely to occur with respect to the deregulated transit market and Urban WCA Market, rather than on the regulated markets, as specific remedies are currently in place in these regulated markets to prevent such predatory behaviour.
- 9.58 Specifically, in respect of the transit market, the types of leveraging which could potentially take place involve:
- (a) Tying FACO and transit, so an Access Seeker, in purchasing FACO from Eircom, must also purchase transit from Eircom, thereby impacting the ability of other transit SPs to compete effectively; or
 - (b) Pricing FACO, when sold with transit, such that an insufficient margin may be earned between (i) the combined price of the FACO/transit bundle and (ii) the costs incurred by an efficient operator competing in the horizontally-related transit market. This practice would likely deter further network investment, thus acting as a barrier to entry and/or expansion in that market.
- 9.59 Taking the above cases into consideration, ComReg's position is that Eircom, as an SP with SMP in the Regional FACO Markets, has both the ability and incentive to use horizontal leveraging to exert undue influence over its competitors in other wholesale markets, including the transit market.

⁹⁹⁰ Fixed Voice Call Termination and Mobile Voice Call Termination Response to Consultation and Decision Published 23 May 2019 (the '2019 Termination Decision') Reference: ComReg 19/47 Decision: D10/19 (<https://www.comreg.ie/media/2019/05/Comreg1947-1.pdf>).

9.4 Exploitative Practices

9.60 Firms which possess market power have the capability, absent regulation, to increase prices above, and/or reduce output below, competitive levels, thereby enabling the accumulation of higher than normal profits. These higher profits effectively create a wealth transfer from the end user to the firm with market power. It is ComReg's position that Eircom, as an SP with SMP in the Regional FACO Markets, and, given its presence in a number of adjacent markets, has the ability and incentive to engage in exploitative practices, such as excessive pricing and some degree of inefficiency or inertia, to the detriment of end users. These concerns are considered below.

Excessive pricing

- 9.61 EU competition case law describes excessive pricing as a situation where the price which an SMP firm charges for a product or service is not closely related to its value to the end user and/or the cost of producing or providing it.⁹⁹¹ Concerns about excessive pricing arise where, absent regulation, price levels would likely be persistently high with no effective pressure (e.g. from new entry or innovation) to bring them down to competitive levels over the duration of the review period.
- 9.62 Taking into account the MGA, the Regional FACO Markets are characterised by a high incumbent market share, an absence of existing effective competition, high and non-transitory barriers to entry associated with control over infrastructure not easily replicated, limited scope for potential competition, and insufficient CBP. Thus, there is insufficient pressure to constrain Eircom from behaving, "*to an appreciable extent, independently of its customers, competitors or consumers*",⁹⁹² including its ability and incentive to engage in excessive pricing in the Regional FACO Markets.⁹⁹³

⁹⁹¹ Case C 27/76 *United Brands v. Commission*, [1978] ECR 207, [1978] 1 CMLR 429, para. 250. In *United Brands* the Court of Justice of the European Union held that: "...charging a price which is excessive because it has no reasonable relation to the economic value of the product supplied would be... an abuse".

⁹⁹² Judgment of the Court of 13 February 1979. *Hoffmann-La Roche & Co. AG v Commission of the European Communities. Dominant position. Case 85/76. European Court Reports 1979 -00461. ECLI identifier: ECLI:EU:C:1979:36* Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:61976CJ0085&from=EN>

⁹⁹³ Eircom's wholesale prices in the Relevant FACO Markets are currently regulated under the 2015 FACO Decision (as amended by the 2018 WLA/WCA Decision).

- 9.63 For example, raising the cost of SB-WLR above a competitive level would, in turn, raise input costs for those Access Seekers that purchase Eircom FACO (assuming Eircom were to continue supplying SB-WLR on a merchant market basis, absent regulation) in order to compete in the RFTS markets. Given that the extra costs incurred by Access Seekers, due to increased FACO prices, may then be passed on to their retail customers via higher RFTS prices, this may harm the development of effective competition in the RFTS market, as end users pay higher RFTS prices, due to Access Seeker pass-through of increased SB-WLR costs. Thus, the exploitative conduct engaged in by the SMP SP at the wholesale level may ultimately be experienced by RFTS end users, as Access Seekers attempt to recover the additional costs arising from increased SB-WLR prices by passing these cost increases through to their customers.
- 9.64 Excessive prices can also distort competition amongst SPs in a market, as the higher charges could create a cross-subsidy to the SMP SP, while simultaneously reducing other SPs' investment incentives. Absent regulation in the Regional FACO Markets, Eircom, as the SMP SP, would have the ability to increase prices at the wholesale level, in order to extract supernormal profits from Access Seekers. If Access Seekers attempt to absorb these higher SB-WLR costs instead of passing them onto end users and potentially being restricted by the absence of demand-side substitutes, they would be subjected to a margin squeeze, thereby reducing their own profit margins and restricting their ability to compete with the SMP SP.
- 9.65 As noted in the analysis set out in Section 10, and pursuant to the 2015 FACO Decision, Eircom is currently subject to a range of regulatory obligations, including price control obligations, on a national basis. Absent regulation in the Regional FACO Markets, ComReg considers that prices for such services may rise above the competitive level.

Respondents' Views

- 9.66 **Eircom** stated, with reference to predatory pricing, that the only MS that ComReg could be referring to is between standalone retail line rental and wholesale line rental. It then goes on to state that the provision of retail line rental is in decline nationally, with only two SPs offering RFVA. Eircom claims that this suggests that ComReg's regulatory concerns have no bearing on the actual market under consideration, or the actual competition concerns therein.

ComReg's Assessment of Respondents' Views and Position

- 9.67 ComReg notes that the MS which it described in the 2020 Consultation was centred around Eircom's WLV offering (discussed further at paragraph 10.290 of the 2020 Consultation), where it had been suggested that, in the absence of a Margin Squeeze Test ('**MST**'), Eircom could offer its WLV service to Access Seekers at a price that did not at least cover the costs of the necessary regulated wholesale inputs (i.e. WLR, FNA, FVCO, interconnection facilities) in providing such a service itself. However, for the reasons set out at paragraphs 10.300 to 10.314 below, this MST obligation is now being removed from the Decision and will no longer be applicable in this case. In particular, since the publication of the 2020 Consultation, WLV volumes have continued to decline and further analysis has identified that over 70% of WLV customers are in the footprint of the Urban FACO Markets. This makes it impractical to operate a MST as 70% of the demand is no longer regulated via cost orientation. Furthermore ComReg is more likely to be constrained in its conduct by the presence of alternative service provision possibilities arising, in particular, from the presence of NG Broadband. Furthermore, in October 2020, Eircom introduced a VIX via WEIL product which provides Access Seekers with an alternative wholesale product to WLV.
- 9.68 ComReg acknowledges the reduced size of the Regional FACO Markets when compared with the national FACO market arising from the 2015 FACO Decision. However, the Regional FACO Markets, consisting of 699,724 premises and 376,165 RFTS lines,⁹⁹⁴ remains a substantial market and requires appropriate analysis, particularly in terms of potential competition problems which might arise, should no regulation be present.
- 9.69 In summary, having considered the Respondents' views above, ComReg is satisfied that Eircom, as the SMP SP, has both the ability and incentive to engage in excessive pricing behaviour as, absent regulation, both Access Seekers and end users are restricted by the absence of effective demand-side substitutes or indirect retail constraints, enabling the SMP SP to act independently of competitive pressure. ComReg considers that this continues to be the case, despite certain changes in FACO market circumstances since the publication of the 2020 Consultation which have led ComReg to conclude that Eircom's incentive to engage in a margin squeeze between WLR and WLV has declined in the intervening period.

⁹⁹⁴ 2020 Consultation, table A9.8.

Inefficiency/inertia

- 9.70 A firm with SMP in a relevant market may also, by virtue of the lack of effective⁹⁹⁵ competitive pressure in that market, be insulated from the need to innovate and improve efficiency and QoS to stay ahead of rivals. In principle, this may, for instance, limit the development of new technology and/or lead to costlier and less efficient methods of supply⁹⁹⁶ and, consequently, higher prices for end users than would likely otherwise exist under competitive market conditions. ComReg accordingly considers whether such competition problems would be likely to eventuate, absent regulation, on the Regional FACO Markets.
- 9.71 ComReg has formed the view that Eircom has SMP in the Regional FACO Markets. Absent regulation, Eircom would face limited competitive pressure to innovate and provide an efficient FACO service, without being subjected to normal competitive pressures. However, it appears that this risk is, to some degree, mitigated by Eircom's proposal to extend the useful working life of its PSTN network across both the Urban and Regional LL-FACO Markets by implementing an MSAN technology solution between Q1 2021 and Q3 2024, which would have the effect of increasing the lifespan and efficiency of the legacy FNA network, as well as Eircom's copper switch-off proposals set out in the White Paper which it issued in April 2021. In light of the MSAN upgrade proposals⁹⁹⁷ (which are at a more advanced stage of detail than the copper switch-off proposals) ComReg's position in this case is that the incentives of Eircom, as the SMP SP, are, in respect of its legacy FNA assets, consistent with maximising efficiency, given its financial incentive to generate maximal returns on these assets for as long as possible by extending their useful lifespan, rather than incurring the high sunk costs associated with copper switch-off in the short term.

⁹⁹⁵ As noted in Section 7, regulated access to wholesale products in other upstream markets or indirect constraints from the retail market are insufficient to effectively constrain Eircom's behaviour in the Regional FACO Markets. Nevertheless, Eircom's decision to invest and innovate may be somewhat influenced by the presence of independent retail competitors, whether in the RFTS or related downstream markets.

⁹⁹⁶ Such inefficiency could potentially be considered an abuse under competition law. Article 102(2)(b) of the TFEU and Section 5(2)(b) of the Competition Act 2002 specifically give, as an example of an abuse, the limitation of production, markets or technical development to the prejudice of consumers. For example, in *Merci Convenzionali Porto di Genova v. Siderurgica Gabrielli* the refusal of dock workers (who had a monopoly for the loading and discharging of cargo on behalf of third parties in the port of Genoa) to use modern technology for the unloading of vessels meant that operations were more expensive than they would otherwise be. This failure to use new technology was found to constitute an abuse.

⁹⁹⁷ Vendor support for legacy PSTN switching equipment is due to be phased out, prompting Eircom to modernise its legacy network, as skills and experience required for maintenance of current technology are becoming increasingly scarce.

ComReg's Assessment of Respondents' Views and Position

- 9.72 In their Submissions to the 2020 Consultation, ALTO, BT, Sky and Vodafone all either generally agreed with, or did not comment on, ComReg's preliminary conclusions on the potential competition problems and impacts which could arise in the Regional FACO Markets. Of these four Respondents, two, namely ALTO and BT provided additional comments. Eircom, however, did not agree with the potential competition problems and impacts identified by ComReg and also provided comments to this effect.
- 9.73 Of the comments received, those which were more appropriately addressed in, or which specifically refer to, Sections other than Section 9 of the 2020 Consultation, were outlined in paragraph 9.2, with further detail provided in the sections indicated therein. ComReg then considered all Respondents' Submissions pertaining to specific sub-sections of Section 9 and, having regard to these Submissions, is satisfied that, other than where specifically indicated, it identified the competition problems and impacts which could occur, absent regulation, in the Regional FACO Markets.

9.5 Overall Conclusion and Final Position

- 9.74 In conclusion, having regard to the Submissions to the 2020 Consultation, and the analysis set out in this Section, ComReg's position is that, absent regulation, Eircom, as the SMP SP in the Regional FACO Markets, has the ability and incentive to engage in the types of exclusionary practices, leveraging behaviour, and exploitative practices discussed above, which is likely to negatively impact on competition and end users in related retail and/or wholesale markets, as well as having the potential to reinforce its SMP in the Regional FACO Markets over time. In the specific instance of exploitative conduct by means of inefficiency, ComReg considers that Eircom's MSAN proposals are indicative that its incentives are currently aligned with market incentives, and that it is not currently incentivised to limit the development of new technology.
- 9.75 ComReg has presented examples of such behaviour and therefore considers that it is justified and proportionate to impose robust obligations on Eircom in the Regional FACO Markets relating to access, transparency, non-discrimination, price control, cost accounting, and a Statement of Compliance ('SoC'). The detail of these obligations is discussed in Section 10.

10 Remedies in the Regional FACO Markets

10.1 Approach to Specifying and Implementing Remedies

- 10.1 In this Section, ComReg sets out its position on the obligations which it considers are necessary to address the competition problems (detailed at Section 9 above) that, absent regulation, could arise in the Regional FACO Markets as a result of Eircom's SMP. These competition problems arise from Eircom's ability and incentive to foreclose competition in the Regional FACO Markets, leverage its SMP into adjacent markets, and exploit Access Seekers at the wholesale level and end users at the retail level, ultimately to the detriment of competition.
- 10.2 ComReg proposed, in the 2020 Consultation, to maintain the full suite of obligations on the Regional FACO Markets, including access, non-discrimination, transparency, price control and accounting separation, which had been imposed in ComReg Decision D05/15.
- 10.3 Of the five Submissions received in response to the 2020 Consultation, all Respondents (namely ALTO, BT, Eircom, Sky and Vodafone) commented on both ComReg's approach to implementing remedies and on the Draft Decision Instrument.
- 10.4 ComReg considers below the Respondents' Submissions and sets out its final position on the appropriate remedies for the Regional FACO Markets (Section 10.5 below), having first had regard to the applicable legal framework (Section 10.2), existing FACO remedies imposed under the 2015 FACO Decision and in other Decisions (Section 10.3), and the Eircom Proposals (Section 10.4).

10.2 Legal Framework for Imposing Remedies⁹⁹⁸

- 10.5 In accordance with Regulation 8(1) of the Access Regulations, where an Undertaking is designated as having SMP in a relevant market, ComReg is required to impose on such an Undertaking at least one of the obligations set out in Regulations 9 to 13 of the Access Regulations, namely obligations relating to:
- (a) Access;
 - (b) Transparency;

⁹⁹⁸ As noted in paragraph 2.55 above, the EECC has not, as of May 2021, yet been transposed into Irish law. The legislation under the EECC governing market analysis is not substantially different to existing legislation. Therefore, in this Decision, ComReg, where appropriate, notes references to existing legislation together with the corresponding reference in the EECC.

- (c) Non-Discrimination;
 - (d) Price Control and Cost Accounting; and
 - (e) Accounting Separation.
- 10.6 In addition, Regulation 8(6) of the Access Regulations provides that any of the above obligations imposed must:
- (a) Be based on the nature of the problem identified;
 - (b) Be proportionate and justified in the light of the objectives laid down in Section 12 of the Communications Regulation Act 2002 (as amended) and Regulation 16 of the Framework Regulations;⁹⁹⁹ and
 - (c) Only be imposed following public consultation and notification of the draft measures to the EC, BEREC and other NRAs, in accordance with Regulation 12 of the Framework Regulations.
- 10.7 Regulation 12(4) of the Access Regulations sets out the statutory criteria that ComReg must take into account before imposing access obligations on an SMP Undertaking. These criteria include, inter alia:
- (a) Examining the technical and economic viability of using or installing competing facilities;
 - (b) The feasibility of providing access;
 - (c) The initial outlay of investment by the Undertaking; and
 - (d) The need to safeguard competition in the long term.
- 10.8 Regulation 13(2) and Regulation 13(3) of the Access Regulations further provide that ComReg is also required, when imposing price control obligations, to:
- (a) Take into account the investment made by the SMP Undertaking which ComReg considers relevant and allow such an SMP Undertaking a reasonable rate of return on capital employed, taking into account any risks involved specific to a particular new network investment project;¹⁰⁰⁰ and
 - (b) Ensure that any cost recovery mechanism or pricing methodology that ComReg imposes serves to promote efficiency and sustainable competition and maximise consumer benefits.¹⁰⁰¹

⁹⁹⁹ Pursuant to Section 12 of the Communications Regulation Act 2002 (as amended), ComReg's relevant objectives in relation to the provision of electronic communications networks and services are: (i) to promote competition, (ii) to contribute to the development of the internal market, and (iii) to promote the interests of users within the Community. Regulation 16 of the Framework Regulations further specifies ComReg's obligations

¹⁰⁰⁰ Pursuant to Regulation 13(2) of the Access Regulations.

¹⁰⁰¹ Pursuant to Regulation 13(3) of the Access Regulations.

- 10.9 These considerations are taken into account, as appropriate, when assessing whether to impose a remedy and, if so, in what form, and are also discussed in further detail in the context of the RIA in Section 12 of this Decision. ComReg also took into account any relevant comments expressed by the European Commission in letters issued to NRAs pursuant to Articles 7 and 7a of the Framework Directive.

10.3 Existing FACO Remedies

- 10.10 Before considering which remedies would best meet ComReg's statutory/regulatory objectives in the Regional FACO Markets, ComReg describes the existing remedies that are in place with respect to Eircom's provision of FACO arising from the obligations imposed in the 2015 FACO Decision and, subsequently, in other relevant decisions.
- 10.11 These regulatory obligations are primarily set out in the 2015 FACO Decision and are discussed briefly below.

Existing FACO access remedies

- 10.12 In the 2015 FACO Decision, ComReg imposed obligations on Eircom requiring it, *inter alia*, to:
- (a) Provide access to specified wholesale products, services and facilities, namely:
 - (i) SB-WLR;
 - (ii) Ancillary Services on SB-WLR;
 - (iii) Payphone Access Charge ('**PAC**') Service;
 - (iv) CG Interconnection services; and
 - (v) Co-Location facilities.
 - (b) Meet reasonable requests for access from wholesale customers for various CG circuit-switched FACO products, services and facilities. ComReg imposed a range of obligations, including (but not limited to) requiring Eircom to:
 - (i) Negotiate in good faith with Undertakings requesting Access;
 - (ii) Not withdraw access to facilities already granted without the prior approval of ComReg;
 - (iii) Grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of products, services or facilities;
 - (iv) Provide access to co-location or other forms of associated facilities sharing insofar as it relates to interconnection services necessary to support access to FACO products, services and facilities;

- (v) Provide access to services needed to ensure interoperability of end-to-end services to end users, including facilities for intelligent network services;
- (vi) Provide access to OSS or similar software systems necessary to ensure fair competition in the provision of services;
- (vii) Interconnect networks or network facilities; and
- (viii) Provide access in accordance with a range of conditions governing fairness, reasonableness and timeliness.

10.13 ComReg did not impose specific requirements on Eircom to provide wholesale access to Next Generation VoIP-based FACO¹⁰⁰² (**'Next Generation Access FACO'** or **'NGA FACO'**) because, amongst other things, competition would be safeguarded in the medium term through Access Seekers having access to traditional circuit-switched TDM-based FVCO (WLR), while at the same time seeking to encourage Access Seekers to develop their own NGA FACO capabilities over a longer time horizon, thereby encouraging more effective and sustainable competition at the retail level.

10.14 The provision of CPS together with WLR (being SB-WLR) was also mandated.

Existing FACO non-discrimination remedies

10.15 In the 2015 FACO Decision, ComReg imposed a range of non-discrimination obligations on Eircom, having regard to a range of identified competition problems, including:

- (a) Non-discrimination obligations to ensure equivalent treatment of Access Seekers by Eircom in its provision of services and information to them;
- (b) Non-discrimination obligations to ensure that Eircom provides the same services and information to Access Seekers as Eircom supplies to itself;
- (c) Non-discrimination to be applied on an Equivalence of Outputs (**'EoO'**) standard;
- (d) Non-discrimination to be applied on an Equivalence of Inputs (**'EoI'**) standard in certain circumstances, namely:
 - (i) For the ordering and provisioning of SB-WLR when SB-WLR is ordered using a Combined SB-WLR and NGA Order (the EoO standard applies where SB-WLR is ordered and provisioned separately to Next Generation Bitstream or Virtual Unbundled Access (**'VUA'**)).

¹⁰⁰² Internet Protocol (**'IP'**) based FVCO that, at the time of the 2015 FACO Decision, would be delivered over an upstream regulated Wholesale Broadband Access (**'WBA'**) product or, indeed, through broadband enabled via Local Loop Unbundling (**'LLU'**).

- (ii) Fault reporting and fault repair for SB-WLR in all cases where SB-WLR, in conjunction with either NG Bitstream or VUA, is used by an Undertaking to provide services to an end user (irrespective of whether SB-WLR was ordered using a Combined SB-WLR and NGA Order, or ordered separately to NG Bitstream or VUA).

10.16 In addition, Eircom was obliged to provide a Statement of Compliance (**'SoC'**) to ComReg to demonstrate how it meets its non-discrimination obligations, including for existing FACO products, services and facilities, and where there are changes to existing - or the introduction of new - FACO products, services and facilities.

10.17 ComReg did not impose non-discrimination obligations on Eircom with respect to NGA FACO. However, Eircom is subject to non-discrimination obligations with respect to Next Generation (**'NG'**) Interconnection Services¹⁰⁰³ (with Eircom also subject to access and other obligations for such services).

Existing FACO transparency remedies

10.18 Eircom is also subject under the 2015 FACO Decision to an obligation of transparency in relation to Access which includes:

- (a) Making publicly available and keeping updated on its wholesale website, a Reference Interconnect Offer (**'RIO'**); and
- (b) Ensuring the RIO is sufficiently unbundled so as to ensure that Undertakings availing of Access are not required to pay for products, services or facilities which are not necessary for the Access requested.

10.19 Eircom is obliged to ensure the RIO includes at least the following:

- (a) A description of the offer of contract for Access broken down into components according to market needs;
- (b) A description of any associated contractual or other terms and conditions for supply of Access and use, including prices;
- (c) A description of the technical specifications and network characteristics of the Access being offered; and

¹⁰⁰³ "Next Generation Interconnection Services" means packet switched based interconnection used for the conveyance of FVCO and includes CSI/H, IBI/H ISI/H, and Next Generation Interconnection Paths;

"(Next Generation) Interconnection Path(s)" means the physical and logical transmission path(s) between the Electronic Communications Network(s) (**'ECN(s)'**) of two Undertakings to facilitate Interconnection based on packet switched infrastructure;

"Customer-Sited Interconnection or Handover" or "CSI/H" means the physical connection from the Eircom network to the Undertaking's equipment, within the Undertaking's premises;

"In-Building Interconnection or Handover" or "IBI/H" means the physical connection from the Eircom network to the Undertaking's equipment within the Exchange; and

"In-Span Interconnection/Handover" or "ISI/H" means the physical connection between an Eircom Exchange and the Point of Handover that has been agreed between the interconnecting parties.

- (d) The terms, conditions, service level agreements, guarantees and other product related assurances associated with the FVCO component of any WLV services¹⁰⁰⁴ that it provides.

10.20 Eircom is obliged to:

- (a) Continue to publish and keep updated on its publicly available wholesale website, its RIO in the same form and format as published, as may be amended from time to time, insofar as those products, services or facilities are available;
- (b) Publish and keep updated on its publicly available wholesale website both clean (or unmarked) and tracked change (or marked) versions of its RIO. The tracked change version of the RIO shall be sufficiently clear to allow Undertakings to clearly identify all actual and proposed amendments from the preceding version of the RIO;
- (c) Publish and keep updated on its publicly available wholesale website an accompanying RIO Change Matrix which lists all of the amendments incorporated or to be incorporated in any amended RIO;
- (d) Publish and keep updated on its publicly available wholesale website both clean (unmarked) and tracked changes (marked) versions of the RIO Price List(s). The tracked change version of the RIO Price List shall be sufficiently clear to allow Undertakings to clearly identify all actual and proposed amendments from the preceding version of the RIO Price List;
- (e) Publish and keep updated on its publicly available wholesale website a RIO Price List Change Matrix;
- (f) Maintain and make publicly available on its wholesale website a copy of historic versions of its RIO, RIO Price List, RIO Change Matrix and RIO Price List Change Matrix; and
- (g) Ensure that its wholesale invoices are sufficiently disaggregated, detailed and clearly presented, such that an Access Seeker can reconcile invoices to Eircom's RIO and RIO Price Lists.

10.21 In respect of non-pricing amendments or changes to the RIO resulting from the offer of a new product, service or facility which falls within the scope of the Relevant FACO Markets, the following obligations apply:

¹⁰⁰⁴ WLV means a managed 'end-to-end' voice calls product that includes WLR and FVCO, along with other wholesale inputs.

- (a) Eircom must, unless otherwise agreed by ComReg, make publicly available and publish on its publicly available wholesale website at least six (6) months in advance of coming into effect, any proposed amendments or changes to the RIO or the making available of any product, service or facility, pertaining to non-price information in respect of product specification, services, facilities and processes resulting from the offer of a new product, service or facility;
- (b) Eircom must notify ComReg in writing, with the information to be published at least one (1) month in advance of any such publication taking place, that is, seven (7) months prior to any amendments or changes coming into effect. The periods may be varied with the agreement of ComReg, or at ComReg's discretion.

10.22 In respect of non-pricing amendments or changes to the RIO resulting from an amendment or change to an existing product, service or facility which falls within the scope of the Relevant FACO Markets, the following obligations apply:

- (a) Eircom must, unless otherwise agreed by ComReg, make publicly available and publish on its publicly available wholesale website at least two (2) months in advance of coming into effect, any proposed amendments or changes to the RIO pertaining to non-price information in respect of product specification, services, facilities and processes resulting from an amendment or change to an existing product, service or facility (including details of any amendment or change in the functional characteristics of an existing product, service or facility);
- (b) Eircom must notify ComReg in writing with the information to be published at least one (1) month in advance of any such publication taking place, that is, three (3) months prior to any amendments or changes coming into effect. The periods may be varied with the agreement of ComReg, or at ComReg's discretion.

10.23 In respect of pricing amendments or changes pertaining to prices in the RIO and/or RIO Price List, Eircom must make publicly available and publish on its publicly available wholesale website information relating to:

- (a) Proposed changes to the prices of existing products, services or facilities set out in the RIO Price Lists and which are offered, at least one (1) month in advance of such changes coming into effect, unless otherwise determined by ComReg; and
- (b) The pricing of a new product, service, or facility that will be offered at least two (2) months in advance of the commercial launch of a new retail service by Eircom, unless otherwise determined by ComReg.

- 10.24 With respect to the obligation outlined in paragraph 10.23 above, Eircom must, unless otherwise agreed with ComReg, notify ComReg in writing with the information to be published at least one (1) month in advance of any such publication taking place.
- 10.25 At the same time, and in accordance with the appropriate timelines outlined in paragraph 10.23 above, Eircom must, on its publicly available wholesale website in respect of products, services, facilities and processes in the Relevant FACO Markets, identify, explain, document and demonstrate any permissible differences between the products, services, facilities and processes as set out in the RIO and the comparable products, services, facilities and processes which Eircom provides to itself. Eircom must keep this information updated as new products, services or facilities are developed or deployed, or existing products, services or facilities are amended.
- 10.26 Eircom is obliged, as specified by ComReg in writing from time to time, to make publicly available on its wholesale website, information such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices, in respect of the products, services and facilities in this market.
- 10.27 Pursuant to the 2011 KPIs Decision,¹⁰⁰⁵ Eircom is obliged to publish Key Performance Indicators ('**KPI(s)**') and performance metrics for the products, services and facilities, in this market, on its publicly available website. The specification of the content of the KPIs and performance metrics must be in accordance with the obligations set out in 2011 KPIs Decision.
- 10.28 Eircom is obliged to make publicly available on its wholesale website all SLAs (and any updates thereto) relating to the provision of products, services and facilities in this market.
- 10.29 Where Eircom considers information to be provided under the obligations set out in the 2015 FACO Decision to be confidential or commercially sensitive (and ComReg is satisfied that this is the case), Eircom must make this available to an Access Seeker that has signed a Non-Disclosure Agreement ('**NDA**'). Once the information ceases to be confidential or commercially sensitive, Eircom must publish it on its publicly available wholesale website without undue delay.

¹⁰⁰⁵ Response to Consultation and Decision on the Introduction of Key Performance Indicators for Regulated Markets, ComReg Document No. 11/45, 29 June 2011 (the '**2011 KPIs Decision**').

Existing FVCO and WLR price control remedies

- 10.30 Products supplied in the FACO Markets (e.g. WLR, co-location, etc.) are subject to price control obligations of cost orientation, as set out in the 2015 FACO Decision and further specified in the 2016 Access Pricing Decision, where relevant.
- 10.31 In addition, Eircom is also subject to three margin squeeze test obligations (i.e. a margin squeeze test between the price of retail line rental and the price charged by Eircom for SB-WLR, a margin squeeze test between wholesale POTS-based VUA and the price for standalone VUA/NGA Bitstream including an amount for VoIP, and a margin squeeze test between Eircom's Wholesale SV service and FVCO), pursuant to the 2015 FACO Decision, and the 2016 Access Pricing Decision.

Existing FVCO and WLR cost accounting and accounting separation remedies

- 10.32 Eircom is currently subject to cost accounting and accounting separation obligations under the 2015 FACO Decision. These obligations are detailed in the Accounting Separation and the Cost Accounting Review of Eircom Limited (the '**2010 Accounting Separation Decision**').¹⁰⁰⁶

10.4 Eircom Proposals

- 10.33 In advance of the publication of the 2020 Consultation, in February 2020,¹⁰⁰⁷ Eircom approached ComReg with a set of proposals – the February 2020 Proposals - which it described as potential voluntary commitments,¹⁰⁰⁸ in lieu of which Eircom sought not to be subject to SMP-based regulation. These are summarised below. As set out in Annex: 6 of this Decision, a non-confidential version of the February 2020 Proposals was published alongside the 2020 Consultation. Subsequently, Eircom provided an updated set of April 2021 Proposals, which are also summarised below, a non-confidential version of which is published as a (late) Submission alongside this Decision, together with additional correspondence on the Proposals in Annex: 6.

¹⁰⁰⁶ ComReg Document 10/67: Accounting Separation and Cost Accounting Review of Eircom Limited;

31 August 2010: <http://www.comreg.ie/fileupload/publications/ComReg1067.pdf>

¹⁰⁰⁷ Presentation by Eircom to ComReg on 13 February 2020.

¹⁰⁰⁸ The February 2020 Proposals were without prejudice to views that Eircom would provide in response to the matters which were the subject of the 2020 Consultation, while the April 2021 Proposals had regard to the 2020 Consultation and Eircom's Submission to the 2020 Consultation.

- 10.38 The revised April 2021 Proposals differed in a number of material respects from the February 2020 Proposals. Eircom made no commitments in respect of either the RFVA market or the RFTS market. In respect of the Regional FACO Markets, Eircom proposed to make a set of voluntary commitments for a duration of five years in the following areas:
- (a) Reasonable requests for the provision of Access to FNA FACO products, services or facilities including Associated Facilities in a fair, reasonable and timely manner, except in the case of access to a proposed 'business to business' market. This commitment would cease to apply once Eircom or NBI FTTP was available at a premises;
 - (b) Non-discrimination consistent with the non-discrimination obligation set out in Clause 11 of the draft Decision Instrument;
 - (c) Transparency consistent with the transparency obligation set out in Clause 12 of the draft Decision Instrument, except that no SoC or KPIs would be imposed on Eircom;
 - (d) Maintaining appropriate cost accounting systems in respect of products, services or facilities in the FACO Markets consistent with the cost accounting obligation would be as set out in Clause 14 of the draft Decision Instrument, except that the relevant provisions on pricing would be replaced by agreed maximum pricing provisions in respect of a range of products, services and associated facilities available on the Relevant FACO Markets.
- 10.39 In respect of the WLA and WCA markets, and given the upcoming ANM Decision, Eircom offered a number of pricing commitments for wholesale broadband products offered on those markets for a duration of five years.

ComReg's Assessment of Respondents' Views and Final Position

- 10.40 As set out in the 2020 Consultation, in general terms, ComReg welcomes Eircom's willingness to engage and notes that, with the introduction of the EECC, proposals offered by undertakings designated as having SMP, which satisfy the criteria referred to in Article 79 of the EECC and are made binding on the undertaking, may be taken into account by ComReg in determining the appropriate level of regulation of a market. As of May 2021, however, Article 79 of the EECC has yet to be transposed in Irish law and ComReg currently has no statutory basis in Irish law on which to accept commitments and make them binding as envisaged in Article 79. Without prejudice to this, ComReg has nevertheless reviewed the two sets of Proposals made by Eircom and in particular has treated Eircom's April 2021 Proposals as a submission to consultation (albeit a late one).

- 10.41 ComReg also notes that the process set out in Article 79 of the EECC is without prejudice to the application of the market analysis procedure set out at Article 67 and the imposition of obligations set out at Article 68. ComReg considers that this process involves an undertaking designated with SMP providing certain commitments to the NRA. Where appropriate and after a market test, these commitments will be made binding on the undertaking. It is only at that stage that the NRA will consider the consequences of the binding commitments on the obligations it has imposed or intends to impose. In contrast, Eircom seems to construe Article 79 as allowing for a bargaining process whereby it will offer proposals in return for the lessening or removal of SMP obligations. It is clear that Article 79 envisages the analysis of any remedies to be carried out, having regard to commitments which have been made binding.
- 10.42 Insofar as the February 2020 Proposals are concerned, ComReg set out its position in the 2020 Consultation and noted that it would consider interested parties' views on this matter. However, no respondents commented on this issue. As regards the April 2021 Proposals, quite apart from the fact that ComReg is not currently empowered to accept commitments, ComReg is of the view that the Proposals on their own are insufficient to address all of the competition problems identified in Section 9 above and overall, do not include anything that is susceptible to enable sustainable competition on downstream markets and facilitate deployment and take-up of very high capacity networks in the interest of end users, a matter that Article 79(2) requires NRAs to have particular regard to.
- 10.43 For instance, Eircom's proposal to no longer provide access to FNA FACO products as soon as a premises is passed by Eircom or NBI FTTH means that end users with existing FNA FACO products will be locked in to their existing SP, hence reducing competition. ComReg notes Eircom's proposal to continue with the non-discrimination obligations set out in the draft Decision Instrument annexed to the 2020 Consultation. However, Eircom also proposes to remove the obligations to provide KPIs and a SoC. KPIs are the method by which Eircom displays to Access Seekers and ComReg that it is meeting its non-discrimination obligations. Without adhering to the KPI obligations, it is difficult to see how Access Seekers or ComReg would be able to measure Eircom's compliance with its non-discrimination voluntary commitment. Similarly, under the obligation to provide a SoC Eircom is required to set out how it identifies and manages risks of non-compliance with SMP obligations in the Regional FACO Markets.

10.44 ComReg is accordingly of the view that the measures offered by Eircom would not be sufficient to address the competition problems identified at Section 9 above, and would be unlikely to enable sustainable competition on downstream markets and in the interest of end users. ComReg has therefore considered the imposition, amendment or withdrawal of existing obligations in the Relevant FACO Markets on the basis of market circumstances as set out in this Decision.

10.5 Imposition of Remedies in the Regional FACO Markets

10.45 The Relevant LL-FACO Product Market is, in summary, comprised of a wholesale access component and a calling component:

- (a) FA for the provision of voice telephony services by means of:
 - (i) FNA (provided by means of PSTN or ISDN BRA); or
 - (ii) NG Broadband¹⁰¹¹
 together with
- (b) FVCO,¹⁰¹² being calls originated
 - (i) In the case of FNA, at a fixed location of an end user which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the FA; or
 - (ii) In the case of NG Broadband, at a fixed location of an end user which are conveyed and routed on an end-to-end basis over an IP network to a Managed VoB VoIP platform.

10.46 The Relevant HL-FACO Product Market is similarly comprised of a wholesale access component and a calling component:

- (a) FA for the provision of voice telephony services by means of:
 - (i) FNA (provided by means of ISDN FRA or ISDN PRA); or

¹⁰¹¹ 'NG Broadband' means broadband provided by means of NGA or CATV;

'Next Generation Access' or 'NGA' means wired access networks which consist wholly or in part of optical elements and which are capable of delivering broadband and other access services with enhanced characteristics (such as higher throughput) as compared to those provided over exclusively copper access networks such as Eircom's FTTC-based VUA/Bitstream, and FTTH-based VUA/Bitstream;

'FTTC-based VUA/Bitstream' means VUA or Bitstream that is based on FTTC, including Exchange-launched VUA/Bitstream;

'FTTH-based VUA/Bitstream' means VUA or Bitstream that is based on FTTH; and

'CATV' refers to the provision of broadband by means of a cable access TV network which runs on the Data Over Cable Service Interface Specification (DOCSIS) 3.0 standard or higher.

¹⁰¹² FVCO does not distinguish between types of telephone numbers called.

- (ii) NGA Broadband¹⁰¹³
together with
 - (b) FVCO, being calls originated
 - (i) In the case of FNA, at a fixed location of an end user which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the FA;
or
 - (ii) In the case of NGA Broadband, at a fixed location of an end user which are conveyed and routed on an end-to-end basis over an IP network to a Hosted PBX or SIP Trunking VoIP platform.
- 10.47 Fixed Narrowband Access FACO ('**FNA FACO**') used in the context of the imposed remedies, is defined as comprising the following:
- (a) FA for the provision of voice telephony services by means of FNA (provided by means of PSTN or ISDN BRA) together with FVCO, where calls are originated in the case of FNA, at a fixed location of an end user which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the FA;
 - (b) the provision of voice telephony services by means of FNA (provided by means of ISDN FRA or ISDN PRA) together with FVCO, where calls are originated in the case of FNA, at a fixed location of an end user which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the FA.
- 10.48 Next Generation Access FACO ('**NGA FACO**') is defined as comprising the following:
- (a) FA for the provision of voice telephony services by means of NG Broadband together with FVCO, where calls are originated at a fixed location of an end user which are conveyed and routed on an end-to-end basis over an IP network to a Managed VoB VoIP platform; and
 - (b) FA for the provision of voice telephony services by means of NGA Broadband together with FVCO where calls are originated at a fixed location of an end user which are conveyed and routed on an end-to-end basis over an IP network to a Hosted PBX or SIP Trunking VoIP platform.

¹⁰¹³ 'NGA Broadband' means broadband provided by means of NGA.

- 10.49 ComReg proposed in the 2020 Consultation not to impose obligations on Eircom with respect to access to NGA FACO (independent of some specific interconnection obligations), on the basis that limiting the scope of the access obligations to FNA FACO serves the dual-purpose of safeguarding competition in the short to medium term (through the various FNA FACO remedies), while at the same encouraging service providers to develop their own Managed VoIP-based capabilities over the longer term, thereby encouraging more effective and sustainable competition. No Respondents save for Eircom expressed a view on ComReg's position on the matter, with Eircom agreeing with ComReg that no obligations should be imposed on Eircom with respect to access to NGA FACO.¹⁰¹⁴
- 10.50 In the paragraphs below ComReg describes the remedies being imposed upon Eircom in the Regional FACO Markets (with respect to FNA FACO). These include:
- (a) Access obligations (see paragraphs 10.51 to 10.189);
 - (b) Non-discrimination obligations (see paragraphs 10.190 to 10.210);
 - (c) Transparency obligations (see paragraphs 10.211 to 10.242);
 - (d) Price control and cost accounting obligations (see paragraphs 10.243 to 10.321);
 - (e) Accounting separation obligations (see paragraphs 10.322 to 10.344); and
 - (f) Obligations in respect of the provision of a Statement of Compliance (see paragraphs 10.345 to 10.373).

Access Remedies

Overview

- 10.51 As identified in Section 4, in providing RFTS, a number of SPs are wholly or largely dependent on Eircom FACO to compete in the provision of RFTS. ComReg has already set out its position that, in the Regional FACO Markets, Eircom has the ability and incentive to refuse to supply FACO to Access Seekers, either actually or constructively, or to provide these products, services and facilities on discriminatory or unreasonable terms and conditions (including in relation to price), and that this would likely hinder the development of sustainable competition in the downstream RFTS markets. This would ultimately be detrimental to the interests of end users and would likely be contrary to the objectives set out in Section 12 of the Communications Regulation Act 2002 (as amended) and Regulation 16 of the Framework Regulations.

¹⁰¹⁴ Eircom Submission, paragraph 223 (page 76).

- 10.52 Absent effective access remedies in the Regional FACO Markets, ComReg would be left to address any such refusal by Eircom to supply FACO either through its general dispute resolution or compliance functions, all of which would occur after the fact, take time to resolve, be specific to the bilateral circumstances between the relevant parties and not, thereby, contribute to regulatory certainty amongst market players. As a consequence, this could be damaging to downstream competition, and ultimately, consumers.
- 10.53 Such case-by-case interventions by ComReg would also be inefficient and ineffective in resolving the broader competition problem of denial of, or delayed, access by an SMP Undertaking. In this regard, it is worth noting that the EC has made several comments, under Article 7/7a of the Framework Directive, on the imposition by NRAs of SMP-type obligations pursuant to the exercise of dispute resolution functions. Such EC decisions clearly highlight the need for effective remedies to be imposed through a formal market analysis process. This includes the imposition of access (and other) obligations on any Undertakings found to have SMP.
- 10.54 Additionally, ComReg could seek to use its *ex post* competition law powers. However, such powers could ultimately result in a finding by an Irish court that an Undertaking has abused its dominant position in breach of Section 5 of the Competition Act 2002, or Article 102 TFEU, but not necessarily require access to be provided as the outcome of any such finding. Similar to the reasons above, a competition law approach would take significant time to resolve, be specific to the circumstances of the case and not contribute to regulatory certainty amongst market players.
- 10.55 Overall, therefore, ComReg considers that dispute resolution (which can be of relevance in resolving access and other issues in certain circumstances), compliance and *ex post* competition law approaches would not be effective in resolving issues concerning denial of access in the Regional FACO Markets.
- 10.56 Regulation 12(1) of the Access Regulations provides that ComReg may, in accordance with Regulation 8 thereof, impose on SMP Undertakings obligations to meet reasonable requests for access to, and use of, specific network elements and associated facilities, where ComReg considers that the denial of such access, or the imposition by SMP Undertakings of unreasonable terms and conditions having similar effect, would:
- (a) Hinder the emergence of a sustainable competitive retail market;
 - (b) Not be in the interests of end users; or
 - (c) Otherwise hinder the objectives set out in Section 12 of the Communications Regulation Act 2002 (as amended) and Regulation 16 of the Framework Regulations.

- 10.57 Obligations must also be proportionate and justified in light of the objectives laid down in Section 12 of the Communications Regulation Act 2002 (as amended) and Regulation 16 of the Framework Regulations.
- 10.58 Regulation 12(2)(a) to (j) and Regulation 12(3) of the Access Regulations provide that ComReg can impose, where appropriate, additional access obligations, and may attach conditions covering fairness, reasonableness and timeliness to those access obligations.

Consideration of statutory criteria on imposing access obligations

- 10.59 As noted in paragraph 10.7 above, pursuant to Regulation 12(4) of the Access Regulations, when considering whether to impose the obligations referred to at Regulation 12(1) and (2) and, in particular, when assessing whether such obligations would be proportionate to the objectives set out in Section 12 of the Communications Regulation Act 2002 (as amended), ComReg has to take the following factors into account:
- (a) Technical and economic viability of using or installing competing facilities in light of the rate of market development, taking into account the nature and type of access or interconnection involved, including the viability of other upstream access products, such as access to ducts: In Sections 5 and 7, ComReg defined the Regional FACO Markets and set out its view that, for reasons of economic feasibility, the existence or potential existence of alternative facilities to provide FNA FACO products, services or facilities is unlikely to materialise to a sufficient extent within those markets in the lifetime of this market review. This is evidenced by the lack of meaningful independent entry into the Regional FACO Markets since the 2015 FACO Decision and Eircom's high (albeit slowly declining) market share. On a forward-looking basis, ComReg considers that the most likely means of introducing competing facilities to the Regional FACO Markets will be the rollout of NGA networks capable of delivering wholesale or retail Managed VoIP. In this regard, the rollout of NBI in the IA may, on a forward-looking basis, be potentially capable, in ComReg's view, of materially altering the conditions of competition in the Regional FACO Markets within – and beyond – the period of this review. This assessment falls to be carried out as part of the MTA;

- (b) **Feasibility of providing access in relation to capacity available:** Access to FNA FACO products, services and facilities in the Regional FACO Markets is currently provided by Eircom pursuant to existing regulatory obligations. On a forward-looking basis, with the possible exception of ISDN BRA,¹⁰¹⁵ ComReg is not aware that there would be any material capacity constraints that would give rise to Eircom facing difficulties in meeting these access obligations. ComReg notes that Eircom published its White Paper on copper switch-off on 5 March 2021¹⁰¹⁶ and, as set out at paragraph 6.156 above, ComReg intends to issue a public consultation on this issue in due course.¹⁰¹⁷ In ComReg's view, copper switch-off is unlikely to take place during the currency of this market review.
- (c) **The initial investment by the facility owner taking account of any public investment made and the risks involved:** Having regard to Regulation 12(4)(c) and Regulation 13(2) of the Access Regulations, ComReg's approach to imposing access remedies is based on principles that, *inter alia*, allow a reasonable rate of return on adequate capital employed, taking into account the risks involved. When imposing price control remedies, ComReg is mindful of facilitating the development of effective and sustainable competition to the benefit of end users, without compromising the efficient entry and investment decisions of Undertakings over time. ComReg is also mindful of the role of regulatory transparency and consistency in contributing to a more predictable environment conducive to long-run investment decisions;

¹⁰¹⁵ See paragraphs 10.90 to 10.109.

¹⁰¹⁶ "Copper switch-off: Leaving a legacy for the Future", White paper, 5 March 2021, https://www.openeir.ie/wp-content/uploads/2021/03/White-paper_Leaving-a-Legacy.pdf

¹⁰¹⁷ ComReg - Eircom Correspondence on Copper Switch Off, Information Notice, ComReg Reference ComReg 21/35, 09 April 2021.

- (d) The need to safeguard competition in the long term, with particular attention to economically efficient infrastructure based competition: In Section 9 and throughout this Section, ComReg has highlighted the impacts on downstream competition and on end users that could arise, given Eircom's ability and incentives to potentially engage in exploitative or exclusionary behaviours in the Regional FACO Markets and related markets, absent regulation. These include, *inter alia*, actual or constructive denial of access, excessive pricing, and other behaviours which could impede the development of sustainable downstream retail competition in the footprint of the Regional FACO Markets. ComReg considers that imposing access (and other obligations) in the Regional FACO Markets will ultimately promote retail competition to the benefit of end users, given that these obligations restrict Eircom's ability and incentives to engage in exploitative or exclusionary behaviours;
- (e) **Intellectual property rights:** intellectual property rights are not a significant concern in the context of the provision of access to FNA FACO products, services and facilities in the Regional FACO Markets; and
- (f) **Pan-European Services:** ComReg's view is that its approach should facilitate the provision of pan-European services since the approach is consistent with the policies of the EC and other NRAs.

10.60 These provisions are taken into account below in ComReg's consideration of the access remedies that it imposes upon Eircom in order to address the competition problems identified in Section 9 in the Regional FACO Markets. An overview of Eircom's existing access obligations is set out in paragraphs 10.12 to 10.14 above.

Reasonable Requests for Access to FACO and Associated Facilities

10.61 In the 2020 Consultation, ComReg proposed, pursuant to Regulation 12(1) of the Access Regulations, to require Eircom to meet all reasonable requests from Undertakings for the provision of access to FNA FACO and associated facilities in the Regional FACO Markets, i.e., access to FNA FVCO and copper/fibre-based WLR in the Regional FACO Markets, including both requests for provisioning/orders of an existing product, service or facility and requests for a development to either provide a new product, service or facility, or change an existing one.

- 10.62 ComReg noted that, while the likelihood of new FNA FACO products, services or facilities being introduced¹⁰¹⁸ in the Regional FACO Markets may be low, Eircom's intention is to prolong the life of the FNA network by its investment in its network modernisation project (outlined in paragraphs 10.103 to 10.108 below). Although Eircom has also signalled its intention to cease the provision of copper-based services in its White Paper, "*Copper switch-off: Leaving a legacy for the Future*" published on 5 March 2021 (as referenced in paragraph 10.59 (b)), the interaction between this and the network modernisation project is currently unclear. ComReg proposed in the 2020 Consultation, in light of the fact that FNA products and services are in decline in the Regional FACO Markets, that it is proportionate and justified to limit Eircom's obligation to meet reasonable access requests¹⁰¹⁹ for new FNA FACO products, services or facilities or amendments to existing FNA FACO products, services or facilities to the following:
- (a) Access requests extant on the date this Decision comes into effect,
 - (b) Access requests required for the implementation of the network modernisation project, and
 - (c) Requests in connection with a FNA FACO product, service or facility which Eircom provides to itself.
- 10.63 The significant majority of the access obligations that ComReg proposed to impose effectively results in a continuation of Eircom's current offer of FNA FACO products as set out in the Eircom RIO.¹⁰²⁰
- 10.64 As a consequence of Eircom's obligation to meet reasonable requests for access, ComReg also proposed to maintain the obligation on Eircom to provide, at the time of refusal, the objective reasons for a refusal, in whole or in part, to meet a request for access (including for Access to those products, services and facilities described in paragraph 10.74 below), or a request for provision of information. ComReg also proposed that either concurrently to the notification of a refusal, or on a monthly basis, Eircom provides to ComReg a list of the instances of refusal together with the objective reasons for such refusal of Access, including in respect of specific products, services or facilities refused, denied or declined, order details, and the identity of the affected operator, in the format and detail specified by ComReg.¹⁰²¹

¹⁰¹⁸ In the period following the Effective Date of this Decision.

¹⁰¹⁹ In the context of access requests for FACO product development.

¹⁰²⁰ Currently RIO version 7.0, dated 1 October 2020, as published on [Open eir's website](#).

¹⁰²¹ Excel file with selected fields from the Eircom order system and objective reason. For example, [parent_order_id, order_type, received_date, operator_code, brn_brand_name, ext_status, ext_status_date, ard_id, EIRCODE, service_code, product_code, bitstream_service_code, exchange_site exchange_code, reason_code, reason_text, unit_no, unit_name, building_no, building_name, street_name_town, postal_dist_name, county_name, action, std_code, subscriber_no], objective reason.

Respondents' Views

10.65 Three Respondents (ALTO, BT and Vodafone) agreed with ComReg's proposal. Eircom disagreed with the proposal to, in effect, maintain Eircom's obligation to meet reasonable requests for FNA FACO products in the Regional FACO Markets. Eircom submitted that this was not necessary or proportionate and that obligations in respect of non-discrimination and transparency would give Access Seekers sufficient comfort.¹⁰²² For Eircom, sufficient competition will arise from the NBP network which would provide wholesale broadband inputs which could be used by SPs for NG FACO services as an alternative to Eircom's FNA FACO service. Eircom suggested that ComReg's acknowledgement that the NBP is capable of materially altering the conditions of competition in the Regional FACO Markets¹⁰²³ appeared to support its view that an access remedy is not required. Eircom suggested further that ComReg had ignored the requirement under Regulation 12(1) of the Access Regulations that ComReg finds:

- (a) That the denial of such access would hinder the emergence of a sustainable competitive retail market, and
- (b) Would not be in the interests of end users, and focussed solely on the objectives in Section 12 referred to in Regulation 12(1) (c).
- (c) As such, Eircom suggested that ComReg had failed to establish that the conditions for the imposition of an access obligation are met.¹⁰²⁴

10.66 Eircom also disagreed with ComReg's interpretation of 'request for access', which ComReg had clarified, for the avoidance of doubt, in Footnote 854 of the 2020 Consultation, that it includes both a request for provisioning of an existing product, service or facility and a request for the development of a new product, service or facility, or a change to an existing one. Eircom considered that this definition was too granular and that the meaning of 'request for Access' should not extend to individual provisioning requests/orders for products and services available to order. Eircom was concerned that, otherwise, new overly burdensome reporting obligations were being imposed on Eircom, with no adequate consideration given to the size of the Regional FACO Markets and the fact that they are in decline, and no justification was given by reference to the nature of the problem identified.¹⁰²⁵

¹⁰²² Eircom Submission, paragraph 202 (pages 75-76).

¹⁰²³ 2020 Consultation, paragraph 10.59(a).

¹⁰²⁴ Eircom Submission, paragraph 202 (pages 75-76).

¹⁰²⁵ Eircom Submission, paragraph 222 (pages 76-77).

ComReg's Assessment of Respondents' Views and Position

- 10.67 ComReg does not agree with Eircom's Submission. It is correct that Eircom will likely face a greater level of competition in the Regional FACO Markets over time as NBI rolls out to the IA. However, NBI's entry in the context of a State-subsidised scheme is not necessarily indicative of the lowering of barriers to entry in the Regional FACO Markets over the lifetime of this market review.¹⁰²⁶ ComReg's view remains that infrastructure-based competition is very limited in the Regional FACO Markets and will remain limited over the lifetime of this market review. The fact that the rollout of the NBP in the IA (over the next seven years) may materially alter the conditions of competition in the Regional FACO Markets within – and beyond – the period of this FACO Market review does not imply that access obligations are no longer appropriate.¹⁰²⁷ Rather, it justifies ComReg keeping the matter under review, including by means of the MTA discussed in Section 11.
- 10.68 Accordingly, ComReg remains of the view that, arising from the lack of effective competition, including due to the lack of economic feasibility, alternative facilities to provide FNA FACO products, services or facilities are unlikely to materialise to a sufficient extent within the Regional FACO Markets in the lifetime of this market review. A requirement that Eircom meets reasonable requests for access, but limited in the manner proposed to exclude NG FACO, is fundamental to ensuring the maintenance and the development of effectively competitive retail markets, in accordance with Regulation 12(1) of the Access Regulations.
- 10.69 As noted in Section 7, absent NG Broadband capable of supporting the delivery of Managed VoIP, there will be no effective constraint on Eircom's SMP within the lifetime of this market review, and RFTS competition will likely continue to be dependent on the availability of wholesale access to FNA FACO products such as SB-WLR. In this respect, access to such FNA FACO products in the Regional FACO Markets is necessary to maintain competition and to minimise foreclosure concerns that could arise, absent such regulation.

¹⁰²⁶ Barriers to entry in Relevant FACO Markets are discussed in paragraphs 7.11 to 7.162.

¹⁰²⁷ The impact of NBIs rollout in the IA is discussed in paragraphs 7.217 to 7.230.

- 10.70 Insofar as NGA FACO is concerned, Access Seekers ultimately have the potential to position themselves to compete more independently of Eircom's wholesale services through climbing the ladder of investment and building their own VoIP-based call origination capabilities (for instance, by using upstream wholesale NGA Broadband inputs from Eircom or other sources). This is also aligned with the ultimate aim of supporting the development of sustainable competition and is consistent with ComReg's position in the 2015 FACO Decision.¹⁰²⁸
- 10.71 ComReg also does not agree with Eircom's contention that ComReg's definition of Access is overly granular. ComReg notes that the position set out in the 2020 Consultation reflects its approach under the 2015 FACO Decision. In this regard, the Decision Instrument appended to the 2015 FACO Decision is clear that the obligation on Eircom to provide reasons for refusal of Access to the Access Seeker concerned extends to specifically mandated products, services and facilities, thereby including within Access requests, orders in respect of existing products. ComReg adds that, in practical terms, it has not proposed new burdensome reporting obligations as the information requested by ComReg is already available to Eircom and being provided to Access Seekers. In addition, Eircom has, in the past, provided to ComReg data on refused/declined orders for regulated products (including FNA FACO), on ComReg's requests based on Section 13D(1) of the Communications Regulation Act 2002 (as amended) and those data are readily available from Eircom's IT systems.
- 10.72 In this context, by requiring Eircom to provide information on refusals to ComReg on a monthly basis, rather than at the time of refusal, thereby confirming recent practice, ComReg is not materially increasing, but rather decreasing, any associated burden on Eircom. ComReg is also open to engaging with Eircom on the specific format used to provide the information.
- 10.73 ComReg is satisfied that such an obligation is an important aspect of ensuring that ComReg is in a position to monitor and analyse refusals for access in a timely manner, given that such refusals, if unjustified, are capable of having a serious negative impact on competition and end users.

¹⁰²⁸ ComReg notes that Eircom and BT both offer White Label VoIP products as a service for Access Seekers who are unable to, or do not wish to, engage in self-supply (although BT's supply is predicated on having access to NG Broadband inputs, which in the Regional FACO Markets tend to be less available).

Specified Access Remedies and requirements governing the provision of Access

10.74 In addition to the general obligation set out above to meet reasonable requests for access to FNA FACO in the Regional FACO Markets, ComReg proposed in the 2020 Consultation to impose specific access requirements on Eircom to provide a range of specific products, services and facilities, as well as more general requirements governing access. In particular, ComReg was of the preliminary view that it was appropriate to continue to impose the following obligations imposed in the 2015 FACO Decision upon Eircom:

- (a) To provide access to specified wholesale products, services and facilities, namely:
 - (i) SB-WLR (see paragraphs 10.77 to 10.110 below);
 - (ii) Ancillary Services on SB-WLR (see paragraphs 10.77 to 10.110 below); and
- (b) Interconnection Services and associated co-location facilities (see paragraphs 10.111 to 10.134 below).
- (c) To negotiate in good faith with Undertakings requesting Access (see paragraphs 10.135 to 10.146 below);
- (d) Not to withdraw Access to facilities already granted without the prior approval of ComReg (see paragraphs 10.147 to 10.153 below);
- (e) To grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of products, services or facilities (see paragraphs 10.154 to 10.155 below);
- (f) To provide access to co-location or other forms of associated facilities sharing insofar as it relates to interconnection services necessary to support access to FNA FACO products, services and facilities (see paragraphs 10.156 to 10.157 below);
- (g) To provide access to services needed to ensure interoperability of end-to-end services to end users, including facilities for intelligent network services (see paragraphs 10.158 to 10.159 below);
- (h) To provide access to OSS or similar software systems necessary to ensure fair competition in the provision of products, services and facilities (see paragraphs 10.160 to 10.163); and
- (i) To provide access in accordance with a range of conditions governing fairness, reasonableness and timeliness (see paragraphs 10.164 to 10.174 below).

10.75 By contrast, ComReg proposed to withdraw the obligation on Eircom to provide a PAC Service.

10.76 The consideration of, and justification for, the access remedies listed above are discussed further below in light of the Submissions received in response to the 2020 Consultation.

SB-WLR and Ancillary Services on SB-WLR

10.77 In the 2020 Consultation, ComReg proposed to require Eircom to continue to provide SB-WLR as well as a range of associated facilities, including wholesale ancillary services, but excluding wholesale low value CPE rental.

10.78 SB-WLR is a wholesale bundle that combines CPS (being FNA FVCO) together with WLR (being FA).¹⁰²⁹ SB-WLR allows RFTS providers to offer RFVC and RFVA together, thus avoiding a situation where the retail end user is billed by Eircom for retail line rental, and separately by a competing SP for calls (RFVC).

10.79 As noted in Section 9, the provision of RFTS in the footprint of the Regional FACO Markets has been and, for the period of this market review is likely to continue to be, largely dependent on Access Seekers having wholesale access to SB-WLR and associated facilities.¹⁰³⁰ Absent regulation, ComReg's view is that Eircom, as a vertically-integrated Undertaking with SMP in the Regional FACO Markets, has the ability and incentive to refuse to provide access to SB-WLR. In this respect, continued access to such SB-WLR is necessary to ensure the development of sustainable and effective downstream RFTS competition and to minimise foreclosure concerns that could arise, absent such regulation.

10.80 ComReg also proposed to continue the obligation for Eircom to provide access to a range of ancillary services associated with SB-WLR on the basis that these services are important for facilitating the effectiveness of the SB-WLR Access remedy in addressing competition problems in the downstream RFTS market.

10.81 Such ancillary services include the various calling features (such as call barring, call waiting, and caller line identity restriction) which are set out in Section 4.2 of Eircom's SB-WLR Product Description (issue 3.0, dated 12 June 2017)¹⁰³¹ as may be amended from time to time, and published on Eircom's wholesale website (the '**Ancillary Services on SB-WLR**').

¹⁰²⁹ WLR, for the purposes of the discussion on remedies, encompasses wholesale access to PSTN, ISDN BRA, ISDN FRA and ISDN PRA.

¹⁰³⁰ On a forward-looking basis, as NG Broadband rolls out in the Regional FACO Markets, Access Seeker reliance on SB-WLR may decline. Changes to the EAs for which remedies are imposed in the Regional FACO Markets may result from the MTA and sunset periods detailed in Section 11 will apply to any of these changes.

¹⁰³¹ A copy is available on open eir's website at www.openeir.ie/Products/Voice/Single_Billing_-_Wholesale_Line_rental/.

10.82 ComReg proposed, however, that Eircom should no longer be required to provide access to wholesale low-value CPE rental (**'wholesale LV-CPER'**). This was on the basis that end users can purchase CPE from a large number of retail outlets nationwide and that, alternatively, SPs can, at their discretion, procure and supply CPE to their retail end users. A number of Eircom RFTS end users currently pay retail charges for the rental of their telephone handsets on top of their retail charges for line rental and calls. If Eircom's retail end users switch to RFTS provided by a competing SP purchasing SB-WLR, the end user can now readily purchase alternative CPE, cease the current CPE rental and return the rented telephone handset to Eircom.

Respondents' Views

10.83 Save for the provision of ISDN BRA (discussed in paragraphs 10.90 to 10.110 below), the only comments made by Respondents concerned the removal of the obligation to provide wholesale LV-CPER.

10.84 Eircom agreed that it should not be required to provide access to wholesale LV-CPER.¹⁰³² Vodafone, however, expressed serious concerns that the removal of Eircom's obligation to provide access to wholesale LV-CPER on the basis that there may be an incentive for Eircom retail to require the return of such CPE in the event that an end user switches from Eircom retail to an alternative SP. Vodafone was concerned to ensure that the return of rental CPE should be 'end user led',¹⁰³³ and Eircom retail should not use the return of low-value CPE as a tool to discourage migrations to another SP.¹⁰³⁴

ComReg's Assessment of Respondents' Views and Position

10.85 ComReg does not believe that Vodafone's concerns are likely to materialise in practice, and that Eircom retail's request to an end user that he or she return a low-value CPE in case of a transfer to an alternative SP, will prevent migrations to another SP. End users can purchase such CPE from a selection of retail outlets nationwide (including online) or alternatively SPs could, at their discretion, procure and supply CPE to their retail end users.¹⁰³⁵ ComReg is accordingly of the view that, in the circumstances, it is appropriate and justified not to require Eircom to provide wholesale LV-CPE.

10.86 ComReg received no comments in respect of the continuation of the obligation for Eircom to provide access to SB-WLR and Ancillary Services on SB-WLR.

¹⁰³² Eircom Submission, paragraph 226 (page 77).

¹⁰³³ Vodafone Submission, pages 7-8.

¹⁰³⁴ Vodafone Submission, point v (page 8).

¹⁰³⁵ 2020 Consultation, paragraph 10.83.

- 10.87 For the avoidance of doubt, ComReg notes that SB-WLR is an access product that is provided via a fixed (copper) line and Eircom is required to meet requests for SB-WLR where there is a spare/unused copper path at the copper Distribution Point ('**Copper DP**') serving the end user's premise. The obligation to provide SB-WLR requires that Eircom complete all necessary tasks required to connect any existing spare/unused copper creating a usable Access Path between the end user's premises and a port/line card in the relevant serving exchange. This includes, but is not limited to, carrying out (one or more) of the following tasks:
- (a) reconnect/jumper the spare/unused copper pair in the access network;
 - (b) install a drop wire from the DP to the end user's premises and connect it to the spare/unused copper pair;
 - (c) install a copper cable into a useable lead-in duct on the end user's premises and connect it to the spare/unused copper pair; or
 - (d) connect the spare/unused copper pair to a port/line card in the exchange.
- 10.88 Furthermore, SB-WLR is an access product that is provided via a fixed (copper) line. A Fixed Cellular Service ('**FCS**') is not an access product that is provided via a fixed (copper) line. Provision of FCS is not an alternative to SB-WLR. For the avoidance of doubt where SB-WLR is requested and there is a spare/unused copper path at the copper DP serving the end user's premise, the request for SB-WLR will not be met through the provision of FCS.
- 10.89 Where Eircom determines that the provision of SB-WLR is not reasonable, and rejects the SB-WLR service order, objective reasons for the rejection of the order must be provided by Eircom, as outlined in paragraph 10.64 above.

ISDN BRA

- 10.90 The obligation to provide access to SB-WLR imposed in the 2015 FACO Decision included an obligation to provide access to ISDN BRA. In the 2020 Consultation, ComReg proposed that Eircom should continue to have an obligation to provide Access to its ISDN BRA product in the Regional LL-FACO Market. ComReg noted that multiple PSTN lines are not an effective substitute for ISDN BRAs, given that the Direct Dial In¹⁰³⁶ ('**DDI**') feature of ISDN BRA is not supported on multiple PSTN lines. The ISDN DDI feature appears to be a key service feature utilised by businesses. Eircom, however, has expressed its intention to cease the provision of ISDN BRA.¹⁰³⁷

¹⁰³⁶ ISDN DDI enables an end user to call directly an end user by using the public ISDN numbering plan.

¹⁰³⁷ Information Notice: Eircom's request to withdraw access to Integrated Services Digital Network (ISDN) Basic Rate Access (BRA), ComReg Document 20/118, dated 09 December 2020.

- 10.91 On 6 April 2020, Eircom requested ComReg's approval under ComReg Decision D05/15 to withdraw access to ISDN BRA services, according to the following timetable:
- (a) End of sale for new ISDN BRA services from 30 January 2021; and
 - (b) The withdrawal of access to ISDN BRA services on 31 December 2024.
- 10.92 On 27 May 2020, Eircom requested that ComReg consider additional information it omitted from its 6 April 2020 request.
- 10.93 On 7 October 2020, ComReg refused Eircom's request to withdraw access to ISDN BRA services,¹⁰³⁸ on the basis that Eircom had not demonstrated to ComReg's satisfaction that it is no longer feasible for Eircom to meet access requests for ISDN BRA services as mandated in ComReg Decision D05/15.

Respondents' Views

- 10.94 Two Respondents (Eircom and Vodafone) expressed views on ComReg's proposal to require Eircom to provide Access to ISDN BRA in the Regional Low-Level FACO Market.
- 10.95 Eircom questioned the evidence relied on by ComReg for its conclusion that ISDN DDI appeared to be a key service feature and that multiple PSTN lines are not an effective substitute for ISDN BRAs, contending that such business needs can be met using SIP Trunking and Hosted PBX services. Eircom also was of the view that ComReg had not considered the technical risk and the key point of technical obsolescence. The objective of its network modernisation programme was to de-risk the technical failure of legacy services in the absence of vendor support and to maintain legacy ISDN BRA network/customer equipment in the absence of effective vendor support contrary to that. This, in Eircom's view, was a reckless approach to take and is one in which it has no possibility to mitigate or control.¹⁰³⁹
- 10.96 In circumstances where 80% of all ISDN BRAs lines are in the Urban Low-Level FACO Market, Vodafone expressed the concern that customers will retain ISDN BRA services (due to customer inertia) from Eircom when the Urban Low-Level FACO Market is deregulated.¹⁰⁴⁰

ComReg's Assessment of Respondents' Views and Position

- 10.97 For the reasons set out below, ComReg is of the view that a requirement on Eircom to provide ISDN BRA in the Regional LL-FACO Market continues to be justified, appropriate and proportionate.

¹⁰³⁸ Idem (ComReg Document 20/118 of 9 December 2020).

¹⁰³⁹ Eircom Submission, paragraph 228 (page 77).

¹⁰⁴⁰ Vodafone Submission, point vi (page 8).

- 10.98 First, ComReg notes that end users located further than approximately 3km (route distance) from the exchange have no technical alternative to an ISDN BRA line delivered using the copper access network, given that an ISDN FRA/PRA line will not operate at these route distances. An end user located within 3km (route distance) from the exchange would incur significant additional cost in upgrading to an ISDN FRA/PRA line, in comparison to the cost of the end user's existing ISDN BRA line. In the absence in the Regional FACO Markets of NG Broadband, end users' needs cannot be met using Managed VoIP (Managed VoB, in the case of LL-FACO, and SIP Trunking and Hosted PBX services in the case of HL-FACO). Absent an obligation on Eircom to continue to provide Access Seekers with ISDN BRA, Access Seekers would be left with no suitable products to offer their customers, in circumstances where the alternative modern equivalent product (e.g. Managed VoIP) will not be available.
- 10.99 Second, based on the data provided, Eircom has sufficient NTUs to cater for ISDN BRA demand in the Regional LL-FACO Market for the period of this market review. There are approximately [X ██████████ X] new ISDN BRA lines installed annually for businesses in the Regional FACO Markets. In the period Q4 2019 to Q3 2020, the ratio of ISDN BRA cease order completions to provide order completions was [X ██████████ X] in the Regional LL-FACO Market. In the Urban LL-FACO Market the ratio was [X ██████████ X]. As of 4 November 2020, Eircom had [X ██████████ X]¹⁰⁴¹ ISDN BRA Network Termination Units ('NTUs') in stock. Furthermore, Eircom can recover and reuse NTUs from ceased ISDN BRA services (from both urban and regional footprints). ComReg understands that Eircom will continue using legacy BRA equipment in its network to provide ISDN BRA services to its existing subscribers and so, has the ability to provide and maintain ISDN BRA services in the Regional LL-FACO Market.
- 10.100 ComReg also notes that the deregulation of the Urban LL-FACO Market will likely provide Eircom with additional NTUs to recover and use in the Regional LL-FACO Market, as required. As of Q3 2020, approximately 80% of the national ISDN BRA installed base was within the Urban LL-FACO Market. After the relevant sunset period has expired, Eircom will no longer be required to provide ISDN BRA in the Urban LL-FACO Market. ComReg expects that during the sunset period, in the Urban LL-FACO Market, SPs will migrate the majority of their end users from ISDN BRA to an alternative modern equivalent product (e.g. Managed VoIP).

¹⁰⁴¹ Eircom Product Development Workshop slide pack, dated 4 November 2020.

- 10.101 Furthermore, given the ongoing rollout¹⁰⁴² of NG Broadband networks in the Regional LL-FACO Market, ComReg's view is that SPs are likely to offer end users an alternative modern equivalent product (e.g. Managed VoIP) where NG Broadband becomes available to order at the end user's premises.
- 10.102 Finally, ComReg does not believe that Eircom's concerns in respect of technical obsolescence justify withdrawing Eircom's obligation to provide ISDN BRA in the Regional LL-FACO Market. Presently, Eircom has the technical ability to provide and maintain ISDN BRA services in the Regional LL-FACO Market. As of 21 December 2020, ISDN BRA services are still provided and maintained, with vendor support (albeit limited), in several European countries with no current plans in these countries to retire the service.¹⁰⁴³
- 10.103 ComReg also notes that Eircom's network modernisation project does not affect Eircom's ability to offer ISDN BRA services.
- 10.104 In November 2019, Eircom proposed to replace all [X ██████████ X] Remote Subscriber Units ('**RSU(s)**') in its network with MSANs which will be controlled by Call Control Servers ('**CCS(s)**'), i.e., PSTN Emulation.^{1044, 1045} This will involve jumpering all active lines from an existing RSU to a new MSAN located on the same local exchange. The MSAN will emulate existing SB-WLR functionality (with the exception of ISDN BRA) towards the end user. The effect of this modernisation will be to reduce the network architecture from three layers to one effective layer.
- 10.105 ComReg understands that as part of the project, existing E10 and AXE ISDN BRA shelves will be rehomed in selected local exchanges to a remote E10/AXE switch. Time-Division Multiplexing ('**TDM**') transmission is used to connect the E10/AXE switch to both the ISDN BRA shelves and to the Media Gateway ('**MGW**'), as shown in Figure 63 below. This network architecture supports ISDN BRA services so that Eircom has the ability, currently, to provide Access to ISDN BRA in the Regional Low-Level FACO Market.

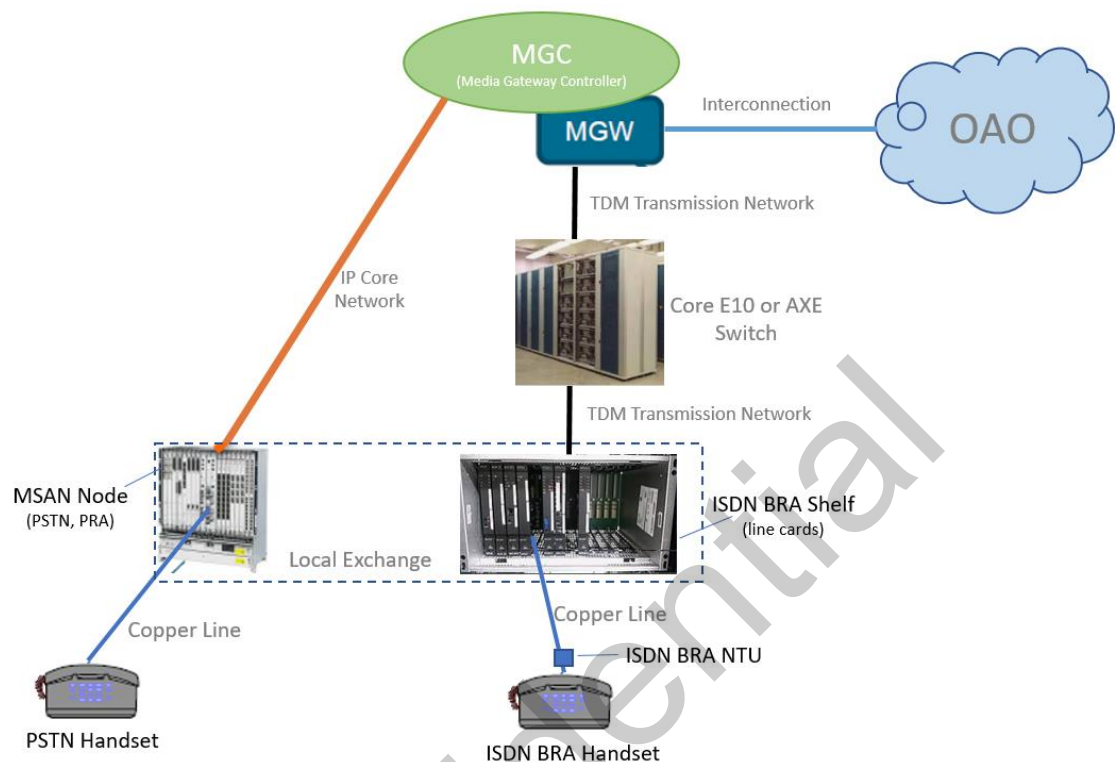
¹⁰⁴² By Eircom, SIRO and Virgin Media, and the expected commencement of rollout by NBI.

¹⁰⁴³ Denmark, Italy, Norway, Spain and Sweden (Source: Cullen International, 21 December 2020).

¹⁰⁴⁴ PSTN Emulation Architecture, ITU-T, Y.2031 <https://www.itu.int/rec/T-REC-Y.2031-200609-I/en>.

¹⁰⁴⁵ TISPAN, PSTN/ISDN Emulation Subsystem (PES) Functional Architecture, ETSI ES 282 002 v1.1.1 https://www.etsi.org/deliver/etsi_es/282000_282099/282002/01.01.01_50/es_282002v010101m.pdf.

Figure 63: Eircom's network modernisation architecture



10.106 Furthermore, ComReg is of the view that key technical risks can be managed over the lifetime of this market review, having regard to:

- (a) The availability of ISDN BRA NTUs (see paragraph 10.99 to 10.100 above);
- (b) The reliability of ISDN BRA exchange-based equipment (see paragraph 10.107 below); and
- (c) The availability of spare TDM equipment (see paragraph 10.108 below).

10.107 ComReg notes that the exchange fault index¹⁰⁴⁶ for ISDN BRA exchange-based equipment is extremely low at [~~]¹⁰⁴⁷ in 2017, 2018 and 2019 respectively, so that the reliability of ISDN BRA exchange-based equipment does not pose a technical risk. Given the current level of ISDN BRA cessations, Eircom has an abundance of ISDN BRA exchange-based equipment which can be reused.~~

¹⁰⁴⁶ For a given 12-month period: Number of exchange-based faults / Number of active lines.

¹⁰⁴⁷ Based on information obtained from Eircom on 1 July 2020.

- 10.108 In implementing the Network Modernisation Project for PSTN and ISDN PRA, Eircom will reduce the requirements for TDM backhaul and can retire significant spare TDM transmission capacity as the project is implemented over the next 3 to 4 years. In addition, Eircom has the ability to implement TDM (end-to-end) paths on its NGN Ethernet network.¹⁰⁴⁸
- 10.109 ComReg is accordingly satisfied that it is justified, appropriate and proportionate to maintain a requirement that Eircom provides ISDN BRA in the Regional LL-FACO Market.
- 10.110 Finally, ComReg does not agree with Vodafone's view (outlined in paragraph 10.96 above) that customers will retain ISDN BRA services (due to customer inertia) from Eircom when the Urban LL FACO Market is deregulated. NG Broadband inputs are generally available in the Urban LL-FACO Market, hence Vodafone has the ability to offer its customers Managed VoIP. In the Regional FACO Markets, NG Broadband inputs tend to be less available and consequently ComReg is imposing an obligation on Eircom to provide ISDN BRA in the Regional LL-FACO Market.

Interconnection services and associated co-location facilities

- 10.111 ComReg proposed in the 2020 Consultation, pursuant to Regulation 12(2)(f) and (i) of the Access Regulations, to require Eircom to provide access to a range of specific interconnection services and co-location facilities that are associated with the provision of access to FACO.
- 10.112 Interconnection services essentially relate to the physical and/or logical connectivity between network switching points (typically exchanges or their equivalents) to facilitate the handover of traffic within or between SPs' networks.
- 10.113 Eircom currently supplies a range of interconnection services to FACO Access Seekers pursuant to its existing SMP obligations:
- (a) In-Span Interconnect/Handover ('**ISI/H**'), which means the connection between the Eircom Exchange and the alternative SP's nominated Point of Handover ('**POH**');
 - (b) Customer-Sited Interconnect/Handover ('**CSI/H**') does not require any additional infrastructure build by the SP to further extend its network as Eircom builds into the SP's site; and
 - (c) In-Building Interconnect/Handover ('**IBI/H**'), which means the connection between the Eircom Exchange and the alternative SP's equipment within the exchange or equivalent facility.

¹⁰⁴⁸ Wholesale CES Service (Version 2.0, 21/06/2017), published on <https://www.openeir.ie/products/data/next-generation-ethernet/>

- 10.114 The above interconnection products (together referred to as '**Current Generation ('CG') Interconnection Services**') support the purchase of FNA FVCO.
- 10.115 ComReg expressed the view in the 2020 Consultation that interconnection products, services and facilities are likely to continue to be a strong complement to the FNA FVCO component of FACO. Given the ubiquity of Eircom's network and the number of its associated points of interconnection, an Access Seeker would require interconnection to a large number of switching points in order to purchase primary level FNA FVCO¹⁰⁴⁹ (or, indeed, to purchase FVCT).¹⁰⁵⁰ In order to avail of access to FNA FACO products, services and facilities in the Regional FACO Markets, Access Seekers require access to interconnection services with Eircom for the purpose of taking their retail end users' originated calls (over SB-WLR) onto their own network.
- 10.116 The continued requirement for various CG Interconnection Services (including in terms of the associated co-location requirements and different Points of Handover) recognises the differing degrees of infrastructure deployment employed by SPs in availing of FACO. For example, not all SPs have sufficient infrastructure of their own that is close enough to Eircom's network in order to be able to economically or commercially avail of Eircom's IBI/H or ISI/H services. Conversely, if only CSI/H were available, then larger scale Access Seekers would not be in a position to take advantage of their own infrastructure deployments to lower their costs of interconnection (and could end up paying for Eircom products, services and facilities which are unnecessary for the services that they require).
- 10.117 In addition to the CG Interconnection Service, ComReg proposed to require Eircom to implement an NG Interconnection Service, supporting as the voice control protocol, Session Initiation Protocol ('**SIP**') as defined by the Internet Engineering Task Force standards (based on Requests for Comment such as RFC3261).¹⁰⁵¹
- 10.118 This standard is the original and most basic form of SIP, and the most widely implemented as standard in vendor platforms. This will allow for a more straightforward interoperability verification between SPs' SIP platforms.

¹⁰⁴⁹ Eircom's PSTN network hierarchy consists of three levels: Primary, Secondary and Tertiary levels. Primary level is the deepest level in the network closest to the end user while Tertiary level is the highest level in the network.

¹⁰⁵⁰ Eircom also has SMP in the FVCT market and has had a range of regulatory obligations imposed upon it. Further details are available in the **2019 Termination Decision**.

¹⁰⁵¹ RFC3261 – SIP: Session Initiation Protocol - <https://tools.ietf.org/html/rfc3261>

- 10.119 The 2020 Consultation noted that Eircom was in the process of developing an NG Interconnect Service,¹⁰⁵² in response to a request from an Access Seeker of 27 February 2018, which launch date had been postponed from 31 January 2020 (as announced on 19 July 2019) to 31 August 2020 (as announced on 10 October 2019). ComReg proposed that an NG Interconnection Service product be made available to Access Seekers no later than 3 months from the Effective Date of this Decision, in order to avoid any further delay to the introduction of NG Interconnection Service, thereby prolonging CG Interconnection Service and associated costs for Access Seekers.
- 10.120 The availability of the NG Interconnection Service will also facilitate Access Seekers in the retirement of legacy TDM equipment which was installed to implement the CG Interconnection Service. Generally, this legacy switching equipment is end of life, of an antiquated nature and has limited support from vendors of the equipment. There can be difficulties in sourcing spare parts (cards, etc.) for this equipment and staff with knowledge of CG technology are limited both in the SP's workforce and the equipment vendor's workforce. NG Interconnection Service availability will mean that an Access Seeker will not be required to purchase unnecessary TDM equipment or licences to enable a CG Interconnection Service to Eircom.
- 10.121 IP Interconnect is a modern and proven technology which is widely available throughout Europe¹⁰⁵³ and is, in general, more cost effective than traditional TDM-based interconnection.
- 10.122 ComReg proposed to specify a number of features of the NG Interconnection Service to be provided by Eircom, including that it performs TDM to IP conversion¹⁰⁵⁴ of an Access Seeker's originating Regional FACO traffic before conveying it to the Access Seeker's specified POH, with the underlying transport network being the Next Generation Network ('NGN'). The POH for Regional FACO traffic was proposed to be the Access Seeker's nominated WEIL(s)¹⁰⁵⁵ served from the NG Interconnection Service double-tandem exchange(s), or equivalent.

¹⁰⁵² IP interconnection product currently under development by Eircom (ID 511: SIP/SIP-I Voice Interconnection over IP, forecast launch 31 August 2020).

¹⁰⁵³ BEREC Report: Case Studies on IP-based Interconnection for Voice Services in the European Union

https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/5579-case-studies-on-ip-based-interconnection-for-voice-services-in-the-european-union

Cullen International 2019: IP interconnection for fixed services

<https://www.cullen-international.com/product/documents/CTTEEU20190116>.

¹⁰⁵⁴ For traffic from TDM RSUs.

¹⁰⁵⁵ All WEIL variants i.e., In-Building Handover ('IBH'), In-Span Handover ('ISH'), Customer-sited Handover ('CSH') and Edge Node Handover ('ENH'). ENH means the connection from Eircom's network through a dedicated Aggregation Node (installed at the Access Seeker's MPoP) which interfaces with the Access Seeker's equipment.

- 10.123 ComReg further proposed that, in the event that the CG Interconnection Service double-tandem exchanges are different from the NG Interconnection Service double-tandem exchanges, Eircom transport the NG Interconnection Service (Regional FACO) traffic to the Access Seeker's WEIL at the CG Interconnection Service double-tandem exchange(s), for a period of 5 years, for the same price as if the Regional FACO traffic was presented at a POH at the NG Interconnection Service double-tandem exchanges. This will allow an Access Seeker to obtain a return on its sunk investment (e.g. backhaul, co-location) at, or in the vicinity of, the CG Interconnection Service double-tandem exchange(s) for a period of 5 years and provide sufficient time for the Access Seekers to plan and install new infrastructure at, or in the vicinity of, the NG Interconnection Service double-tandem exchange(s).
- 10.124 QoS functionality available on Eircom's WEIL product can ensure the prioritisation of voice traffic on the WEIL over other data traffic.
- 10.125 ComReg noted that the availability of an NG Interconnection Service can facilitate Access Seekers who wish to migrate their interconnect traffic from CG.

Respondents' Views

- 10.126 Four Respondents (ALTO, BT, Eircom and Vodafone) expressed a view on ComReg's proposal to require Eircom to provide Access to the NG Interconnection Service. Eircom considered that it was an unnecessary requirement, given that it is in the final stages of launching its NG Interconnection service, and that an obligation applies to all operators under Regulation 5 of the Access Regulations 2011.¹⁰⁵⁶
- 10.127 ALTO, BT and Vodafone agreed with ComReg's proposal to impose an obligation on Eircom to provide an NG Interconnection Service.^{1057 1058 1059}
- 10.128 Vodafone stated that Eircom should have an obligation to transport FACO traffic to the Eircom primary exchanges (noting however ComReg's comments that Eircom's introduction of MSANs would remove the Primary and Secondary Interconnection Layers).¹⁰⁶⁰ Vodafone stated that, in any event, SPs should not be commercially disadvantaged by migrating from the CG Interconnection Service to the NG Interconnection Service.¹⁰⁶¹

¹⁰⁵⁶ Eircom Submission, paragraph 223 (page 76).

¹⁰⁵⁷ ALTO Submission, page 13.

¹⁰⁵⁸ BT Submission, page 19.

¹⁰⁵⁹ Vodafone Submission, page 7.

¹⁰⁶⁰ 2020 Consultation, paragraphs 10.101.

¹⁰⁶¹ Vodafone Submission, page 7.

10.129 ALTO and BT asked that Eircom be required to allow all operators to choose to use the NG Interconnection Service for both Urban and Regional call originating traffic. ALTO explained that this would avoid the possibility that some operators could be restricted to high-cost legacy TDM services, in the case of voice traffic originating from the Urban FACO Markets.^{1062 1063}

ComReg's Assessment of Respondents' Views and Position

10.130 Eircom launched its NG Interconnection Service¹⁰⁶⁴ on 1 October 2020 and, as a result, it is no longer necessary to require Eircom to make available an NG Interconnection Service product to Access Seekers no later than 3 months after the Effective Date of this Decision. However, ComReg does not agree that this makes the imposition of an obligation unnecessary.

10.131 While an NG Interconnection Service has been made available since 1 October 2020, it is reasonable, proportionate and justified to specify that NG Interconnection falls within the scope of the products and services that Eircom is required to provide. It allows ComReg to ensure in the most effective and time-efficient manner that there is clarity as to what the minimum characteristics of such a service are, and to facilitate compliance. Having regard to the importance of interconnection for the purpose of the Regional FACO Markets, as outlined above, the provisions of Regulation 5 of the Access Regulations, whereby operators are required to *negotiate* interconnection when requested to do so by another Undertaking, are not sufficient to avoid distortions arising from Eircom's SMP.

10.132 Having considered Vodafone's views, ComReg's position is that it is not necessary to require Eircom specifically to transport FACO traffic to Eircom primary exchanges, given that Eircom's NG Interconnection Service transports FACO traffic to Eircom exchanges capable of supplying a wholesale WEIL product¹⁰⁶⁵ (which includes primary tandem/secondary and double-tandem/tertiary exchanges). Hence, ComReg is satisfied that this facility offers SPs the opportunity to design and implement an efficient interconnection when migrating from a CG Interconnection Service to a NG Interconnection Service

10.133 ComReg does not believe that it would be necessary or appropriate to impose on Eircom the condition suggested by ALTO and BT, namely that Eircom is required to ensure that the NG Interconnection Service allows all operators to choose to use the NG Interconnection Service for both Urban and Regional FACO call originating traffic.

¹⁰⁶² ALTO Submission, page 13.

¹⁰⁶³ BT Submission, page 19.

¹⁰⁶⁴ CRD 511: SIP/SIP-I Voice Interconnection over IP.

¹⁰⁶⁵ 154 (full WEIL) exchanges as listed the Eircom MI WHQA Rollout Plan (Version 14.2, January 2021).

10.134 For the avoidance of doubt, ComReg notes that Eircom, following the request for NG Interconnection access, was obliged under ComReg Decision D05/15 to provide NG Interconnection so that, during the sunset period, Eircom is required to make available NG Interconnection in respect of FACO originating traffic from both the Urban and Regional FACO Markets. However, after the sunset period, the NG Interconnection Service obligation will apply solely to FACO originating traffic from the Regional FACO Markets, and Eircom's obligations in respect of traffic originating from the Urban FACO Markets will be limited to the obligation set out in Regulation 5 of the Access Regulations.

Requirement to negotiate in good faith

10.135 In the 2020 Consultation, ComReg proposed to impose, pursuant to Regulation 12(2)(b) of the Access Regulations, an obligation on Eircom to negotiate in good faith with Undertakings requesting access to FACO and associated facilities. Having regard to the competition problems identified in Section 9, ComReg considers this measure to be proportionate and justified in order to ensure that genuine *bona fide* negotiations take place between Eircom and Access Seekers in relation to access, particularly given the identified competition problem that Eircom has the ability and incentive to expressly or constructively refuse to provide access to FACO. It is also intended to address imbalances in bargaining power¹⁰⁶⁶ between Eircom and Access Seekers in the negotiation process, and reduce incentives to unnecessarily prolong negotiations, thereby encouraging a more efficient and effective consideration of reasonable requests for access and provision of such access. Overall, an obligation to negotiate in good faith will support the provision of efficient and effective access to FACO and associated facilities, thereby promoting the development of downstream competition, to the benefit of consumers.

10.136 ComReg also noted that the obligation to negotiate in good faith implies that the responsibility rests with Eircom to demonstrate that its approach to negotiations with Undertakings was in good faith and that any unmet access requests¹⁰⁶⁷ can be shown to have been unreasonable by reference to objective criteria. ComReg referred to Recital 19 of the Access Directive, now Recital 191 of the EECC, according to which:

¹⁰⁶⁶ As noted at paragraph 9.62 above, ComReg considers CBP to be ineffective in constraining Eircom's SMP in the Regional FACO Markets.

¹⁰⁶⁷ For the avoidance of doubt, access requests include Access Seeker requests for access to specified wholesale products/services (listed in 10.74 (a) above). For example, SB-WLR orders with 'rejected' and 'undeliverable' status fall within the scope of this obligation.

“Where obligations are imposed on undertakings that require them to meet reasonable requests for access to and use of networks elements and associated facilities, such requests should only be refused on the basis of objective criteria, such as technical feasibility or the need to maintain network integrity...”

- 10.137 ComReg therefore proposed that, should an access request be refused on the grounds that it is not a RAP request, then the detailed objective criteria/reasons for refusing same must be provided by Eircom to the Access Seeker and ComReg at the time of refusal. This will also improve regulatory effectiveness and efficiency, should any complaint or dispute be raised with ComReg, as it will provide a useful audit trail for compliance monitoring purposes.
- 10.138 ComReg also noted that the obligation to negotiate in good faith encompasses the way in which Eircom conducts the negotiations, as well as the positions that it takes in them. In investigating an allegation of a failure to negotiate in good faith, ComReg might draw inferences from Eircom’s behaviour and from the adequacy of the processes and controls it has put in place to assure compliance with this obligation. For example, ComReg might draw adverse inferences from behaviours including, but not limited to the following:
- (a) A failure on the part of Eircom to behave in the way that a willing seller would behave when negotiating with a willing buyer;
 - (b) A failure by Eircom to respond to proposals made by Access Seekers in a timely and constructive manner;
 - (c) A failure by Eircom to deploy participants in the negotiations who had appropriate knowledge and authority, so that negotiations could proceed in a timely manner;
 - (d) The absence of effective controls to assure that decision-making processes within Eircom in relation to the negotiations could not be influenced by concerns about the commercial impact on Eircom's downstream retail business; or
 - (e) The presence of incentives for individuals within Eircom who participated in or influenced the negotiations that might lead them to receive greater financial or other benefits if the negotiations were to be delayed, or to result in an outcome other than that which might have been freely negotiated between a willing buyer and a willing seller.
- 10.139 The precise nature of any investigation, and the degree to which inferences might be drawn from behaviour, would need to be assessed in the context of the actual circumstances of any particular case.
- 10.140 In ComReg’s view, this remedy would not impose any significant additional burden on Eircom beyond that which would normally be expected to occur in circumstances involving fair commercial negotiations between parties.

Respondents' Views

10.141 Only Eircom expressed a view on ComReg's proposal to require it to negotiate in good faith.¹⁰⁶⁸ Eircom disputed that the obligation to negotiate in good faith should apply to requests for Access, saying that the draft Decision Instrument in the 2020 Consultation confirmed that the obligation in respect of Access requests is limited to meet all 'reasonable requests', and the obligation to negotiate in good faith relates solely to SLA negotiation. Eircom also took issue with the set of criteria listed in the 2020 Consultation as indicators of whether negotiations are conducted in good faith, saying that negotiation in 'good faith' is a contract law concept whose parameters are established in case law, which ComReg could not unilaterally replace. Eircom also noted that the new criteria did not form part of the Decision Instrument. Contrary to ComReg's suggestion, these new criteria would, in Eircom's view, result in imposing a significant additional burden, for instance, in terms of the implications for record keeping, in case of disputes in the future.

ComReg's Assessment of Respondents' Views and Position

10.142 ComReg notes that it was very clear in the draft Decision Instrument in the 2020 Consultation that the obligation proposed by ComReg extended not only to the negotiation of SLAs, but also to all negotiations in connection with requests for access. Paragraph 9.4(i) of the draft Decision Instrument clearly stated that Eircom is obliged to negotiate in good faith with Undertakings requesting Access.

10.143 As for Eircom's comments regarding the 'criteria' that ComReg had listed at paragraph 10.110 of the 2020 Consultation, ComReg listed a (limited) number of types of behaviours and circumstances from which ComReg might draw inferences, taking into account Eircom's regulatory processes and associated controls. They are not meant as anything other than examples of behaviours from which negative inferences could be drawn, rather than specific criteria. On that basis, the examples were not listed in the draft Decision Instrument and are not listed in the Decision Instrument attached to this Decision. As explained at paragraph 10.111 of the 2020 Consultation, the precise nature of the behaviours, and the degree to which inferences might be drawn from behaviour, can only be assessed in the context of the actual circumstances of any particular case.

10.144 For the same reasons, ComReg does not agree that it is replacing 'good faith' contract law parameters (established in case law) with ComReg's own prescriptive criteria for assessing when a negotiation is in good faith.

¹⁰⁶⁸ Eircom Submission, paragraph 231 (pages 78-79).

10.145 ComReg does not agree that the obligation imposed in respect of good faith negotiations (either for access or in relation to SLAs), including any consequential record keeping activity¹⁰⁶⁹ that Eircom may find necessary in case of future disputes, represents a significant additional burden for Eircom. In relation to SLAs, the requirement to provide an Undertaking with details of the SLA Negotiation Period within one month of their request for a new SLA or an amendment to an existing SLA is retained in this Decision. In addition, ComReg also expects that documentation (e.g. agreed minutes, proposals etc.) would be exchanged between parties during commercial negotiations but nothing further or specific is required of Eircom as a result of the requirement to negotiate in good faith. For access requests, the obligation in this Decision is to provide objective reasons justifying refusals or part grants of access to the Access Seeker making the request and also to ComReg. As discussed above, ComReg considers that in practice this does not introduce a significant additional burden on Eircom, as the same information which must be provided to ComReg is already available to Eircom, as it must be provided to the relevant Access Seeker. Hence, ComReg's view remains that this remedy does not impose any significant additional burden on Eircom beyond that which would normally be expected to occur in circumstances involving fair commercial negotiations between parties.

10.146 In the light of this, ComReg finds that it is appropriate, justified and proportionate to impose on Eircom an obligation to negotiate in good faith, in the form and to the extent set out above and in the Decision Instrument.

Requirement not to withdraw access to facilities already granted

10.147 Pursuant to Regulation 12(2)(c) of the Access Regulations, ComReg proposed to impose on Eircom an obligation not to withdraw access to facilities already granted without the prior approval of ComReg. For the avoidance of doubt, this does not mean there could not be objectively justified circumstances for withdrawing access to FACO and associated facilities, however, this would have to be considered on the basis of the facts of the particular circumstances governing the proposed withdrawal of access.

¹⁰⁶⁹ Eircom Submission, paragraph 231 (page 78-79).

- 10.148 Having regard to the competition problems identified in Section 9, ComReg was concerned that, as networks develop, and owing to Eircom's SMP, Eircom would have the incentive to make changes to points of interconnection or types of interconnection offered or provided, which may be to the detriment of competition in the Regional FACO Markets. ComReg recognised that a balance needs to be struck to properly account for the investments made by Eircom in providing FACO, and, more particularly, NGA FACO, and the investments made by Access Seekers in availing of the FNA FACO service or, indeed, SPs self-supplying NGA FACO. The requirement that Eircom may only withdraw Access to facilities already granted subject to ComReg's prior approval allows the appropriate balance to be struck, and promotes regulatory certainty for all parties, without unduly restricting investment incentives.
- 10.149 More specifically, ComReg proposed that Eircom should notify ComReg, in writing, of any proposal to withdraw access to facilities already granted, giving detailed reasons for the proposal, including the impacts that the withdrawal of access is likely to have on existing FACO purchasers in the Regional FACO Markets. ComReg indicated that a decision to grant or not grant approval for the proposed withdrawal may, although not in all cases, require prior public consultation.

Respondents' Views

- 10.150 Only Eircom expressed a view on ComReg's proposal that Eircom shall not withdraw Access to facilities already granted without the prior approval of ComReg.
- 10.151 Eircom queried "*the unjustified non-payment of wholesale charges*"¹⁰⁷⁰ as an example of a withdrawal of access,¹⁰⁷¹ and Eircom was concerned that this implied that the obligation not to withdraw applies to the termination of individual contracts as permitted by their terms, rather than being limited to the general withdrawal of Access to a particular facility. Eircom stated that this is not how it understands the obligation in the draft Decision Instrument.

ComReg's Assessment of Respondents' Views and Final Position

- 10.152 Eircom appears to have misinterpreted paragraph 10.113 of the 2020 Consultation. In that paragraph, ComReg explained that the proposed obligation not to withdraw Access to facilities already granted

¹⁰⁷⁰ 2020 Consultation, paragraph 10.113.

¹⁰⁷¹ Eircom Submission, paragraph 231 (pages 78-79).

“[f]or the avoidance of doubt, [did] not mean there are no objectively justified circumstances for withdrawing access to FACO and associated facilities (such as the unjustified non-payment of wholesale charges), however, this would have to be considered on the basis of the facts of the particular circumstances governing the proposed withdrawal of access”.

10.153 The purpose of the obligation not to withdraw Access to facilities already granted without ComReg’s prior approval is to avoid the scenario where Access Seekers relying on certain regulated products, services or facilities provided by Eircom for, in turn, providing services to their customers are left with no adequate alternative for serving their customers, were Eircom to cease making available any of those products, services or facilities to all or certain Access Seekers, without adequate justification and/or appropriate notice. ComReg accepts that termination of a contract for non-payment of regulated wholesale charges in accordance with its terms and conditions falls outside the scope of the obligation not to withdraw Access to facilities already granted. Whether or not this is the case in a specific instance will depend on the actual facts of the particular circumstances governing termination.

Requirement to grant open access to technical interfaces, protocols and other key technologies

10.154 ComReg proposed in the 2020 Consultation to impose on Eircom, pursuant to Regulation 12(2)(e) of the Access Regulations, an obligation to grant open access to technical interfaces, protocols and other key technologies that are indispensable for the interoperability of services. Having regard to the competition problems identified in Section 9, this remedy is designed to ensure that, in the context of the provision of access to FACO and associated facilities (including Interconnection Services), interoperability of networks and services is ensured.

10.155 No specific comments were received from Respondents to the 2020 Consultation in respect of this proposal, and ComReg is satisfied that a requirement on Eircom to grant open access to technical interfaces, protocols and other key technologies that are indispensable for the interoperability of services is justified and proportionate, and will contribute to the development of sustainable downstream competition to the ultimate benefit of consumers.

Requirement to provide access to co-location or other forms of associated facilities sharing

10.156 ComReg proposed in the 2020 Consultation to impose on Eircom pursuant to Regulation 12(2)(f) of the Access Regulations an obligation to provide access to co-location or other forms of associated facilities sharing necessary to support the provision of access to FACO and associated facilities, including but not limited to that which is necessary or required to facilitate Access Seekers' ability to effectively and efficiently avail of the Interconnection Services discussed in paragraphs 10.111 to 10.134 above.

10.157 No specific comments were received from Respondents to the 2020 Consultation in respect of this proposal and ComReg is satisfied that such a requirement is proportionate and justified. Absent such a remedy, Eircom could restrict access to, or use of, co-location for the purpose of facilitating the use of Interconnection Services by Access Seekers which could, in turn, restrict or distort competition in downstream or adjacent markets.

Requirement to provide access to services needed to ensure interoperability of end-to-end services to end users, including facilities for intelligent network services

10.158 In the 2020 Consultation, ComReg proposed to impose on Eircom pursuant to Regulation 12(2)(g) of the Access Regulations an obligation to provide access to services that are needed by Access Seekers to ensure interoperability of end-to-end services to end users, including facilities for intelligent network services.

10.159 No specific comments were received from Respondents to the 2020 Consultation in respect of this proposal and ComReg is satisfied that such a requirement is justified and proportionate. Absent such a remedy in support of Eircom's general access obligation, Eircom could potentially impede or raise the costs associated with Access Seekers' use of FACO or Interconnection Services in the Regional FACO Markets, by making services non-interoperable through, for example, effective or constructive refusal of access to intelligent network services that are necessary for FACO, thereby undermining the effectiveness of the access obligations.

Requirement to provide access to Operational Support Systems (OSS) or similar software systems necessary to ensure fair competition in the provision of products, services and facilities

10.160 ComReg proposed in the 2020 Consultation to impose on Eircom pursuant to Regulation 12(2)(h) of the Access Regulations an obligation on Eircom to provide access to OSS or similar systems to ensure fair competition in the provision of products, services, and facilities.

- 10.161 No specific comments were received from Respondents to the 2020 Consultation in respect of this proposal and ComReg is satisfied that such a requirement is justified and proportionate. Access to Eircom's OSS plays an important role in Eircom's provisioning of FACO services (such as SB-WLR etc.) and access to fault and in-service management. Access to OSS is essential to the effectiveness and efficiency of the operational aspects of the supply of FNA FACO products, services and facilities that are used as inputs to the supply of RFTS to end users.
- 10.162 Were Access Seekers to be unable to gain effective and efficient access to Eircom's OSS, they would likely be at a significant competitive disadvantage relative to Eircom's retail arm in their provisioning of RFTS. Having regard to the competition problems discussed in Section 9, this remedy is needed to support Eircom's general access obligation because Eircom has the ability and the incentives to impede access to its OSS in order to leverage its SMP into downstream and adjacent markets.
- 10.163 Vodafone in its Submission¹⁰⁷² highlighted the turnaround time of a Line Enquiry ('LE') order (up to 2 days) being too long. The LE order determines the status of a line at a premises in advance of submitting a provide order. As the FACO market was designated as national, in the 2015 FACO Decision, it was not necessary to highlight whether regulated SB-WLR was available or not at an address. However, as a result of this Decision, Access Seekers will need a method to determine whether an address is in the Regional FACO Markets. Hence, ComReg has concluded that Eircom must supply an accurate offline file to Access Seekers containing all end user addresses in the Regional FACO Markets. The offline file must include at least the ARD ID, the address, the Eircode (where available), and the exchange code. The first file must be made available within one (1) month of the Effective Date of this Decision. An updated file must be made available within one (1) month of the effective date of the MTA to reflect any amendments to the regulated area, arising from the MTA. The file must be updated on a 3-monthly basis (aligning with any address inventory updates). The file must be made available, in a suitable format,¹⁰⁷³ on the UG and on Eircom's wholesale website. This obligation is listed as an access obligation in the Decision Instrument of this Decision.

¹⁰⁷² Vodafone submission, pages 7-8.

¹⁰⁷³ '.txt' or '.csv' format.

Requirements governing fairness, reasonableness and timeliness of access

- 10.164 As noted in Section 9, Eircom has the ability and incentive to constructively refuse to supply access (including delay or other behaviours which have the effect of raising rivals' costs) to FNA FACO products, services and facilities in the Regional FACO Markets by engaging in non-price leveraging behaviours.
- 10.165 In the 2020 Consultation, ComReg proposed accordingly that certain conditions attach to Eircom's access obligations in order to ensure that access to FNA FACO products, services and facilities is provided in a fair, reasonable and timely manner. Such conditions should also ensure consistency in the treatment of requests for access. ComReg considers that this remedy will ultimately contribute to the development of sustainable downstream competition, to the ultimate benefit of consumers.
- 10.166 No specific comments were received from any Respondents in respect of ComReg's proposals, and ComReg accordingly adopts the proposals made in the 2020 Consultation, as described below, in terms of the requirements of fairness, reasonableness, and timeliness.
- 10.167 First, where requests for access to FNA FACO products, services and facilities, including SB-WLR, are made in conjunction with requests for other services (those required to be provided on foot of SMP requirements imposed in other SMP regulated markets, such as the WLA Market), Eircom shall ensure that such requests for access are provided to Access Seekers in a concurrent timeframe.
- 10.168 Second, Eircom shall negotiate in good faith and agree Service Level Agreements (SLAs) as follows:
- (a) Eircom shall negotiate in good faith with Access Seekers SLAs meeting the conditions set out below, including amendment to an existing SLA. For the purpose of these negotiations, Eircom shall within one month of the receipt of an SLA request provide the Access Seeker concerned with details of the proposed negotiation period. Negotiations shall conclude, unless otherwise agreed by ComReg, within six months, unless Eircom had sought from ComReg within one month of the request and obtained an extension to the six month period.
 - (b) Service Level Agreements shall include binding commitments by Eircom to service levels when supplying FACO to Access Seekers, and provide for fair and reasonable service credits where committed service levels are not met;
 - (c) SLAs shall detail how the service credits are calculated, include the provision of a sample calculation; and provide for the automatic application of service credits, when due, in a timely and efficient manner;

- (d) SLAs shall set out the methodology and service parameter to be used for the definition of the guaranteed service levels under the SLA, including performance metrics, being the aggregate performance levels achieved by Eircom within a specified period.

10.169 These conditions essentially mirror those imposed in the 2015 FACO Decision. These obligations will:

- (a) Encourage Eircom to achieve acceptable levels of service performance in the provision of products, services, and facilities to Access Seekers and to ensure that a level playing field is created in terms of the access provided by Eircom to Access Seekers and that which is self-supplied;
- (b) Ensure that Eircom engages in genuine bona fide negotiations with Access Seekers when seeking to agree appropriate SLAs;
- (c) Provide assurances to Access Seekers surrounding the levels of service provided by Eircom so that they are, in turn, able to offer service assurances to their own customers (and prospective customers);
- (d) Ensure that Eircom is adequately incentivised to achieve the targets set out in its SLAs by ensuring that any service credits to be paid by Eircom to Access Seekers are fair and reasonable;
- (e) Establish performance metrics against which the standards of performance achieved by Eircom can be readily measured and compared; and
- (f) Hold Eircom accountable for its committed service levels by establishing a mechanism for Access Seekers to receive service credits where service levels are not achieved by Eircom.

10.170 SLAs are intended to prevent Eircom from engaging in actual or constructive refusal to supply effective and efficient access to FNA FACO products, services and facilities. Ultimately, this will support the aim of ensuring fair competition in the provision of products, services and facilities by allowing Access Seekers to compete on a level playing field with Eircom (and its wholesale customers) in the RFTS markets.

10.171 While, typically, SLA negotiations might commence at an industry meeting, they may also commence on foot of a written request for access from an Access Seeker(s). Where Eircom accedes to the request to amend the SLA, the agreed negotiation timeframe should be recorded in the meeting minutes or other document exchanged by the parties (as appropriate).

- 10.172 While negotiations in respect of a new SLA¹⁰⁷⁴ or an amendment to an existing or proposed SLA shall be concluded, unless otherwise agreed by ComReg, within six months of the date of request, this does not mean that negotiations cannot conclude earlier than the end of the 6 month period. Neither is an Access Seeker precluded from raising a dispute or compliance issue with ComReg during that negotiation period. Furthermore, at any time, it is open to ComReg to investigate, on its own initiative, Eircom's compliance with its SMP obligations.
- 10.173 Any investigation by ComReg as to what represents a reasonable timeframe for concluding an SLA will depend on the nature and complexity of the access request, and on the evidence presented by parties to ComReg regarding the SLA negotiation. ComReg may also consider whether such SLA negotiations have been carried out in accordance with Eircom's other SMP obligations, as relevant, including but not limited to those relating to non-discrimination.
- 10.174 The timing of any subsequent launch of the SLA will depend on whether system developments are required in order to give effect to the associated changes. Normal advance notification procedures/timeframes (required under Eircom's Transparency obligations) will apply. However, ComReg may be amenable to reducing the advance notification periods in certain circumstances.
- 10.175 ComReg notes that no Respondent provided views on this specific obligation.

Payphone Access Charge ('PAC') Service

- 10.176 The 2015 FACO Decision requires Eircom to provide a PAC Service. The PAC Service is defined as a wholesale charge payable by an Undertaking to a payphone service provider for calls made by an end user from a payphone that do not involve a direct retail charge, including, but not limited to, Freephone calls to 1800 numbers.
- 10.177 The PAC Service means the service whereby Eircom levies and administers the PAC on behalf of payphone operators.
- 10.178 For a payphone to be PAC eligible, it must comply with the following requirements:
- (a) The payphone operator must incur the relevant costs of providing the payphone (i.e. the payphone, the line and call charges, maintenance costs etc.); and

¹⁰⁷⁴ Subject to the restrictions outlined in paragraph 10.62.

- (b) The payphone must be a 'public pay telephone' (i.e., a telephone available to the general public for the use of which means of payment may include coins, credit cards, debit cards or pre-payment cards, including cards for use with dialling codes).

10.179 ComReg proposed in the 2020 Consultation to withdraw the obligation on Eircom to provide the PAC Service, for the following reasons.

10.180 The PAC database (hosted by ComReg), which contains the list of payphones eligible for the PAC service, has c.13,300 payphone number entries. The database indicates that 7,650 of these payphones are no longer active. Since 2008, c.3,700 payphones have been made inactive on the PAC database. The PAC database indicates there are c.5,650 active payphone numbers. However, seven (7) out of the nine (9) payphone operators designated as owners of these numbers on the PAC database are no longer registered in the Electronic Register of Authorised Undertakings ('ERAU').¹⁰⁷⁵ Also, two (2) of the five (5) network operators are no longer registered in the ERAU. Removing phones associated with these payphone operators, there are c.2,800 active payphone numbers

10.181 Based on network data provided by Eircom, the number of active payphones [REDACTED],¹⁰⁷⁶ is much lower than the figure cited above.

10.182 Of those active payphones, Eircom operates 456 payphones¹⁰⁷⁷ under its retail USO¹⁰⁷⁸ and a further [REDACTED] payphones on a commercial basis.

10.183 In 2018, Eircom credited [REDACTED]¹⁰⁷⁹ to payphone operators under its existing PAC Service obligation. In 2019, this figure was [REDACTED].¹⁰⁸⁰ In each year, the PAC Service payments did not exceed €10,000. In 2019, this amounted to [REDACTED] per day per phone.

10.184 Of the total active payphones identified in paragraph 10.181, only 6% are operated by a payphone operator other than Eircom, and under 2% are located in the Regional FACO Markets and so, would be eligible for the PAC service after this FACO market review

¹⁰⁷⁵ <https://serviceregister.comreg.ie/services/search/>

¹⁰⁷⁶ Less than 1,000.

¹⁰⁷⁷ <https://www.eir.ie/regulatoryinformation/public-payphones/>

¹⁰⁷⁸ Provision of Public Pay Telephones, Universal Scope and Designation, ComReg 19/06, Decision Number D01/19, 25 February 2019.

¹⁰⁷⁹ Less than €10,000.

¹⁰⁸⁰ Less than €10,000.

10.185 Given the low value of the existing PAC Service payments, and declining payphone market, ComReg's view, subject to consultation, was that it is no longer proportionate to maintain the PAC Service remedy on Eircom.

Respondents' Views

10.186 No Respondent objected to ComReg's proposal. ComReg's proposal was simply noted by Vodafone; Eircom agreed.

ComReg's Assessment of Respondents' Views and Position

10.187 Given that no Respondent objected to ComReg's proposal and the reasons set out (in paragraph 10.176 to 10.185 above), ComReg therefore has decided to withdraw the obligation on Eircom to provide the PAC Service.

Summary of Conclusions on Access Obligations

10.188 Having regard to the analysis set out in paragraphs 10.51 to 10.185 above, ComReg's position is that the access obligations are proportionate and justified. The specific requirements include obligations to:

- (a) Provide access to the following specific wholesale products services and facilities, namely:
 - (i) SB-WLR (PSTN, ISDN BRA and ISDN PRA);
 - (ii) Ancillary Services on SB-WLR; and
 - (iii) Interconnection Services and associated co-location facilities, including both CG Interconnection and NG Interconnection.
- (b) Negotiate in good faith with Undertakings requesting Access;
- (c) Not withdraw Access to facilities already granted without the prior approval of ComReg;
- (d) Grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of products, services or facilities;
- (e) Provide access to co-location or other forms of associated facilities sharing insofar as it relates to interconnection services necessary to support access to FNA FACO products, services and facilities;
- (f) Provide access to services needed to ensure interoperability of end-to-end services to end users, including facilities for intelligent network services;
- (g) Provide access to OSS or similar software systems necessary to ensure fair competition in the provision of services; and

- (h) Provide access in a fair, reasonable and timely manner and for that purpose, in particular, negotiate in good faith and agree Service Level Agreements for the provision of FACO services at agreed binding service levels.

10.189 ComReg has considered whether the access obligations identified above would be sufficient in and of themselves to address the competition problems identified in Section 9. For the reasons set out in the discussion of the other remedies below, and as outlined in paragraphs 12.40 to 12.43 in the RIA, ComReg does not consider this to be the case. For example, the imposition of access obligations alone would not resolve issues such as excessive pricing or margin squeeze, discrimination on price or quality grounds, or ensure transparency of terms and conditions of access.

Non-Discrimination Remedies

Overview

10.190 The application of an *ex ante* non-discrimination remedy seeks to prevent a vertically-integrated operator which is designated with SMP from engaging in discriminatory (price or non-price) behaviour that could hinder the development of sustainable and effective competition in downstream wholesale and retail markets.

10.191 In Section 9, ComReg identified that, absent regulation, Eircom has the ability and incentive to engage in behaviours that could adversely impact the Regional FACO Markets and, as a result, downstream competition, ultimately affecting end users. For example, Eircom could offer products, services and facilities in the Regional FACO Markets at discriminatory prices, terms and conditions, and service/repair quality to different Access Seekers or between Access Seekers and its own retail arm.

10.192 As noted in the EECC,¹⁰⁸¹ the principle of non-discrimination is designed to ensure that Undertakings with market power do not distort competition, in particular, where they are vertically-integrated and supply services to other Undertakings with whom they compete in downstream markets.

10.193 Regulation 10 of the Access Regulations provides that ComReg may impose non-discrimination obligations in relation to access or interconnection on an operator designated with SMP, in particular to ensure that the SMP operator:

- (a) Applies equivalent conditions in equivalent circumstances to other Undertakings providing equivalent services; and
- (b) Provides services and information to others under the same conditions and of the same quality as it provides for its own services or those of its subsidiaries or partners.

¹⁰⁸¹ Recital 184.

10.194 In this respect, non-discrimination obligations can be standalone, but can also support other obligations, such those relating to access, transparency and price control.

10.195 An overview of existing non-discrimination obligations has been provided in paragraphs 10.15 to 10.17 above. In the 2020 Consultation, ComReg proposed to retain the non-discrimination obligations imposed on Eircom in the 2015 FACO Decision, in order to address identified competition problems that could arise in the Regional FACO Markets. For the same reasoning set out above with respect of the access obligations,¹⁰⁸² ComReg is not imposing non-discrimination obligations on Eircom with respect to NGA FACO, with the exception of Access to NG Interconnection Services.

10.196 Only Eircom specifically addressed ComReg's proposal as regards non-discrimination, stating that it had no objection¹⁰⁸³ to ComReg's proposed non-discrimination remedies in the Regional FACO Markets. ComReg accordingly adopts the proposals set out in the 2020 Consultation, as described below.

General non-discrimination remedies

10.197 In order to ensure that Eircom does not favour its downstream arm, or unduly favour any particular Access Seeker in the provision of regulated products, services and facilities, in the Regional FACO Markets, such that it might otherwise restrict or distort competition in any downstream or adjacent market, ultimately impacting on the development of sustainable retail competition, Eircom is required not to discriminate in the treatment of Access Seekers, and between Access Seekers and its downstream arm. In particular, Eircom is required to do the following:

- (a) Apply equivalent conditions in equivalent circumstances to all Access Seekers requesting, or being provided with, Access in the Regional FACO Markets (including Access to FACO and associated facilities) or requesting or being provided with information in relation to such Access; and
- (b) Provide Access in the Regional FACO Markets (including Access to FACO and Associated Facilities) and information to all Access Seekers under the same conditions and of the same quality as Eircom provides to itself or to its subsidiaries, affiliates or partners.

¹⁰⁸² See paragraph 10.70 above.

¹⁰⁸³ Eircom Submission, paragraph 233 (page 79).

10.198 For the avoidance of doubt, these requirements apply irrespective of whether or not a specific request for products, services, facilities or information has been made by an Access Seeker. For example, if information or a service is provided by Eircom following a request from one Access Seeker, or information or a service is made available to a downstream arm of Eircom, Eircom is obliged to offer this to other Access Seekers, notwithstanding that they did not make any request. This is to ensure fair treatment of all Access Seekers.

Specification of non-discrimination standards with respect to the provision of FACO

10.199 Absent any other specification, whether an obligation of non-discrimination is met is determined by reference to the outputs: non-discrimination is achieved where, at the minimum, there is Equivalence of Outputs (**EoO**). EoO means that products, services, facilities, and information are provided to Access Seekers in a manner which achieves the same standards in terms of functionality, price, terms and conditions, service and quality levels as the SMP operator provides to itself, although different systems and processes may have been used. The standard by which non-discrimination is measured may be raised to a requirement of Equivalence of Inputs (**EoI**). Under an EoI standard, the products, services, facilities, and information provided to Access Seekers must be provided in a manner not only which achieves the same standards in terms of functionality, price, terms and conditions, service and quality levels as the SMP operator provides to itself, but the same systems and processes must be used for the delivery of the products, services, facilities, and information.

10.200 In respect of FNA FACO, an EoO standard is appropriate, having regard to the fact that delivery of existing FNA FACO products, services and facilities is largely over a legacy copper-based network, and that Eircom is not required to provide access to NGA FACO. In that context, requiring Eircom to meet the EoI standard would not be proportionate. In particular, the OSS and wholesale interfaces that are in place and used for the provision of Eircom's suite of existing legacy FNA FACO products, services and facilities have already been developed. These OSS and wholesale interfaces would be likely to require substantial investment to upgrade or replace them in order to achieve an EoI standard. The incremental benefits of such an upgrade/replacement would not likely be proportionate to the costs involved.¹⁰⁸⁴

¹⁰⁸⁴ This is in contrast to obligations imposed for NGA in the WLA markets where Eircom was developing new OSS to deliver these services and adopting an EoI standard was considered proportionate by ComReg in this context.

- 10.201 However, ComReg considers that an Eol standard for SB-WLR continues to be justified, proportionate and reasonable with respect to ordering processes when an SB-WLR and an NGA VUA/Bitstream Plus service (or equivalent services) are being provided to an Access Seeker concurrently using a 'combined order'. In this respect, a combined order type exists on Eircom's order management systems whereby concurrent ordering of SB-WLR and NGA VUA/Bitstream Plus products can take place using a single order. This type of concurrent order is transacted through the same Eircom order handling mechanism and interface for all Access Seekers, as well as Eircom's retail arm. ComReg notes that NGA VUA/Bitstream Plus orders are subject to an Eol non-discrimination standard by virtue of pre-existing SMP obligations imposed on Eircom in the 2018 WLA/WCA Decision. Therefore, ComReg considers that it is justified, proportionate and reasonable to require that Eircom be subject to an Eol standard for ordering processes for SB-WLR when SB-WLR is ordered in conjunction with NGA VUA/Bitstream Plus using a combined order type.
- 10.202 The Eol standard shall also apply in respect of SB-WLR when in use with an NGA VUA/Bitstream Plus service for the provision of post-provisioning services to a user and in respect of fault handling and fault repair services for the SB-WLR service element. The Eol standard shall apply regardless of whether the SB-WLR and NGA VUA/Bitstream Plus services have been ordered using a combined order or ordered separately. Again, ComReg notes that NGA VUA/Bitstream Plus service assurance is subject to Eol by virtue of pre-existing SMP obligations imposed on Eircom in the WLA Market and WCA Market via the 2018 WLA/WCA Decision. Fault handling and fault repair services for NGA VUA/Bitstream Plus services and SB-WLR services are managed using the same interface and processes for all Access Seekers, as well as Eircom's retail arm. Therefore, ComReg considers that it is justified, reasonable and proportionate that Eircom be subject to an Eol standard for fault handling and fault repair processes for SB-WLR in these circumstances.

Application of non-discrimination remedies to FACO prices/charges

- 10.203 Absent regulation, ComReg considers that due to the lack of effective competitive constraint on Eircom's supply of FACO and associated facilities in the Regional FACO Markets, Eircom has the ability and incentive to discriminate between Access Seekers and its own retail arm or indeed between Access Seekers, when charging and offering FACO prices. This type of discriminatory behaviour could distort competition in the FACO market, as well as in the transit market and in downstream markets.

10.204 ComReg has considered whether the non-discrimination obligations should apply to the pricing of FACO and associated facilities, in light of the potential competition problem of discriminatory (and excessive) pricing. ComReg's view is that this issue can be partially addressed through an effective price control obligation (see discussion later in paragraphs 10.243 to 10.318). ComReg considers it appropriate, even in the presence of an appropriate price control obligation, to maintain a non-discrimination obligation with respect to the pricing of FACO products, services and associated facilities in the Regional FACO Markets.

KPI Obligations to Support Non-Discrimination

10.205 Non-discrimination monitoring activities are supported by access and transparency measures¹⁰⁸⁵ such as requirements to put in place and publish SLAs, performance guarantees and KPIs.¹⁰⁸⁶

10.206 KPIs provide assurances to Access Seekers regarding the levels of service provided by Eircom to its downstream arm, relative to that provided to Access Seekers. It also facilitates ComReg in fulfilling its role in monitoring the markets.

10.207 In addition to the full suite of Transparency obligations, as discussed later in paragraphs 10.232 to 10.235, ComReg is imposing a requirement on Eircom to publish a specific set of KPIs relevant to the Regional FACO Markets on its public website in accordance with the existing requirements set out in the 2011 KPI Decision, as may be amended from time to time or replaced with equivalent effect.¹⁰⁸⁷

10.208 Published KPIs will provide evidence that Eircom is delivering products, services, features or facilities in a non-discriminatory manner. In addition, KPIs are a measure of the quality and efficiency of access to FNA FACO products, services and facilities. As such, they will help minimise the risk of Eircom engaging in actual or constructive refusal to supply. Ultimately, this will support the aim of ensuring fair competition in the provision of services by allowing Access Seekers to compete on a level playing field with Eircom.

Summary of Conclusions on Non-Discrimination Obligations

10.209 Having regard to the analysis set out in paragraphs 10.190 to 10.208 above, ComReg's position is that non-discrimination obligations are proportionate and justified in the Regional FACO Markets. The specific requirements include:

¹⁰⁸⁵ Transparency obligations are discussed from paragraph 10.211 onwards.

¹⁰⁸⁶ Key Performance Indicators measure(s) of the standard(s) of products, services or facilities provided by Eircom to Access Seekers and by Eircom to itself.

¹⁰⁸⁷ Access Products and Services KPI Metrics Consultation, ComReg Reference 21/33, 1 April 2021.

- (a) Non-discrimination obligations to ensure equivalent treatment of Access Seekers by Eircom in its provision of products, services, facilities and information to them;
- (b) Non-discrimination obligations to ensure that Eircom provides the same products, services, facilities, and information to Access Seekers as it supplies to itself;
- (c) Non-discrimination to be applied on an EoO standard;
- (d) Non-discrimination to be applied on an EoI standard in the case where the FACO service is bundled with an NGA VUA/Bitstream Plus service; and
- (e) Eircom continuing to report KPIs to demonstrate how it is meeting its non-discrimination obligations.

10.210 ComReg has also considered whether the non-discrimination obligations summarised in paragraph 10.209 would be sufficient in and of themselves to address the competition problems identified in Section 9. As outlined in paragraphs 12.37 to 12.39 in the RIA ComReg does not consider this to be the case. For example, excessive pricing, constructive denial of access problems or poor service quality issues could still occur in the presence of a non-discrimination obligation.

Transparency Remedies

Overview

10.211 Regulation 9 of the Access Regulations provides that ComReg may, *inter alia*, impose obligations to ensure transparency in relation to access or interconnection requiring an SMP operator to make public specified information such as accounting information, technical specifications, network characteristics, prices, and terms and conditions for supply and use, including any conditions limiting access to, or use of, services and applications, where such conditions are permitted by law.

10.212 Transparency obligations can be standalone, but can also support other obligations being imposed and, as evidenced from the above, usually relate to requirements to make specified information publicly available.

10.213 An overview of existing transparency obligations is set out at paragraph 10.18 to 10.29 above.

Transparency Remedies being imposed

10.214 In Section 9, ComReg identified that Eircom has the ability and incentive to engage in a range of exploitative and exclusionary behaviours which can impact adversely upon competition and consumers. The potential for leveraging SMP into related markets through informational asymmetries was also identified.

- 10.215 A transparency obligation is necessary in order to monitor and ensure the effectiveness of any access or non-discrimination obligations (and other obligations such as price control), as it allows ComReg to monitor the compliance of an SMP operator's pricing and other behaviour (such as with respect to terms and conditions of use, quality or technical parameters) with non-discrimination and access obligations, and to address potential competition problems relating to price or quality discrimination.
- 10.216 As noted in Recital 182 of the EECC, transparency of terms and conditions for access and interconnection, including prices, also serve to speed up negotiations between Access Seekers, avoid disputes and give confidence to market players that a service is not being provided on discriminatory terms. Openness and transparency of technical interfaces can also be particularly important in ensuring interoperability. Transparency on prices (and price changes) is also likely to provide the necessary clarity to Access Seekers in order that they can consider impacts on the structure or level of retail prices. Transparency also provides the means for Eircom to demonstrate that access to products, services and facilities in the Regional FACO Markets is being provided in a non-discriminatory manner.
- 10.217 In the 2020 Consultation, ComReg therefore proposed that Eircom comply with a range of transparency obligations (the majority of which are already imposed upon it under existing regulatory decisions) in order to minimise information asymmetries and facilitate effective access to FACO and, ultimately, to promote effective competition in downstream and related markets. For the same reasoning set out above with respect to the access obligations,¹⁰⁸⁸ ComReg proposed not to impose transparency obligations upon Eircom with respect to NGA FACO.
- 10.218 Only Eircom specifically addressed ComReg's proposal as regards transparency, stating that it had no objection¹⁰⁸⁹ to ComReg's proposed obligations in the Regional FACO Markets. ComReg accordingly adopts the proposals set out in the 2020 Consultation, summarised below, noting again for the avoidance of doubt that they only apply to the provision of FNA FACO in the Regional FACO Markets, to the exclusion of the NGA FACO.¹⁰⁹⁰

¹⁰⁸⁸ See paragraph 10.188 above.

¹⁰⁸⁹ Eircom Submission, paragraph 203 (pages 79-80).

¹⁰⁹⁰ For the avoidance of doubt, Eircom's network modernisation project is an Eircom initiative to modernise FACO over FNA.

10.219 Further to the obligation on Eircom to make public on its website, information relating to the provision of FNA FACO products, services and associated facilities including accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices, Eircom is required in particular under its transparency obligation to engage with Access Seekers in a transparent manner by doing the following:

- (a) Publish a Reference Interconnect Offer (RIO) meeting the specifications detailed below;
- (b) Manage changes to the content of the RIO according to defined processes and timelines;
- (c) Ensure transparency in the billing of regulated FACO products, services and associated facilities;
- (d) Publish KPIs, Performance Metrics and SLAs relating to FNA FACO products, services and facilities; and
- (e) Meet requirements concerning access to confidential and/or commercially sensitive information.

RIO

10.220 ComReg has taken utmost account of the BEREC guidelines on the minimum criteria for a reference offer.¹⁰⁹¹

10.221 With the view to ensuring that current or potential Access Seekers have access to all relevant information about the regulated FNA FACO products, services and facilities that are, or are intended to be, provided by Eircom and that the same information, products and terms and conditions are available to all Access Seekers (also having regard to its non-discrimination and other obligations), thereby allowing them to make commercial decisions effectively and efficiently, Eircom shall publish on the website used by its wholesale division, and keep updated, a RIO.

10.222 The RIO shall include at least the following items:

- (a) A description of the offer of contract for access broken down into components according to market needs. In this regard, the RIO should be sufficiently unbundled so as to ensure that Access Seekers are not required to pay for products, services or facilities which are not necessary for the Access requested;
- (b) A description of any associated contractual or other terms and conditions for supply of access and use, including prices, (the latter being the '**RIO Price List**');

¹⁰⁹¹ BEREC Guidelines on the minimum criteria for a reference offer, BoR (19) 238, 5 December 2019.

- (c) A description of the technical specifications and network characteristics of the access being offered;
- (d) The terms, conditions, SLAs, guarantees and other product-related assurances associated with the FACO component part of any Wholesale SV Services that it provides, with the view to allowing for the effective monitoring and enforcement of Eircom's access, non-discrimination, pricing and other obligations in respect of the FACO component of any Wholesale SV services, including its Wholesale White Label service;
- (e) All general terms and conditions of the RIO, including:
 - (i) Dispute resolution procedure to be used between the SMP Undertaking and the Access Seeker;
 - (ii) Definition and limitation of liability and indemnity;
 - (iii) Glossary of terms relevant to the wholesale inputs and other items concerned; and
 - (iv) Details of duration, renegotiation and causes of termination of agreements as well as other associated contractual terms.
- (f) Details of operational processes, including:
 - (i) Pre-ordering, ordering and provisioning;
 - (ii) Migration from legacy products and infrastructure, incl. moves and ceases;
 - (iii) Rules of allocation of space between the parties when supply facilities or co-location space is limited;
 - (iv) Repair and maintenance;
 - (v) Changes to IT systems to the extent that it impacts Access Seekers;
 - (vi) Details of the necessary interoperability tests; and
 - (vii) Specifications of equipment to be used on the network.
- (g) Procedures in the event of amendments being proposed to the service offerings, which may include a requirement for notification to ComReg for such amendments, for example, launch of new products, services or facilities, changes to existing services or change to prices.

10.223 These obligations continue (to a large extent) the obligations imposed upon Eircom under the 2015 FACO Decision and are consistent with those that have been imposed on Eircom arising from its SMP position in other regulated markets.

10.224 ComReg considers that the format of the RIO itself should be based on the version that is currently published¹⁰⁹² (Version 7.0, dated 1 October 2020) on Eircom's wholesale website, thereby continuing the current practice.

RIO change management

10.225 In order to ensure that ComReg and Access Seekers have visibility of any changes made or to be made, to the RIO over time, and for the support of the monitoring and enforcement of compliance with SMP obligations, Eircom is required to meet the following obligations (in conjunction with obligations outlined in paragraph 10.227 to 10.229 below) when amending the RIO:

- (a) Eircom shall make and keep available on its public wholesale website both clean (or unmarked) and tracked changes (or marked) versions of the RIO, and of the RIO Price List. The tracked change version must be sufficiently clear to allow Access Seekers to readily identify all actual and proposed amendments from the preceding version;
- (b) Eircom shall publish and keep updated on its public wholesale website a change matrix which lists all of the amendments incorporated, or to be incorporated, in any amended RIO (the '**RIO Change Matrix**'), and in any amended RIO Price List (the '**Price List Change Matrix**'); and
- (c) Eircom shall also publish and maintain on its publicly available wholesale website, a copy of historic versions of its RIO, RIO Price List, RIO Change Matrix and Price List Change Matrix.

10.226 The above transparency requirements governing change management are effectively those that are currently employed by Eircom, having regard to its transparency obligations in the 2015 FACO Decision.¹⁰⁹³

Advance notification timeframes for RIO and price changes

10.227 It is important that Eircom provides sufficient notification to Access Seekers so that they can factor in proposed changes into the commercial decision-making activities and make any necessary adjustments or developments to billing or other systems, as appropriate. In addition, advance notification to ComReg provides ComReg and Eircom with a transparent mechanism facilitating the monitoring of compliance by Eircom with its SMP obligations.

10.228 The following timelines apply:

- (a) For proposed amendments/changes to an existing FNA FACO product, service or facility (price and non-price), two months' advance notification shall be provided by Eircom to Access Seekers by way of publication on its wholesale website.

¹⁰⁹² Eircom's RIO is available on its Open eir website at https://www.openeir.ie/Reference_Offers/?selectedtab=rio.

¹⁰⁹³ See Section 10 of the Decision Instrument in the 2015 Decision.

- (b) For a new FNA FACO product, service or facility (price and non-price), six months' advance notification shall be provided by Eircom to Access Seekers by way of publication on its wholesale website.
- (c) Notification to ComReg shall in all cases be made at least one month in advance of the publication due to be made by Eircom to Access Seekers, that is three months in advance of amendments taking place, and seven months in advance of the introduction of a new product, service or facility.

10.229 These timelines may, however, be varied at ComReg's discretion on the application or otherwise of Eircom. In particular, where proposed changes to existing products are likely to have a material impact on related markets (including having regard to the timeframes within which an Access Seeker would reasonably require to make any operational and/or technical adjustments in order to avail of such amended products), it may be necessary to extend applicable timelines. By contrast, the six month or two month advance notification period may exceed the time required for Access Seekers, in which case ComReg may also intervene in order to ensure that a new product or product changes are available as soon as reasonably possible for the benefit of Access Seekers.

10.230 The above transparency requirements (paragraphs 10.225 to 10.229 above) oblige Eircom to notify ComReg of any changes to the RIO. However, it should be noted that this notification does not include an approvals process. For the avoidance of doubt, in relation to existing contracts, text changes proposed by Eircom, arising from the RIO change management process set out above, apply to Eircom's obligations only and are not automatically incorporated into existing contracts as changes to Access Seeker contractual obligations. Eircom can negotiate with Access Seekers regarding any such changes.

Transparency requirements on wholesale billing

10.231 In order to ensure that Access Seekers may readily monitor the wholesale charges being levied on them and to facilitate an auditable means of detecting of any billing anomalies and/or non-compliance with regulatory obligations, Eircom shall ensure that its wholesale invoices in respect of FACO are transparent, and in particular that they are sufficiently disaggregated, detailed and clearly presented so that an Access Seeker can reconcile the invoice to Eircom's RIO and RIO Price Lists.

Transparency requirements regarding KPIs, Performance Metrics and SLAs

- 10.232 As discussed in the context of non-discrimination¹⁰⁹⁴ remedies, KPIs, Performance Metrics and SLAs can support the monitoring of non-discrimination obligations and, in so doing, provide assurances to Access Seekers regarding the levels of service provided by Eircom to its downstream arm relative to that provided to Access Seekers.
- 10.233 In that context, Eircom is required to comply, in respect of all products, services and associated facilities offered in the Regional FACO Markets, with ComReg Decision D05/11 providing for the publication of Key Performance Indicators (**‘the 2011 KPI Decision’**),¹⁰⁹⁵ as may be amended from time to time or replaced with equivalent effect.¹⁰⁹⁶
- 10.234 This will ensure that Eircom’s performance in the supply of FNA FACO products, services and facilities is measured against relevant performance indicators in a transparent way; it therefore supports the non-discrimination and access obligations.
- 10.235 For the same reasons, Eircom is required to publish performance metrics related to its SLAs on its publicly available wholesale website.

Transparency requirement to facilitate the legitimate sharing of confidential and/or commercial information through a non-disclosure agreement

- 10.236 It is essential that Eircom, as the SMP Undertaking in the Regional FACO Markets, make available relevant information to the provision of FNA FACO products, services and associated facilities, including information regarding technical developments, network rollout and wholesale services, with sufficient visibility that Access Seekers are in a position to prepare business or operational plans.
- 10.237 However, this obligation must be balanced with the requirement to ensure the adequate protection of Eircom’s confidential and/or commercially sensitive nature, and it is appropriate accordingly to provide for a process allowing Eircom reasonable protection for such information, in accordance with the approach followed in other markets on which Eircom has been designated with SMP.

¹⁰⁹⁴ See paragraphs 10.205 to 10.208 above.

¹⁰⁹⁵ See “Introduction of Key Performance Indicators for Regulated Markets”, Response to Consultation and Decision, [ComReg Document No 11/45](#), DecisionD05/11, June 2011 (the ‘**2011 KPI Decision**’).

¹⁰⁹⁶ Access Products and Services KPI Metrics Consultation, ComReg Reference 21/33, 1 April 2021.

- 10.238 In this regard, where Eircom considers certain aspects of information to be provided under its transparency obligations to be of a confidential and/or commercially sensitive nature, Eircom shall, without delay, provide ComReg with complete details of the information together with the reasons why Eircom considers it to be confidential and/or commercially sensitive. Where applicable, ComReg will consider the information in accordance with ComReg's guidelines on the treatment of confidential information in ComReg Document No. 05/24.¹⁰⁹⁷ If ComReg finds that the information is not confidential and/or commercially sensitive, Eircom shall publish it in accordance with its transparency obligations, including timelines.
- 10.239 If ComReg concludes that the information is confidential and/or commercially sensitive, then ComReg may, as appropriate in the circumstances, either confirm to Eircom that publication is not required, or in the alternative indicate to Eircom that Eircom shall publish general non-confidential details as to the nature of such information, and/or make the information, or extracts of the information, available to Access Seekers on the condition that they have signed a Non-Disclosure Agreement ('NDA'), the terms and conditions of which shall be fair, reasonable and non-discriminatory and published on Eircom's publicly available wholesale website.
- 10.240 For the avoidance of doubt and in accordance with Eircom's obligation of non-discrimination, any confidential and/or commercially sensitive information withheld by Eircom shall not be made available by Eircom to its downstream operations until such time as it is made available to Access Seekers, including where subject to an NDA, or as otherwise agreed with ComReg.
- 10.241 Furthermore, as soon as the information ceases to be commercially sensitive and/or confidential, it shall be made available by Eircom on its publicly available wholesale website without undue delay and without the need for an NDA to be signed.

Summary of Conclusions on Transparency Obligations

- 10.242 Having regard to the analysis set out in paragraphs 10.214 to 10.241 above, ComReg's position is that transparency obligations are proportionate and justified. ComReg has considered whether transparency obligations would be sufficient in and of themselves to resolve the competition problems identified in Section 9, and as outlined in paragraphs 12.34 to 12.36 in the RIA, does not consider this to be the case. In particular, ComReg considers that problems associated excessive pricing, discriminatory behaviour (on price or non-price grounds) or denial of access would not be adequately addressed through transparency obligations alone.

¹⁰⁹⁷ See ComReg Document 05/24, 'Guidelines on the treatment of confidential information', March 2005. <https://www.comreg.ie/csv/downloads/ComReg0524.pdf>.

Price control and cost accounting Remedies

Overview

10.243 In Section 9 of the 2020 Consultation, ComReg identified that Eircom had the ability and incentive to potentially engage in a range of anti-competitive pricing behaviours to the detriment of competition and end users. These included the risk that Eircom could, in the Regional FACO Markets, charge excessive prices for FACO products, services and facilities, or that Eircom might impose a margin squeeze to leverage its SMP position into adjacent or downstream markets. In light of this, ComReg considered that the imposition of obligations of price control and cost accounting on Eircom was justified.

10.244 In this section, ComReg now considers the forms of the price control obligations for:

- (a) Both CG and NG Interconnection services;
- (b) Co-Location and Order Handling;
- (c) Ancillary Services on SB-WLR;
- (d) WLR component of ISDN SB-WLR;
- (e) WLR component of PSTN SB-WLR;
- (f) FNA FVCO; and
- (g) White Label Voice.

10.245 In developing the proposed price control obligations outlined below, ComReg is mindful of facilitating the development of effective and sustainable competition to the benefit of end users without compromising the efficient entry and investment decisions of Undertakings over time. ComReg is also mindful of the role of regulatory transparency and consistency in contributing to a more predictable environment conducive to long-run investment decisions. ComReg considers that the proposed price control obligations outlined below provide an appropriate balance between risk and rewards for Eircom and appropriate build or buy signals for Access Seekers. Taking these factors into account, and having regard to the submissions made to the 2020 Consultation, ComReg considers that the proposed price control obligations outlined below are appropriate and proportionate.

- 10.246 Insofar as the price control for PSTN WLR is concerned, however, as explained in the 2020 Consultation, ComReg is currently in the process of developing new wholesale access pricing modelling that gauges the efficient costs for provision of, amongst other things, PSTN WLR in the Regional FACO Markets. This model is called the Access Network Model (hereafter '**ANM**') and since the 2020 Consultation, in October 2020, was put to public consultation in the Separate ANM Pricing Consultation. ComReg expects that its Decision will be published in late 2021 (the '**Separate ANM Pricing Decision**').
- 10.247 In the 2020 Consultation, ComReg expressed the view that a form of price control for PSTN WLR was necessary due to the finding of SMP in the Regional FACO Markets and the identification of the price related competition problems. The 2020 Consultation did not consider the most appropriate form of price control for PSTN WLR as this was to be consulted on in the Separate ANM Pricing Consultation and will be determined in the Separate ANM Pricing Decision. ComReg aimed to adopt this Decision and the Separate ANM Pricing Decision at the same time but proposed that if this was not the case, pending the adoption of the Separate ANM Pricing Decision, the price control obligation for PSTN WLR as set out in ComReg Decision D05/15, and as amended by ComReg Decision D03/16 would be maintained for a short transitional period. This transitional period, which is expected to be between four to six months, will enable the matters subject to this Decision to be finalised while providing additional time to facilitate the final PSTN Price control obligation (post transitional period) to be adopted.

Forms of potential price control remedies

- 10.248 As set out in the 2020 Consultation, the main forms of potential price controls available to ComReg include benchmarking, retail-minus, margin squeeze tests and cost orientation. Paragraphs 10.233 to 10.244 described each of those in some details and this is briefly summarised below:
- (a) Benchmarking means setting regulated prices by reference to the prices of comparable services (which can include prices in other countries). Benchmarking may be used in the absence of sufficient cost data to arrive at a cost-oriented price for the local market.

- (b) Under a retail-minus price control, the regulated wholesale price is determined by deducting from the retail price the retail and other downstream costs so that Access Seekers relying on the wholesale input can effectively replicate the retail offer of the SMP operator. A retail-minus price control does not require a detailed cost model of the underlying network, but does require that there is a readily identifiable retail equivalent (which may not be the case e.g. interconnection services). It also places little constraint on retail prices and accordingly, where there is limited network competition, little constraint on the level of wholesale prices.
- (c) A margin squeeze test ('**MST**') may be used as a price control obligation to set maximum wholesale prices or in conjunction with other obligations (e.g. cost orientation). Under an MST, the wholesale prices are set at a level such that as to ensure that, given the prevailing retail prices, an Access Seeker may cover its downstream retail costs (e.g. sales, marketing, etc.) profitability replicate the SMP SP's retail offers. MSTs can be used to promote entry and support sustainable competition but may also have the effect of preserving inefficient competitors. They may be very complex to implement especially when there is no direct retail price comparator and may place little constraints on retail prices where network competition is limited. Under a cost orientation price control, the SMP SP's wholesale prices may recover no more than the actual incurred costs, adjusted for efficiency plus a reasonable rate of return.
- (d) Cost orientation may help ensure greater predictability of access price levels for Access Seekers, thereby allowing them to make investment decisions and develop business plans with a greater degree of confidence. Under a cost orientation obligation wholesale prices are set independently of retail price levels. Cost orientation does require the development of a cost model which can be a time-consuming and a resource intensive process.

Costing methodologies

Cost Standards

10.249 The implementation of a cost orientation obligation requires to choose the appropriate Cost standards; Cost bases; and Cost models.

10.250 The cost standard determines the basis on which to allocate costs of assets and resources to the services that they support, where they are used to deliver numerous services. In general terms:

- (a) Joint costs are incurred by some but not all services (e.g. DSLAMs can provide voice and internet services, but are not compatible with high speed leased lines);

- (b) Common network costs are used by all services (e.g. common network costs of ducts and trenching are consumed by all fixed line services); and
- (c) Corporate overheads cannot be allocated to services using a specific allocation method (e.g. the costs of the Chief Executive's office would be allocated to all services).

10.251 Table 75 below outlines some of the cost standards used for the purpose of price controls and a brief description of each:

Table 75: Cost Standard Descriptions

Concept	Description
Pure LRIC	This considers a small increment (e.g. each individual service). The pure incremental cost of a service is considered to be the costs avoided by not providing that service on the network, treating it as the last service in the service stack
LRAIC	This considers a large increment (e.g. all traffic services provided by the network) and allocates the cost of this increment between services based on the volumes of these services. Each service receives a share of relevant network common costs
LRAIC +	This is calculated in the same way as LRAIC, except that one or more mark-ups are applied to the network costs to capture other costs (e.g. business overheads)
FAC or ATC	Average Total Cost ('ATC') includes variable, fixed, joint and common costs. ATC requires an SP with SMP to price at levels that include appropriate amounts of variable, fixed and common costs, which is the decision faced by any SP when deciding to enter or expand

Cost base

10.252 For the cost base, there are two options – historical cost, or current cost.

10.253 The historic cost base approach uses Historical Cost Accounting, which reflects the incumbent's costs. This approach reduces the chance of over- or under-recovery of costs, as the value is linked to the actual investment made, as opposed to the MEA. In particular it ensures that there is no over-recovery of costs for assets that are fully depreciated but still in use.

- 10.254 By contrast, the current cost base approach values assets at the current market value and reflects evolving changes in asset prices. This approach reflects the costs that a hypothetical entrant would incur when investing at any particular point in a Modern Equivalent Asset ('**MEA**'). Therefore, where technology is changing rapidly, the price set for the use of a particular asset may not reflect the actual costs incurred (in the past). Hence, there is less of a direct relationship between the prices charged and the actual investment made.
- 10.255 The economic rationale for the use of a current cost approach, as applied by means of a bottom-up model, is that by linking the value of the assets to a newly deployed network, it promotes efficient investment incentives. The current cost approach also ensures that the incumbent recovers its future costs, thereby encouraging efficient infrastructure investments.
- 10.256 A key criterion in asset valuation, in the context of the current cost base approach, is the principle of **asset replicability**. The concept of asset replicability means that if there is actual investment, the incumbent will recover the efficiently incurred cost of the asset, but if there is no investment compensation will be limited to the initial gross book value of the asset. In other words, if there is no prospect of a competitor replicating the service in question (or bypassing the bottleneck with an alternative platform), it is reasonable to base the regulatory pricing on historical costs. Therefore, this creates the appropriate investment signals for the incumbent. This is also recognised by the 2013 EC Recommendation on non-discrimination and costing methodologies¹⁰⁹⁸ (the '**2013 Recommendation**') which considers that reusable civil engineering assets e.g., ducts and poles, should be valued on the basis of the regulatory asset base derived from the SMP SP's accounts.
- 10.257 As set out in the 2020 Consultation, two types of model may be used to determine the costs of provision of the access services, namely a Top-Down ('**TD**') model; or a Bottom-Up ('**BU**') model. Either of these cost models, can, in principle, use a historic or current cost base, as outlined above. However, TD cost models generally use a historic cost base, whereas BU cost models generally use a current cost base approach.

¹⁰⁹⁸ Commission Recommendation dated 11 September 2013 on 'Consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment'.

- 10.258 A TD cost model, using the historic cost base, may use current financial information of the SMP SP (e.g. income statement, balance sheet) as an input to determine unit costs. TD cost models are generally used to achieve exact cost recovery and do not easily convert into a forward-looking approach and can as a result provide the wrong 'build or buy' signal to industry. They run the risk of including inefficient costs and rely on the SMP SP providing significant amounts of accurate and robust data. By contrast a BU cost model does not rely on historical financial data. Instead, it reflects the choices of a hypothetical, forward-looking efficient operator from both a technical and an operational point of view. A BU model is a data intensive process of dimensioning the network assets to meet an assumed level of demand, as if the network were being built (either as it stands, or with improvements to the topology).
- 10.259 The BU modelling approach is associated with models that are aimed at promoting efficient entry through sending appropriate build-or-buy signals, by accounting for how a network would be built today using modern technology by a reasonably efficient entrant, and is more efficient in terms of making forward-looking estimations based on expected levels of demand, rather than relying on historical data. It also avoids the risk of including inefficient costs and difficulties with TD cost data in particular as regards their granularity lending itself to the use of a LRAIC+ cost approach. However, modelling a network is a difficult, time-consuming and expensive process.
- 10.260 Different forms of price control, cost standard, cost base and cost models are used in respect of regulated services in the FACO Regional Markets as set out further below.

(a) Interconnection Services (Current Generation and Next Generation)

Consultation Position

- 10.261 Legacy or CG Interconnection Services are known as Transport Links and can take three forms: Customer-sited Handover ('CSH'), In-Span Handover ('ISH') and In-Building Handover ('IBH'). In the 2020 Consultation, ComReg noted that Eircom is currently subject to an obligation to provide cost-oriented CG Interconnection Services in the Relevant FACO Markets but also in the market for Wholesale Local Access and Wholesale Central Access under the 2018 WLA/WCA Decision and in the market for Wholesale High Quality Access under the 2020 WHQA Decision. ComReg noted that the 2020 WHQA Decision imposes a price control in the form of cost orientation as follows (paragraph 8.266 of the 2020 WHQA Decision):

“In relation to Transport Links, ComReg notes there is a requirement for Eircom to complete a review of the BU-LRAIC plus cost models used to determine cost-oriented prices for these services. These cost models were originally developed by Eircom and subsequently reviewed by ComReg and its consultants. Therefore, it is ComReg’s view that Eircom must update these models and derive revised cost-oriented prices for Transport Links.”

- 10.262 ComReg accordingly proposed, to ensure consistency between decisions, and reflecting that these legacy interconnection facilities are used to support a number of services in other markets, that the same price control should apply in the Regional FACO Markets.
- 10.263 Insofar as NG Interconnection Service is concerned, ComReg noted that it is a packet switched based product which includes CSI/H, IBI/H ISI/H, and ENH Next Generation Interconnection Paths, the physical circuit for which is a WEIL (see paragraph 10.123). WEILs can be used to support traffic from broadband and leased line services, as well as voice, and are a regulated service under the 2020 WHQA Decision. ComReg proposed, noting that in conjunction with Eircom, it had developed cost models to assess the efficient costs incurred by Eircom in providing NG interconnection services to require Eircom to set NG Interconnection prices on the basis of these bottom-up LRAIC plus cost models, so as to derive cost oriented prices.
- 10.264 ComReg explained that this approach will not create an extra burden on Eircom, as this is simply the continuation of the approach from the 2020 WHQA Decision. It avoids the risk of excessive pricing, maintains consistency between decisions, and reflects the fact that, on a forward-looking basis, SPs are unlikely to invest in legacy voice infrastructure as this service can handle voice traffic through Managed VoIP.

Respondents’ views

- 10.265 No submissions were received in respect of the proposed price controls for CG and NG Interconnection services.

ComReg’s Final Position

- 10.266 In the absence of any submissions in respect of ComReg’s proposals, ComReg adopts the position set out in the 2020 Consultation so that both CG and NG Interconnection are subject to an obligation of cost-orientation to be set on a BU-LRAIC+ basis.

(b) Co-location and Order Handling

Consultation Position

10.267 In the 2020 Consultation, ComReg proposed to maintain the price control as set out in the 2015 FACO Decision, namely a price control obligation of cost orientation based on no more than the actual costs incurred (TD HCA), adjusted for efficiency, plus a reasonable rate of return. ComReg noted that these services are unlikely to be offered by other SPs and, to avoid a situation of excessive prices, considered that an obligation of cost-oriented charges should be maintained on co-location. Calculation of prices on the basis of actual costs incurred (TD HCA), adjusted for efficiency, plus a reasonable rate of return ensures that Eircom can recover its costs, but equally recognises that there is no longer a requirement for a bottom-up costing methodology to incentivise market entry.

10.268 Similarly, ComReg proposed that order handling process costs associated with SB-WLR should continue to be based on the likely actual costs incurred by Eircom, adjusted for efficiencies, plus a regulated rate of return.

Respondents' view

10.269 Vodafone welcomed ComReg's proposal on co-location services. No Respondents commented on ComReg's proposal.

ComReg's Final Position

10.270 In light of the Submissions received, ComReg adopts the position set out in the 2020 Consultation so that Eircom is required to ensure that co-location charges are based on no more than the actual costs incurred (TD HCA), adjusted for efficiency, plus the regulated rate of return, and order handling process costs associated with SB-WLR are based on the likely actual costs incurred by Eircom, adjusted for efficiencies, plus the regulated rate of return.

(c) Ancillary Services on SB-WLR

Consultation Position

10.271 In the 2020 Consultation, ComReg proposed that Ancillary Services on SB-WLR should continue to be subject to a price control obligation of cost orientation based on no more than the actual costs incurred (TD HCA), adjusted for efficiency plus a reasonable rate of return for these services on the Regional FACO Markets. Such ancillary services include call management services such as call forwarding, call barring, messaging services etc. that are available to Access Seekers who wish to provide them to end users.

10.272 ComReg noted that maintaining the current price control balances the ability of Eircom to recover reasonable costs, but also acknowledges the absence of a requirement for a bottom up costing methodology, which might otherwise be required to incentivise new market entrants.

Respondents' views

10.273 No Respondent commented on ComReg's proposal.

ComReg's Final Position

10.274 In the absence of any submissions in respect of ComReg's proposals, ComReg adopts the position set out in the 2020 Consultation so that Eircom shall ensure that prices for ancillary services recover no more than the actual costs incurred (TD HCA), adjusted for efficiency plus the regulated rate of return for these services. ComReg is of the view that this is reasonable and proportionate as, in the absence of some form of price control, it would not be possible to ensure that the associated wholesale charges are set at an efficient level, leading to the danger of Eircom engaging in excessive pricing of such services to Access Seekers.

(d) WLR Component of ISDN SB-WLR

Consultation Position

10.275 In relation to ISDN BRA, ISDN FRA, and ISDN PRA, ComReg considered in the 2020 Consultation that these access products should continue to be subject to a price control obligation of cost orientation whereby Eircom can charge no more than current prices for these products (a maximum charge).

10.276 ComReg noted that legacy ISDN WLR services are near the end of life in terms of vendor support and, indeed, sourcing experienced staff and replacement parts to maintain and repair this equipment could become more difficult and expensive. So, over time, the costs in providing ISDN services in the Regional FACO Markets may increase, in circumstances where the number of users of ISDN access products has continued to decline since the 2015 FACO Decision. In the Regional FACO Markets there are fewer users of these products.

10.277 ComReg further noted in relation to ISDN WLR charges experiencing fluctuations and causing volatility for end users, that the 2013 Recommendation recognises such possibilities and recommends that costing methodologies reflect the *"need for stable and predictable wholesale copper access prices over time"*. This is so as to avoid *"significant fluctuations and shocks, in order to provide a clear framework for investment"* and for the methodology chosen specifically to deal,

*"appropriately and consistently with the impact of declining volumes caused by the transition from copper to NGA networks, i.e. avoiding an artificial increase in wholesale copper access prices which would otherwise be observed as a result of customers migrating to the NGA network of the SMP operator."*¹⁰⁹⁹

¹⁰⁹⁹ [Commission Recommendation \(c. 2013 5761\)](#), paragraph 25.

10.278 Accordingly, ComReg was concerned that without at least re-imposing the current prices as ceilings, then end users may experience significant variations in prices. Requiring Eircom not to charge above the current price (a price cap) would ensure that Access Seekers will continue to have price stability and certainty for the period.

Respondents' Views

10.279 Only Vodafone commented, saying that it “generally welcomes ComReg’s proposals to maintain cost-orientation obligations on WLR (PSTN, BRA, FRA, FRA)”.¹¹⁰⁰

ComReg’s Final Position

10.280 The decline in the ISDN volumes has been constant since 2015, as illustrated by the table below. In the Regional FACO Markets there are fewer users of these products. The table below shows the decline in volumes over the last number of years.

Table 76: Extract for Eircom HCA Accounts 2015- 2020 showing the decline in volumes of ISDN

Vol (000s)	2015	2016	2017	2018	2019	2020
ISDN BRA	64	60	57	54	50	47
ISDN FRA/PRA	7	7	6	6	5	5
Total	71	67	63	60	55	52

10.281 In light of this and for the same reasons as recalled above, ComReg adopts the position set out in the 2020 Consultation so that Eircom is required not to charge more than the current cost-oriented prices for ISDN services (a maximum charge).

(e) Price control in respect of PSTN WLR

Consultation Position

10.282 In the 2020 Consultation, ComReg was of the view that some form of price control is warranted in respect of PSTN WLR in the Regional FACO Markets, but left the form and the details of the price control to be considered in the ANM Pricing Consultation.

10.283 ComReg stated that it intended to adopt the two decisions (the ANM Pricing Decision and this FACO Decision) together but that, if that did not occur, ComReg proposed that the existing price control obligation should be maintained for the transitional period until the ANM Pricing Decision is adopted.

¹¹⁰⁰ Vodafone Submission, page 7

Respondents' Views

10.284 Only Eircom made submissions in response to ComReg's proposal. Eircom was of the view ComReg's proposal was a step away from established good practice whereby the full suite of remedies is put to consultation. According to Eircom, if the detail is not provided in the FACO decision, it may have no option but to appeal that decision to preserve its position as regards the price control:¹¹⁰¹

“eir must have a holistic view of the outcome of market reviews. This has been the case in the WLA/WCA 2018 market reviews and the WHQA 2020 market reviews. In all cases eir was presented with the full suite of proposed remedies so that it could properly evaluate its position. It is concerning that ComReg is now seeking to step away from established good practice. If at the conclusion of the FACO review ComReg is able to demonstrate that price regulation can be justified, then its measures must be included at the same time as any other obligations. Otherwise eir may have no option but to Appeal the first Decision which contains broad pricing principles to preserve its position until the detailed measures are presented.”

10.285 Eircom submitted that ComReg's approach in respect of the SB-WLR price control is not administratively efficient or fair on the regulated entity. Eircom called on ComReg to accelerate the conclusion of the ANM review to avoid this, rather than any further delay to the FACO decision.

ComReg's Assessment of Respondents' Views and final position

10.286 ComReg notes Eircom's concerns and its position as regards an appeal. This is a matter that is entirely for Eircom. ComReg notes that since the 2020 Consultation was published, ComReg's detailed proposals in respect of the price control for SB-WLR have been put to consultation in the ANM Pricing Consultation. At this point in time ComReg is not in the position to finalise the price control for PSTN WLR which will be dealt with in the Separate ANM Pricing Decision, and accordingly, in the absence of any specific comments on this proposal, has decided to maintain the price control obligation for PSTN WLR pending the adoption of the Separate ANM Pricing Decision, which ComReg expects to be within six months from the Effective Date of the Decision.

10.287 Any submissions received on the price control for SB-WLR will be dealt with in the separate ANM Pricing Decision.

¹¹⁰¹ Eircom Submission, paragraph 235.

10.288 ComReg's final position is that the current price control obligation applicable to PSTN-WLR should pertain in the Regional FACO market until the ANM Decision. This transitional price control obligation will enable the matters subject to this Decision to be finalised while at the same time providing for the additional time to facilitate the final PSTN WLR price control obligations (post transition period) to be adopted.

(f) FNA FVCO component of SB-WLR

Consultation Position

10.289 Currently, Eircom provides an FNA FVCO service to other Access Seekers as a component of SB-WLR. In the 2020 Consultation, ComReg proposed to cap prices at existing levels, set on the basis of an obligation of cost orientation via the use of TD LRAIC+ cost modelling.

10.290 This price control has served to reward Access Seekers' investments in deep network interconnection with Eircom's FNA for voice. In such instances, Access Seekers have climbed the ladder of investment and leveraged their own network infrastructure, and so minimised the costs incurred in the use of Eircom's network to convey call traffic, through the use of primary, tandem and double-tandem interconnection.

10.291 ComReg's proposal to require Eircom to price FNA FVCO at no more than existing (cost-oriented) prices was justified on the basis of the following rationale: The legacy technology which underlies this service is increasingly difficult to source and maintain; FNA FVCO voice traffic volumes carried on the Eircom PSTN network have declined in recent years and are likely to be eroded through eventual migration to FVCO delivered over NG Broadband (i.e. Managed VoIP); and some other Access Seekers reliant on Eircom provision of FNA FVCO have already established deep interconnection facilities with Eircom's FNA network, therefore minimising the wholesale costs which they incur to facilitate such FVCO. Therefore, this factor, in combination with declining traffic volumes ensures that the impact of the retention of existing FNA FVCO tariffs is limited. In addition, any material reduction in tariffs for FNA FVCO could impede the incentive for SPs to migrate to NGA FACO.

10.292 ComReg recognised that, given advances in technology, FVCO can now be provided either through the existing legacy CG solution from Eircom (FNA FACO), but also via NGA FACO. However, as outlined above (see paragraph 10.13), ComReg did not propose to impose any access or price control obligations on Eircom in relation to such an NGA FACO service.

Respondents' view

10.293 No Respondent commented on this proposal.

ComReg's Final Position

10.294 In the absence of any submissions in respect of ComReg's proposals, ComReg adopts the position set out in the 2020 Consultation so that Eircom is required to charge no more than the existing prices for FNA FVCO.

(g) White Label Voice (WLV) service

Consultation Position

10.295 Eircom's WLV service is a managed 'end-to-end' voice calls service that includes WLR, FNA FVCO, and interconnection facilities, along with other non-regulated wholesale inputs e.g. transit, if necessary. This service can be purchased by Access Seekers to provide RFTS to end users without the need for an Access Seeker to procure those individual components themselves.

10.296 In the 2020 Consultation¹¹⁰² ComReg proposed that Eircom should continue to have an obligation not to cause a margin squeeze between (a) the charge for WLV, and (b) the charges for the necessary regulated and unregulated components to provide the WLV service in the Regional FACO Markets.

Respondents' Views

10.297 BT, Vodafone, and Eircom all responded to this proposal.

10.298 Responses to the 2020 Consultation on this matter can be divided into two points of view. On the one hand, in supporting an MST, BT¹¹⁰³ had a concern that there had been increased levels of demand for WLV. If competition had become more intense, the expectation would be that there would be further unbundling or a decline in demand for Eircom's wholesale services (including WLV), rather than a reliance on Eircom's downstream alternatives.

¹¹⁰² Section 14.10 of the Decision Instrument.

¹¹⁰³ BT Submission, Section 2.2.

10.299 On the other hand, Vodafone¹¹⁰⁴ and Eircom expressed views around the difficulties of applying an MST at national level, Eircom¹¹⁰⁵ expressing the view that the market for WLV services is national in character. Eircom highlighted that ComReg in the leased line or Wholesale High Quality Access ('WHQA') market, had removed the MST remedy between retail and wholesale offerings, on the basis that a large share of WHQA service demands occurs in the deregulated market ('Zone A'), and the remainder in the regulated market ('Zone B'). This situation made it impractical to maintain the test for WHQA as there were no wholesale regulated cost-oriented pricing obligations attached to the majority of services. For these reasons, Eircom noted, that this position would apply equally herein respect of the national provision of WLV services, where the majority of services will be provided in the Urban FACO Markets, and the same approach should be followed.

ComReg's Assessment of Respondents' Views and Final Position

10.300 The rationale in the 2020 Consultation for the use of an MST, to be applied between the price of WLV services and their wholesale inputs was based on a number of factors, but principally:

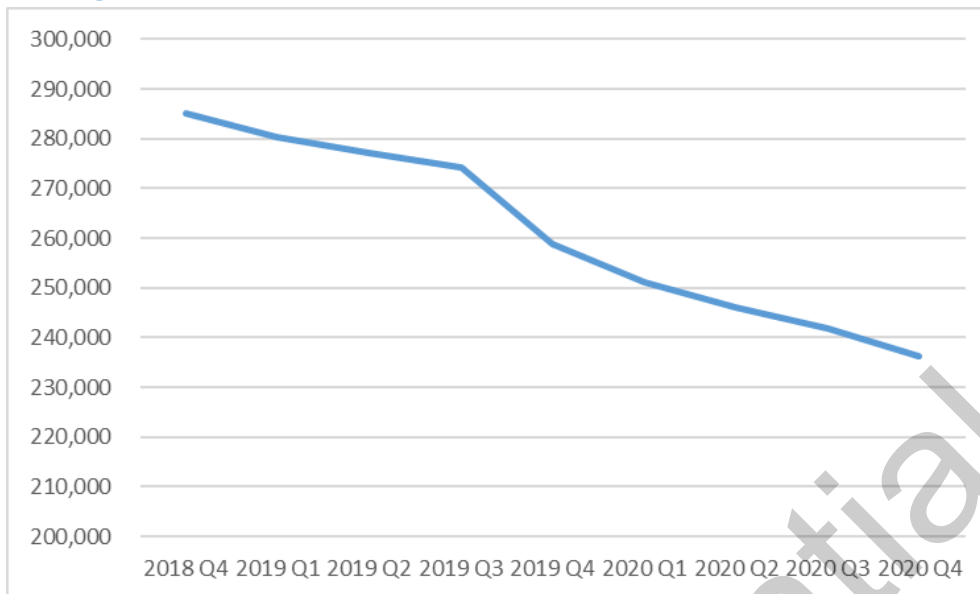
- (a) The volumes of WLV services in the Regional FACO Markets were sufficient to justify imposing a margin squeeze obligation; and
- (b) The need to protect the economic space between WLR and WLV, largely consisting of the cost of call origination and a contribution to interconnection costs.

10.301 ComReg notes however that there has been a material decline in the volume of WLV. It has fallen 15% since the peak in Q3 2018 and ComReg's further analysis now indicates that the MST is no longer necessary.

10.302 Firstly, there have been nine recent quarters of consecutive decline in WLV. Also, further analysis has identified that the majority of existing WLV services are provided in the Urban FACO Market. A review conducted by ComReg has indicated that in excess of 70% of Eircom's existing WLV customers are located in EAs in the Urban FACO Markets.

¹¹⁰⁴ Vodafone Submission, Page 5.

¹¹⁰⁵ Eircom Submission, paragraph 236.

Figure 64: White Label Voice Access Paths, Q3 2018 – Q4 2020

- 10.303 Secondly, since the publication of the 2020 Consultation, Eircom launched a new Voice over IP Interconnection via a Wholesale Ethernet Interconnection Link ('**VIX via WEIL**') product on 1 October 2020. This product offers much lower cost interconnection solutions and the ability to rationalise the number of interconnection points which an Access Seeker would need to interconnect with Eircom's voice network. In tandem with this product, Eircom has rationalised the wholesale costs of legacy call origination where it is still required, so that only Primary Call Origination tariffs apply in conjunction with VIX via WEIL. The introduction of this product now offers Access Seekers a low-cost alternative to traditional WLV.
- 10.304 ComReg notes in this context that the increase noted by BT in WLV service demands occurred over a period extending from 2014 to 2019 before the availability of the VIX via WEIL product offering. Volumes fell subsequently. At the time of the increase noted by BT legacy voice interconnection was costly, and while industry was aware that the Eircom IP interconnection wholesale service was in development, there was uncertainty as to when it might become available. Also, at the same time, some SPs were still developing their own VoIP platforms and processes.
- 10.305 Since then, more SP VoIP platforms have become established, and their products are more clearly available in the voice markets.

10.306 In light of evidence of declining market demand for WLV services since the third quarter of 2018, and the availability of lower cost voice interconnection through VIX via WEIL, ComReg has reconsidered its proposal for a MST. ComReg recognises also that that an MST between WLV and the wholesale inputs is not practicable, given that WLV is a product that is sold across both Urban FACO Markets and Regional FACO markets, with the large majority being sold in the footprint of the Urban FACO Markets which results in the inability to construct a MST with relevant cost inputs. Given the combination of all of these factors, ComReg's position is that an MST between WLV and the wholesale inputs is not now required. ComReg's final position is that there is no need to apply a specific MST remedy in respect of WLV services.

Other Margin Squeeze Test ('MST')

Consultation position

10.307 As outlined in paragraph 10.32 of the 2020 Consultation, Eircom has been subject to three MST obligations pursuant to the 2015 FACO Decision, and the 2016 Pricing Decision:

- (a) A MST between the price of retail line rental and the price charged by Eircom for SB-WLR;
- (b) A MST between wholesale POTS-based FTTC and the price for standalone FTTC VUA/Bitstream including an amount for VoIP; and
- (c) A MST between Eircom's Wholesale SV service and FVCO.

10.308 In the 2020 Consultation, ComReg outlined¹¹⁰⁶ that all three MSTs would be discontinued.

Respondents' Views

10.309 Vodafone requested that ComReg set out in more detail the impact of its proposals on margin squeeze assessment moving forward to ensure that SPs can compete effectively in the Urban FACO Markets and for multisite tenders across Urban and Regional FACO Markets.¹¹⁰⁷

10.310 BT was "strongly concerned at the potential risk of an upstream margin squeeze between WLR prices and WLA+VoIP costs in the FACO upstream market that could create supply issues in the Urban RFTS Market and ultimately cause RFTS supply difficulties to the 80% part of the Exchange Area".¹¹⁰⁸

¹¹⁰⁶ 2020 Consultation, Table 77.

¹¹⁰⁷ Vodafone Submission, page 5.

¹¹⁰⁸ BT Submission, Page 15.

ComReg's Assessment of Respondents' Views and Final Position

- 10.311 In respect of Vodafone's concerns, in the case of retail tenders for standalone FACO services provided across multiple sites, the Urban FACO markets are being deregulated. The RFTS standalone Low Level PSTN service prices provided in the footprint of the Regional LL-FACO Market will be the only regulated input to any tender. If Eircom tenders at the retail level for a mix of RFTS standalone LL-PSTN/ISDN, located across the footprints of both the Urban FACO Markets and Regional FACO Markets, Eircom will have retail pricing flexibility relating to the share of any services provided in the Urban FACO Markets. As the bulk of FACO service demands occur in the Urban FACO Markets, the continued application of a retail MST would be futile, as the obligation to consider a wholesale cost floor would only apply to the smaller FACO product volumes provided in the Regional FACO Markets.
- 10.312 In respect of BT's concerns, in the context of retail bundles, the MST described in ComReg Decision D12/18¹¹⁰⁹ (the '**2018 Bundles Decision**') between wholesale POTS-based VUA and standalone VUA/NGA bitstream including VoIP, ensures that a retail bundle cost input must contain a contribution to a VoIP service. In addition, the cost base for VUA is a national obligation, which must be incorporated into the bundles test. Therefore, even within the geographic footprint of the Urban FACO Markets, the retail service bundle prices are subject to a wholesale cost floor, inclusive of the cost of VUA, plus a contribution to a VoIP service. This price control is not affected by the removal of the MSTs proposed in the 2020 Consultation.
- 10.313 Although the RFTS markets are to be deregulated, Eircom will still have the obligation to adhere to price controls in the Regional FACO Markets. Furthermore, consequent on the 2018 Pricing Decision and the 2018 Bundles Decision, ComReg has ensured that pricing controls remain in place when VoIP services are included in Broadband Bundles sold nationally.
- 10.314 ComReg's final position is that there is no longer a need to maintain a separate Retail MST for standalone PSTN or SB-WLR. ComReg notes that there are still pricing constraints in the geographic footprint of the Urban FACO Markets where retail bundles include broadband and VoIP.

¹¹⁰⁹ 2018 Bundles Decision <https://www.comreg.ie/media/2020/10/ComReg-2096.pdf>

Cost accounting remedies

Consultation Position

10.315 In Section 10 of the 2020 Consultation, ComReg considered that it was necessary to have a clear and comprehensive understanding of the costs associated with Eircom's provision of products, services, and facilities in the FACO markets. Obligations to maintain appropriate cost accounting systems generally support obligations of price control (and accounting separation) can also assist ComReg in monitoring the obligation of non-discrimination.

10.316 ComReg proposed that Eircom should ensure that it maintains appropriate cost accounting systems to justify its prices/costs of products, services, and facilities in the Regional FACO Markets. Cost accounting obligations are currently imposed on Eircom, as specified in the 2010 Accounting Separation and Cost Accounting Decision¹¹¹⁰ (with accounting separation obligations discussed below).

Respondent's Views

10.317 Eircom did raise a concern that ComReg had made no attempt to quantify the impact and proportionate cost of retaining regulation in a subset of the overall market.¹¹¹¹

ComReg's Assessment of Responses and Final Position

10.318 ComReg notes Eircom's position but remains of the view as outlined in the 2020 Consultation that, having regard to Eircom's integrated position across several upstream and downstream markets (in particular, noting its SMP designations in a number of these markets), the scope for Eircom to leverage its market power (as identified in Section 9) and the associated need to ensure sufficient visibility of how costs are allocated across products, services and facilities in the FACO markets and other horizontally and vertically-related input services, the obligation of cost accounting on Eircom continues.

10.319 Eircom accordingly must maintain appropriate cost accounting systems that are sufficiently granular to allow an assessment of cost allocations under the 2010 Accounting Separation and Cost Accounting Decision and support the obligation of price control.

10.320 The burden of proof rests with Eircom to show that its prices/charges for products and services in the Regional FACO Markets and associated facilities or interconnection links, are derived from costs, having regard to the nature of the proposed price control obligations

¹¹¹⁰ [Response to Consultation Document No. 09/75 and Final Direction and Decision: Accounting Separation and Cost Accounting Review of Eircom Limited | Commission for Communications Regulation \(comreg.ie\)](#)

¹¹¹¹ Eircom Submission, paragraph 312.

Summary of Price Control and Cost Accounting Obligations

10.321 Having regard to the analysis set out in paragraphs 10.243 to 10.318 above, and in Section 10 of the 2020 Consultation, ComReg's view is that the price control and cost accounting obligations are proportionate and justified. Table 77 summarises ComReg's conclusions:

Table 77: Pricing Control Obligations for Regional FACO Markets

Price Control Obligation for Products, Service or Facility			
	Pre-2020 Consultation	2020 Consultation	Final FACO Decision
PSTN WLR	Cost Orientation	To be determined in ANM Decision (existing Price Control remains until ANM Decision)	To be determined in ANM Decision (existing Price Control remains until ANM Decision)
ISDN BRA WLR	Maximum Charge	Maximum Charge	Maximum Charge
ISDN FRA WLR	Maximum Charge	Maximum Charge	Maximum Charge
ISDN PRA WLR	Maximum Charge	Maximum Charge	Maximum Charge
FNA FVCO	Cost Orientation	Cost Orientation	Cost Orientation
CG Interconnection	Cost Orientation	Cost Orientation	Cost Orientation
NG Interconnection	N/A for Voice interconnection	Cost Orientation	Cost Orientation
Co-Location	Cost Orientation	Cost Orientation	Cost Orientation
Order Handling	Cost Orientation	Cost Orientation	Cost Orientation
Ancillary Services	Cost Orientation	Cost Orientation	Cost Orientation
White Label Voice	N/A	MST	N/A
Retail Line Rental	MST	N/A	N/A
POTS-based FTTC and standalone FTTC +VoIP	MST	N/A	N/A
Switchless Voice	MST	N/A	N/A
POTS based FTTC	Cost Orientation	Cost Orientation	Cost Orientation

Accounting Separation Remedies

Overview

10.322 In paragraphs 10.243 to 10.321 above, ComReg is imposing various price control and cost accounting obligations on Eircom relating to the provision of products, services, and facilities in the Regional FACO Markets.

- 10.323 The purpose of accounting separation obligations is to provide a further level of detail of information than that which can be derived from the statutory financial statements of the SMP SP, with the objective of reflecting, as closely as possible, the performance of those parts of its business, were it to operate on a standalone basis. Given Eircom's vertical integration, accounting separation also supports non-discrimination obligations, prevents unfair cross-subsidies to other services, and assists ComReg in monitoring Eircom's compliance with obligations. Having such detailed information enables ComReg to understand the information related to the costs, volumes and associated revenues of products, services and facilities offered by Eircom.
- 10.324 In accordance with Regulation 11 of the Access Regulations, ComReg can, *inter alia*, require an SP which is vertically-integrated, to make transparent its wholesale prices and its internal transfer prices, among other things, to ensure compliance with any non-discrimination obligation imposed or, where necessary, to prevent unfair cross-subsidy.
- 10.325 Allocating costs to the appropriate and relevant products and services of an SMP Undertaking is an important factor to consider when regulating multiple products and services carried over the same network. This is particularly true for Eircom, where its FNA network is a common infrastructure that is used to provide a range of retail and wholesale services (some of which are subject to regulation) including, for example FACO or WCA, which relies, in some instances, on the FNA network. Therefore, when setting price controls for FACO products, services and facilities (and in ensuring compliance with pricing and other obligations), information is required about the costs associated with Eircom's provision of FACO, with such costs being distinct from the costs associated with other services provided over Eircom's network.
- 10.326 ComReg has decided to continue the accounting separation obligations with respect to CG and NG Interconnect services (including the WEIL product which is a component of NG Interconnection Services) and the production of the annual Additional Financial Information ('AFI'). This requirement recognises the present and potential future use of such interconnection facilities to carry voice traffic between Eircom and OAO networks, and the ongoing need to monitor Eircom's profitability and cost recovery, as part of a regulated market.
- 10.327 Eircom has been required to provide separated accounts and maintain detailed cost accounting systems that are sufficiently granular to allow an assessment of cost allocations under the 2010 Accounting Separation and Cost Accounting Decision.
- 10.328 ComReg considers the Accounting Separation obligation reporting requirements under the following headings:
- (a) Historic Cost Accounting ('HCA') Statements;

- (b) Additional Financial Statements ('AFS'); and
- (c) Additional Financial Information ('AFI').

Consultation proposal

10.329 In Section 9 of the 2020 Consultation, ComReg identified that Eircom has the ability and incentive to engage in a range of anti-competitive pricing behaviours in the Regional FACO Markets. These included the risk that Eircom could charge excessive prices for products, services and associated facilities in the Regional FACO Markets. In view of this, ComReg provisionally considered that the imposition of obligations of accounting separation on Eircom was justified, in addition to the imposition of the price control and cost accounting obligations. As a result of the proposed deregulation of the Urban FACO Market, ComReg outlined a rationalisation of some elements of the reporting obligations in the 2020 Consultation. The proposed changes to the Accounting Separation obligations were:

- (a) The obligation to publish an annual Statement of Average Costs and Revenues by service for the Wholesale Fixed Narrowband and Unbundled Access would be removed as part of the HCA Statements requirements.¹¹¹²
- (b) The obligation to report separate revenues and costs within the Wholesale Narrowband Access, and Wholesale Unbundled Access, into those of PSTN, ISDN and Wholesale Unbundled Access in the AFS would also be removed¹¹¹³ and
- (c) Finally, ComReg also outlined a plan to conduct a review of the existing AFI suite of reports linked to the FACO Markets. This would be assessed by ComReg and Eircom in an annual review of AFI reporting obligations.¹¹¹⁴

Respondents' Views

10.330 In response to Question 12, only Eircom addressed the issue of the reduction in the obligations concerning cost accounting and accounting separation reporting. Eircom, in response to Question 10, also raised objections to the retention of most of the existing accounting separation obligations. In light of the significant share of the market, which will no longer be subject to regulation. Eircom also noted in their response that Section 13.1 of the draft Decision Instrument seemed to suggest that all existing reporting obligations would remain in place. Therefore, Eircom requested that *"The de-regulatory proposals should be clarified in the text of the Decision Instrument."*

¹¹¹² 2020 Consultation, paragraph 10.308.

¹¹¹³ 2020 Consultation, paragraph 10.309.

¹¹¹⁴ 2020 Consultation, paragraph 10.31.

ComReg's Assessment of Respondents' Views and Final Position

Historical Cost Accounts ('HCA') requirements

- 10.331 Having further considered the level of deregulation occurring in the FACO market and Eircom's submission in relation to proportionality, ComReg is proposing changes to ease the regulatory burden on Eircom by allowing Eircom to provide accounts for the Relevant FACO markets, however, these changes are not intended to be a way of regulating the Urban FACO Markets. ComReg has decided that the requirement to publish Wholesale Fixed Narrowband revenues, costs and mean capital employed within the Wholesale Access statement should be removed and that Wholesale Fixed Narrowband revenues, costs and mean capital employed shall be reported as part of Wholesale Residual (Regulated) in the Wholesale Other statement. Following this change the Wholesale Access statement will report the financial results for Wholesale Unbundled Access, Wholesale Broadband Access and Wholesale Leased Lines.
- 10.332 In relation to the existing obligation to provide an annual Statement of Average Costs and Revenues by service for Wholesale Fixed Narrowband ComReg remains of the view that this should be removed. The requirement for Statement of Average Costs and Revenues for Unbundled Access remains as any change to this requirement is outside the scope of this Decision.
- 10.333 The removal of these obligations for Wholesale Fixed Narrowband is based on the fact that over 70% of SB-WLR services is provided on the Urban FACO Markets which is to be deregulated. Eircom will no longer be subject to price control obligations for standalone PSTN services that are sold in EAs that constitute the Urban FACO Markets.

- 10.334 Additionally, ComReg proposes to engage with Eircom and its auditors to determine how changes can be implemented in the HCA statements in order to ensure that Eircom is not required to report on services which are no longer regulated, while also ensuring that the HCA Separated Accounts provide stakeholders with information on those services that continue to be subject to cost orientation. In making these changes ComReg expects that when PSTN WLR is sold as part of a FTTC VUA or FTTC Bitstream bundle that the revenues, costs and mean capital employed associated with those network elements that support these FTTC broadband services (including the local copper loop elements that are necessary to provide the broadband service) will be included in Wholesale Fixed Broadband in the Wholesale Access statement. This is to recognise that, as set out in ComReg Decision D11/18, broadband has replaced PSTN as the anchor service for an increasing proportion of Eircom's customer base and that the pricing of FTTC services continues to be cost oriented. ComReg is aware that revising the reporting requirements within the HCA Separated Accounts may require Eircom to amend some of the cost and revenue accounting studies that are used in the preparation of the accounts.
- 10.335 Accordingly ComReg is of the view that the obligation to include Wholesale Fixed Narrowband Access in the published Wholesale Access statement is no longer required, and directs that Wholesale Fixed Narrowband revenues, costs and mean capital employed be reported as part of Wholesale Residual (Regulated) in the Wholesale Other statement.
- 10.336 ComReg has also decided that the obligation to publish Average revenue and costs by service for Wholesale Fixed Narrowband as part of the annual HCA Separated Accounts is no longer required. However, the average revenue and cost by service for Wholesale Unbundled products is retained.
- 10.337 These revised accounting separation obligations are applicable for any financial reporting made by Eircom after the Effective Date of this Decision.¹¹¹⁵

Additional Financial Statements ('AFS')

- 10.338 Consistent with the reasoning set out above, and as proposed in the Consultation, ComReg has also concluded that the Wholesale Fixed Narrowband Access AFS is no longer required. As the published Wholesale Access statement will now report the results for the Wholesale Unbundled Access, the inclusion of Wholesale Unbundled Access in the AFS is no longer necessary.

¹¹¹⁵ As per D08/10, ComReg expects to receive this information in Q2 2022.

Additional Financial Information ('AFI')

- 10.339 ComReg also remains of the view, that a review of the AFI suite of reports linked to the FACO Markets will continue to be carried out by ComReg as part of the annual review of AFI reporting obligations in accordance with the decision instrument in Appendix II of ComReg Decision D08/10.
- 10.340 ComReg's final position is that Eircom shall no longer be required to publish separated accounts in respect of the products, services and facilities falling within the FACO Markets as part of Wholesale Access statement and directs that Wholesale Fixed Narrowband revenues, costs and mean capital employed be reported as part of Wholesale Residual (Regulated) in the Wholesale Other statement. However, the requirement remains to adhere to the pre-existing reporting obligations within the separated accounts, for revenues and costs relating to CG and NG interconnection services for voice services.
- 10.341 ComReg's final position is that the obligation to publish Statement of Average Costs Revenues by Service for the Wholesale Fixed Narrowband is no longer required in the annual HCA Statements.
- 10.342 ComReg is of the final view that the obligation to include Wholesale Fixed Narrowband and Unbundled Access in the annual Additional Financial Statements is no longer required.
- 10.343 ComReg's final position is that a review of the AFI suite of reports linked to the FACO Markets will be carried out as part of the annual review of AFI reporting obligations
- 10.344 Finally, ComReg has slightly revised the Decision Instrument to reflect the modifications to the accounting separation reporting obligations which Eircom must adhere to from the Effective Date of this Decision. However, it should be noted that extensive changes to the Decision Instrument are not required, as many of the amendments to the accounting separation obligations are permissible within the terms of the existing accounting separation obligations detailed in ComReg Decision D08/10.

Statement of Compliance (SoC) Remedies

2020 Consultation Proposals

- 10.345 In the 2020 Consultation, ComReg proposed to require Eircom to submit, within 6 months, and thereafter keep up-to-date, a SoC setting out how Eircom identify and manage risks of non-compliance with SMP obligations in the Regional FACO Markets, and to publish the SoC on its publicly available website, subject to any confidentiality considerations. ComReg proposed in particular that the SoC describe in detail the following:
- (a) The governance measures implemented by Eircom to ensure compliance with regulatory (SMP) obligations;

- (b) The methodology followed by Eircom to identify risks of non-compliance and to develop the controls required to manage such regulatory risks;
- (c) The regulatory risks identified for all the products, services and facilities offered by Eircom in the Relevant Regional FACO Markets; and
- (d) For each of the product, service, and facility offered by Eircom in the Regional FACO Markets, the risk analysis and control development process carried out to arrive at the SoC.

10.346 In order to ensure that the SoC meets the objective of providing assurances as regards Eircom's compliance with SMP obligations and the regulatory governance measures put in place by Eircom in this respect, ComReg proposed to impose a number of specific requirements as regards the form and content of the SoC. In particular, ComReg proposed to require as follows:

- (a) In order that the adequate level of attention is given to regulatory governance and oversight at the appropriate level within Eircom Limited, that the SoC is signed by a director or directors of Eircom Limited with detail provided of the review, verification and certification processes followed or relied on by the Director(s) for the purpose of the SoC;
- (b) That the description of the risk identification and control development methodology in the SoC includes the scope and output of the risk review, the processes reviewed, the material considered and the role given and exercised by Subject Matter Experts (SMEs);
- (c) That the SoC covers a number of key activities from a regulatory compliance perspective, namely: (i) Pre-provisioning, provisioning and service assurance for products, services and facilities; (ii) Product development including product enhancements, and pre product development screening of Access requests; (iii) Product prioritisation and investment decisions; (iv) Access to shared resources including IT and network development resources; and (v) The management of Structured and Unstructured Information;
- (d) That the SoC includes, for each of the product, service, and facility offered by Eircom in the Regional FACO Markets, detail of how the review was carried out and the basis for the conclusions reached, how the controls to manage risks were identified and the reasons why they are appropriate, and the repository in which the data from the operation of each control is recorded and stored.

- 10.347 ComReg explained in the 2020 Consultation that such a SoC had the potential to increase confidence in the scope and comprehensiveness of Eircom's regulatory governance and oversight in the Regional FACO Markets. ComReg noted that the proposed SoC and associated requirements, extending to all SMP obligations in the Regional FACO Markets aligned with the approach followed in respect of the WHQA Markets, and WLA/WCA Markets, as did the proposed obligation more generally, and no additional burden would result from the proposed SoC requirements.
- 10.348 ComReg noted that the SoC could be generated as an output from the risk assessment processes executed by Eircom as part of its Regulatory Governance Model ('RGM'), a key element of which is the analysis, development, management and documentation of the risk and control framework.
- 10.349 Finally, ComReg proposed, in order to ensure that the SoC remains up to date, to include it in the documentation required to be published in respect of amendments to existing products and for new products, in accordance with the timelines set out in the Decision for the purpose of transparency.

Respondents' views

- 10.350 Eircom, ALTO and BT responded specifically in relation to ComReg's proposals on the SoC. ALTO and BT expressed the view that there was very little transparency as to whether the RGM including the Independent Oversight Board ('IOB')¹¹¹⁶ was functional, which causes concern regarding the effectiveness of the process. In this context they found that the RGM should be underpinned with regulation to ensure it works in a transparent way.
- 10.351 Eircom submitted a detailed response disagreeing with ComReg's proposals. In particular, Eircom complained that ComReg had not identified a clear legal basis and justification for the proposed requirement on Eircom to provide a SoC and that ComReg must take into account existing reporting requirements under the Settlement Agreement of December 2018;¹¹¹⁷ that ComReg's proposals would result in a significant unjustifiable increase of the regulatory burden on Eircom where there was no rational justification for it in the Regional FACO Markets. Eircom also queried the reasonableness and practical application of the requirement to update the SoC.

¹¹¹⁶ The IOB was established in accordance with the Settlement Agreement of December 2018 with majority independent membership. Its functions include, among other things, overseeing and assessing Eircom's regulatory governance arrangements.

¹¹¹⁷ The Settlement Agreement was entered into by ComReg and Eircom Limited on 10 December 2018 in respect of certain litigation which had been brought to the High Court. As part of the terms of the Settlement Agreement, ComReg and Eircom agreed a set of commitments, including the establishment and operation of an enhanced Regulatory Governance Model in Eircom.

10.352 These issues are considered below, first in terms of the regulatory and legal underpinning for the proposed obligations, and then in terms of the burden associated with the obligation including from a justification and proportionality point of view.

ComReg's assessment – Regulatory and legal underpinning of the obligation to provide a SoC

10.353 ComReg is satisfied that it may impose under the regulatory framework for electronic communications a requirement to provide to ComReg, and publish, a Statement of Compliance as proposed in the 2020 Consultation, and indeed ComReg has done so previously. While it is correct that no provision in the regulatory framework "*prescribes*" the provision of a SoC, Regulation 10 of the Access Regulations, in particular, provide that ComReg may impose obligations "*to ensure*" that an operator designated with SMP provides services and information to others under the same conditions and of the same quality as it provides for its own services or those of its subsidiaries and partners. Regulation 18(1)(a) of the Authorisation Regulations allows ComReg to require an operator to provide information, where proportionate and objectively justified, including for the systematic verification of compliance with SMP obligations. Furthermore the Communications Regulation Act 2002 (as amended) confers on ComReg, under section 10(1)(a), the following function,

"to ensure compliance by undertakings with obligations in relation to the supply of and access to electronic communications services, electronic communications networks and associated facilities and the transmission of such services on such networks",

10.354 and under section 10(3), gives ComReg all such powers as are necessary for or incidental to the performance of its functions. On the basis of the above, ComReg has the power to impose an obligation on Eircom to provide a statement of compliance.

10.355 In terms of the relevance of Eircom's existing RGM, ALTO and BT on the one hand, and Eircom on the other, referred to the RGM arrangements under the Settlement Agreement of December 2018. ALTO and BT note that they do not provide sufficient transparency and Eircom's view is that the SoC requirements are not necessary having regard to Eircom's existing reporting requirements. According to Eircom, furthermore, the adequacy of how Eircom carries out its risk assessments and control design is not for ComReg to decide upon.

- 10.356 While ComReg accepts that the existence of the RGM is relevant to the matter of the SoC, ComReg does not agree, however, that reporting requirements under the Settlement Agreement mean that no SoC obligation is required or appropriate. Under the Settlement Agreement, Eircom agreed to implement regulatory governance arrangements in order to improve Eircom's identification and management of its risks of non-compliance and the operation of its RGM, including through the establishment of the IOB. While the IOB is responsible for the oversight of the RGM within Eircom, it does not make redundant ComReg's role in the monitoring of compliance with SMP obligations.
- 10.357 ComReg notes further that the reports generated by Eircom under its regulatory governance arrangements and which are submitted to the IOB are not the same as the SoC which ComReg has proposed to require Eircom to publish as part of its SMP obligations in the Regional FACO Markets. Eircom's RGM manages risks of non-compliance with SMP obligations and is used to apply internal governance and oversight to its compliance. While ComReg does not receive the RGM reports, the RGM reports which Eircom agreed to provide to the IOB under the Settlement Agreement mainly include the output from the various governance processes in operation. They are not published, unlike the SoC, and do not in particular include a signed statement by an Eircom Director or Directors explaining the basis on which they are satisfied that Eircom's governance arrangements provide reasonable assurance that Eircom is in compliance with its regulatory obligations.
- 10.358 As such, the RGM reports are not sufficient to ensure or demonstrate, from ComReg's and OAOs' perspective, non-discriminatory provision of access by Eircom in accordance with SMP obligations or to verify compliance by Eircom with its obligations. Additional reports produced by Eircom and provided to ComReg according to the terms of the Settlement Agreement¹¹¹⁸ (for example, the report based on Eircom's review of all IT systems with confidential regulated information or that have access to systems with confidential regulated information and a corresponding risk review of each system), are one-off reports rather than systemic compliance reports and do not provide all of the information required by the SoC.
- 10.359 As RGM reports are not published, they are not transparent or sufficient to give OAOs confidence in Eircom's non-discriminatory provision of regulated wholesale services in accordance with SMP obligations for the purpose of their investment decisions ultimately for the benefit of competition in the FACO Markets generally.

¹¹¹⁸ Annex 2 of the Settlement Agreement, the Performance Agreement, sets out a number of performance milestones to be achieved by Eircom. A number of these milestones include a requirement for Eircom to submit reports relating to Eircom's implementation of regulatory governance arrangements to ComReg.

- 10.360 ComReg notes that a key aspect of the SoC is to provide insight into how regulatory risks are identified by Eircom, and control processes devised. For the avoidance of doubt, by imposing the SoC obligation ComReg does not purport to direct how Eircom is to carry out its risk assessments and control design; but ComReg does require to understand how Eircom carries out risk assessment and control design, in order that ComReg can take a view on the adequacy of the analysis carried out by Eircom and the assurances accordingly that ComReg may derive from the SoC. The list of new risks or controls identified is an important aspect of the SoC but it is insufficient on its own; the analysis of how Eircom assesses risks and arrives at the set of controls is critical to understand what the list of risks and controls means from a compliance perspective.
- 10.361 The SoC, accordingly, has a different content and function than the RGM reports; it is published on Eircom's website with the intention of transparently providing information to ComReg and OAOs, and does not duplicate existing reporting requirements.
- 10.362 ComReg is of the view that the SoC obligations complement the RGM, for example, a significant portion of the information required for the SoC is generated as a result of processes in the RGM, and regulatory arrangements under the RGM informed ComReg's assessment of the proportionality of the obligation as proposed.

Burden of SoC Requirements

- 10.363 In its submission Eircom states that the SoC obligation as described in the 2020 Consultation would significantly increase the regulatory burden on Eircom. Eircom believes that there is no rational justification for seeking to impose increased reporting obligations in the Regional FACO Markets given that these markets are in decline. In Eircom's view, it would seem more reasonable for ComReg to consider removing the SoC requirement in this narrow market rather than increasing it (which would be consistent with proposals on other matters such as relaxing Eircom's access obligation in terms of RAP development requests in the Regional FACO Markets). Eircom raised an issue in respect both of the amount of information required and the frequency with which the statements must be provided, as compared to other, existing Decisions such 2018 WLA/WCA Decision and 2020 WHQA Decision.

- 10.364 ComReg does not agree that the fact that the geographic scope of the regulated market has decreased and that the regulated Regional FACO Markets may further decline over the lifetime of the review (noting that ComReg intends to carry out a Mid-term Assessment) render a SoC requirement redundant. It is the case that ComReg has found that Eircom continues to have SMP in respect of the Regional FACO Markets and is imposing a suite of appropriate remedies to address identified competition problems. It is in this context that ComReg has found that a requirement for SoC remains justified and appropriate to demonstrate to OAOs and ComReg that Eircom is compliant with its regulatory obligations and has in place good regulatory governance.
- 10.365 While ComReg notes that the SoC obligation for the Regional FACO Markets is more specific in relation to certain obligations, it does not consider that it is more demanding or otherwise more burdensome than the SoC required in respect of the WLA and Regional WCA Markets under the 2018 WLA/WCA Decision or the regulated WHQA Market under the 2020 WHQA Decision. The proposed SoC obligation in the 2020 Consultation and the obligation to provide a SoC in 2018 WLA/WCA Decision and 2020 WHQA Decision are in essence the same.
- 10.366 Although the substance of the SoC obligations throughout the various regulated markets is the same, it is correct that the text of the SoC for the Regional FACO Markets differs in some ways from the text of obligations imposed under the of the 2020 WHQA Decision, which itself differed slightly from the text of the SoC obligations imposed in the 2018 WLA/WCA Decision. While in each case these differences have been introduced with the view to providing greater clarity in order to avoid any confusion, ComReg has reviewed further the wording of the text of the SoC obligation and has aligned it with the text used in the SoC obligations under the 2018 WLA/WCA Decision and 2020 WHQA Decision.
- 10.367 In addition, separately, with the view to assisting Eircom to meet the requirements associated with SoCs fully and also operationally as efficiently as possible across the regulated markets, it is ComReg's intention to issue guidance as to how those requirements may be met by Eircom.

- 10.368 As regards keeping the SoC up-to-date, there is no new requirement being introduced for the purpose of the obligation being imposed in the Regional FACO Markets that was not already applicable in respect of the WLA/WCA and WHQA Markets. ComReg notes in this regard that Eircom's proposal that it provides an updated Risk and Control Matrix ('**RACM**') on a six-monthly basis to incorporate any relevant changes and that where there are new risks or controls following business unit process compliance reviews ('**BUPCR**') for new products or amendments to existing products, that they are provided separate to the complete RACM, would introduce a different regime for the Regional FACO Markets from what is in place for WLA/WCA and WHQA markets.
- 10.369 In addition to introducing discrepancies in the applicable SoC regimes, Eircom's proposals fail to acknowledge that the value that can be derived from the SoC critically depends on understanding how robust the RACM, which lists the risks identified by Eircom and the controls put in place to manage the identified risks, is as the output of risk analysis undertaken by Eircom. The key requirements of the SoC for all markets is the same, namely that the risks and associated controls are identified in the SoC together with evidence on how the risk analysis and control development was done, and the adequacy and effectiveness of controls maintained. In order to provide ComReg with assurance as to how Eircom is managing its SMP obligations, the SoC needs to show how the risk analysis and control development methodology is applied systematically to the entire risk environment, not separately and on an ad-hoc basis from time to time. A SoC, signed by a Director of Eircom, reflects the underlying inputs and is only true and accurate to the extent that these inputs remain the same. Where there are material changes to the underlying inputs, a new SoC, signed by a Director of Eircom, is required, to ensure the integrity of the SoC. Eircom has indicated that there may be a number of reasons why material changes are made. However, no matter what the reason for the change, in order to be effective, the SoC must reflect Eircom's current regulatory risks and controls.
- 10.370 ComReg does not accept that this requirement – which applies already in other regulated markets – places an unreasonable burden on Eircom and notes that the underlying evidence should be available as an output from Eircom's RGM.

ComReg's final position on SoC

- 10.371 In conclusion, having taken into account Respondents' Submissions, ComReg considers that the obligations proposed in the 2020 Consultation in respect of SoCs, which reflect the obligations imposed in the 2018 WLA/WCA Decision and the 2020 WHQA Decision, are appropriate and proportionate and in particular do not materially increase Eircom's existing regulatory burden.

10.372 However, in order to address any potential difficulty for Eircom arising from different wording used in the Decision Instrument as compared to the Decision Instruments in the 2018 WLA/WCA and 2020 WHQA Decisions, ComReg has amended the draft decision instrument in the 2020 Consultation and aligned the level of detail in the Decision Instrument in Annex 14 of this Decision with these Decisions.

10.373 It is ComReg's intention also to provide further guidance to Eircom as to how the SoC obligations across all regulated markets may be met in a compliant and operationally efficient manner.

10.6 Overall Conclusion on Remedies

10.374 In their Submissions to the 2020 Consultation, ALTO, BT and Vodafone broadly agreed with ComReg's preliminary conclusions on remedies in the Regional FACO Markets.

10.375 ALTO and BT both agreed with ComReg's preliminary conclusions on remedies in the Regional FACO Markets and welcomed the detailed analysis provided in section 10 of the 2020 Consultation,^{1119 1120} and the '*depth and breadth*' of the proposed remedies.^{1121 1122} Vodafone also generally agreed with ComReg's preliminary conclusions on remedies in the Regional FACO Markets.¹¹²³

10.376 Eircom, however, did not agree with the remedies proposed stating ComReg had not shown that its proposed set of remedies are appropriate, necessary and the least onerous option available.

10.377 For the reasons set out above and having considered Eircom's Submission, ComReg remains of the view that the remedies imposed on Eircom are justified and appropriate having regard to the conditions for competition in the Regional FACO Markets regarding the provision of FNA FACO.

¹¹¹⁹ ALTO Submission, pages 12-13.

¹¹²⁰ BT Submission, page 19.

¹¹²¹ ALTO Submission, page 14.

¹¹²² BT Submission, page 19.

¹¹²³ Vodafone Submission, page 7.

- 10.378 ComReg is satisfied in particular that the access obligations imposed on Eircom will contribute to retail competition to the benefit of end users, in the Regional FACO Markets, by restricting Eircom's ability and incentives to engage in exploitative or exclusionary behaviours. It is not the case, contrary to Eircom's contention, that the remedies imposed are not appropriate, being historic remedies developed for a larger national regulated market with quite different conditions, or that ComReg did not properly assess whether, in the absence of specific remedies, ComReg could effectively address issues by means of its dispute resolution and compliance functions, combined with its existing *ex post* competition law powers.
- 10.379 ComReg acknowledges the reduced size of the Regional FACO Markets when compared with the regulated national FACO market arising from the 2015 FACO Decision. However, the Regional FACO Markets, consisting of 699,724 premises and 376,165 RFTS lines,¹¹²⁴ remains a substantial market and require an appropriate set of remedies designed to promote the development of effective competition and to protect end users pending in particular further development of NG-based competition. As set out in Section 7 above, the Regional FACO Markets meet the 3 Criteria Test, are therefore susceptible to *ex ante* regulation, and furthermore display SMP. In considering whether to amend, maintain or remove existing obligations in that context, ComReg was satisfied that relying on dispute resolution, or competition law, in place of specific access obligations accompanied by obligations of transparency and non-discrimination, would not be sufficient to ensure effective competition in the market.
- 10.380 The developing status of competition in the Regional FACO Markets, pending in particular further development of NG-based competition, including the decrease in the number of lines concerned, is reflected in the scope of the access obligations, which is limited to the following:
- (a) new FNA FACO products, services or facilities or amendments to existing FNA FACO products, services or facilities to those access requests extant on the date the decision arising from the 2020 Consultation comes into effect;
 - (b) those access requests required for the implementation of the network modernisation project; and
 - (c) requests in connection with a FNA FACO product, service or facility which Eircom provides to itself.

¹¹²⁴ Table A11.5.

10.381 Furthermore, a number of access obligations is removed, namely PAC Service and wholesale LV-CPER. It is accordingly not the case, contrary to what Eircom contends, that there is an increase in the regulatory burden on Eircom.¹¹²⁵ Only the scope of the obligation to provide a Statement of Compliance has extended but as explained in paragraphs 10.364 to 10.367 above, ComReg does not believe that the regulatory burden has increased to any extent as a result.

Non-confidential

¹¹²⁵ Eircom Submission, paragraph 201 (page 62).

11 Withdrawal of SMP and Remedies on the Urban FACO Markets

11.1 Issues arising with the withdrawal of regulation

- 11.1 As noted in Section 7, ComReg's position is that the following markets are no longer susceptible to *ex ante* regulation:
- (a) the Urban Low-Level FACO Market; and
 - (b) the Urban High-Level FACO Market.
- 11.2 In accordance with the principle that regulatory obligations can only be imposed or maintained pursuant to a finding of SMP, in the 2020 Consultation, ComReg proposed in light of its preliminary finding that the Urban FACO Markets were no longer susceptible to *ex ante* regulation, to withdraw the obligations imposed on Eircom by the 2015 FACO Decision in respect of the Urban FACO Markets. ComReg proposed, as provided for by Regulation 27(2) of the Framework Regulations, to allow for a sunset period prior to the withdrawal of obligations becoming effective, by way of notice to affected parties, in particular those Access Seekers availing of regulated access in the Urban FACO Markets.
- 11.3 ComReg's finding that the Urban FACO Markets are no longer susceptible to *ex ante* regulation is, as set out at Section 7 above, predicated on a number of factors, including a forward-looking assessment of the competitive constraints arising in those markets, principally due to the presence of wholesale NG Broadband networks capable of delivering RFTS by means of Managed VoIP offered by SPs to end users on a retail basis, or to other SPs on a wholesale basis. The presence of such constraints is assured, in a Modified Greenfield Approach, through upstream regulation in the WLA Market, as per the 2018 WLA/WCA Decision.
- 11.4 Two issues in terms of the withdrawal of obligations arise from this finding:
- (a) the notice period that ought to be given to Access Seekers prior to regulated access being withdrawn in the Urban FACO Markets. This is discussed in Section 11.2 below; and
 - (b) ensuring that the level of regulation across the Regional FACO Markets remains appropriate, having regard to the evolution of the availability of NG Broadband networks over the 5-year lifetime of this market review. This is discussed in Section 11.3 below, together with any appropriate sunset periods to follow further deregulation in that context.

11.2 Sunset periods

- 11.5 As set out in the 2020 Consultation and further clarified in ComReg's Information Notice 20/46, the purpose of the proposed sunset periods is to give reasonable and sufficient notice to the Access Seekers affected by the withdrawal of obligations, in order to facilitate orderly deregulation in the Urban FACO Markets. ComReg proposed sunset periods of 9 months in respect of new orders, and 18 months in respect of existing access, to allow Access Seekers sufficient time in which to make any necessary preparations for the new market environment and to preserve continuity in the supply of both wholesale and retail services (were Eircom to withdraw SB-WLR, or significantly alter its SB-WLR terms and conditions, following deregulation).
- 11.6 The proposed initial 9-month period following the Effective Date of this Decision sought to ensure that an Access Seeker would have sufficient time to (further) develop or procure a VoIP platform and associated operational/support systems and processes to enable the delivery of Managed VoIP to RFTS end users. The sunset period seeks to ensure continuity in the supply of SB-WLR while an Access Seeker develops or procures a VoIP platform (along with, for example, all ancillary systems integration for in-life management of the Managed VoIP product(s)). This initial 9-month period should also provide sufficient time for an Access Seeker to, in parallel to these activities, initiate a communication programme with its end users regarding the replacement of its existing SB-WLR-based RFTS by Managed VoIP delivered via NG Broadband access.
- 11.7 The subsequent 9-month period of the 18-month sunset period seeks to ensure that Access Seekers have sufficient time to migrate their end users from POTS-based NGA broadband to standalone NGA broadband with Managed VoIP, noting that SB-WLR-only end users will require NGA broadband to be installed before migrating to standalone NGA broadband with Managed VoIP. The length of the latter 9-month period proposed in the 2020 Consultation was determined having regard to the volume of FACO lines in the Urban FACO Markets¹¹²⁶ and Eircom's published product migration processes,¹¹²⁷ which state a maximum throughput of 1,000 migrations per operator per day on the FTP channel of the UG.¹¹²⁸ Eircom has confirmed to ComReg that this migration capacity is available¹¹²⁹ but noted that there had been no significant demand to date from SPs for bulk migrations.

¹¹²⁶ The overall volume of FACO lines in the Urban FACO Markets is set out in Table 55 above.

¹¹²⁷ <https://www.openeir.ie/products/>

¹¹²⁸ As specified in the Open eir UG Data Contract.

¹¹²⁹ Eircom submission, paragraph 276.

Respondents' Views

- 11.8 Five Respondents (ALTO, BT, Eircom, Sky and Vodafone) commented on the proposals regarding the withdrawal of obligations. All five Respondents disagreed with ComReg's approach to the withdrawal of SMP and remedies on the Urban FACO Markets. Eircom expressed the view that the proposed sunset periods were too long, while other Respondents considered that they were insufficient.
- 11.9 In its Submission Eircom argued that the proposed withdrawal periods were excessive and disproportionate for a number of reasons, including that:
- (a) the market review delay meant that it was inappropriate to further extend the period for deregulation with respect to the Urban FACO Markets or any EAs identified as competitive in the subsequent MTA;
 - (b) the 2020 Consultation effectively served as appropriate notice for the withdrawal of regulation;
 - (c) the proposed transitional periods were not in line with EU regulatory precedent;
 - (d) ComReg did not provide sufficient justification as to why the chosen length was appropriate under Article 16(3) of the Framework Directive or how an eventual faster lifting of SMP obligations could cause harm to consumers in a market that is considered effectively competitive;
 - (e) the precise nature of the parallel sunset period appeared to Eircom to be illogical; and
 - (f) the Eircom Proposals negated the need for any transitional periods with regard to the MTA.
- 11.10 Eircom considered that the proposed sunset periods were excessive, and that sufficient justification has not been provided by ComReg as to why such sunset periods were appropriate, proportionate or justified. In particular, Eircom suggested that delays in the timely publication of a new FACO Decision, arising in the first instance from ComReg's decision to seek a two-year extension to the deadline for notification of new draft measures in 2018, have had a significant effect on Eircom's ability to compete effectively.

- 11.11 Eircom considered that that Access Seekers have been granted sufficient time to migrate away from the purchase of FACO, and disagreed that it is appropriate to maintain obligations in the Urban FACO markets beyond the Effective Date. Access Seekers are well aware of the changes in the market place over the last number of years, in particular the substantial increase in the footprint of NG broadband, the increases in Managed VoIP subscriptions and the move towards full IP-based infrastructure. Eircom added that the 2020 Consultation effectively served notice of the withdrawal of regulation from the relevant markets, such that additional time beyond the effective date of the Decision is not justified.
- 11.12 Eircom noted that Article 16(3) of the Framework Directive states that any sunset period should be accompanied by an appropriate period of notice. Eircom did not consider that the proposed notice periods were appropriate.
- 11.13 Eircom also considered that the proposed sunset periods were inconsistent with EU precedents, and pointed to examples from decisions taken by NRAs in Portugal (ANACOM), Poland (UKE), Latvia (SPRK), and Bulgaria (CRC) which suggested that instances of sunset periods in excess of 12 months were rare, and that the EC has regularly commented on the longer sunset periods proposed for FACO deregulation.
- 11.14 UKE proposed a sunset period of in excess of 24 months, which it justified on the basis that this corresponded to the maximum duration of contracts concluded by Access Seekers with their RFTS customers.
- 11.15 Pursuant to FACO deregulation, ANACOM proposed an 18 month sunset period for existing access agreements on the basis that an immediate withdrawal could, *inter alia*,
- (a) cause a disruption of supply under medium-term contractual commitments of access seekers with non-residential and public authorities and,
 - (b) cause possible dissatisfaction among end users.
- 11.16 The EC noted that, in accordance with Article 16(3) of the Framework Directive, any transitional period should be appropriate, and noted that ANACOM's justification was couched in general, rather than specific, terms. The EC therefore requested that ANACOM “...reconsider the length of the transitional period and to provide further and more specific justifications in its final measure as to why the chosen length can be considered appropriate under Article 16(3) of the Framework Directive.” Eircom also noted that the EC had made similar comments on withdrawal period proposals made by SPRK and CRC.

- 11.17 ALTO believed, on the evidence of market share data, that ComReg's proposal to remove remedies on the Urban FACO Markets was premature. ALTO noted that, in the event that ComReg decided to remove the SMP remedies, the removal should be conditional on a fit for purpose set of bulk migration processes, together with a sunset clause of a minimum of three years in duration from the date at which bulk migration offerings can be deemed to be fit for purpose by ComReg and an independent assessor.
- 11.18 BT considered that the sunset period for existing customers should be extended to at least three years, given the slow rate of customer migration due to the absence of a fit-for-purpose bulk migration remedy. BT was of the view the 9 months for new supply could only work for customers that have access to NG broadband.
- 11.19 Vodafone urged that sunset periods of 12 months and 24 months at minimum should apply for 'new provide orders' and 'existing lines', given that most RFTS contracts are of at least 12 months' duration, and investment will be required in platforms.
- 11.20 ComReg addresses these points below.

ComReg's Assessment of Respondents' Views and Position

- 11.21 ComReg considers, for the reasons set out at 2.55 above, that, pending the transposition into Irish law of the EECC, it does not yet have, as of May 2021, a statutory power to accept the Proposals offered by Eircom. Accordingly, regardless of their merits or otherwise, the Proposals cannot negate the need for any transitional period.
- 11.22 ComReg disagrees with Eircom that it is inappropriate to further extend the period for deregulation by means of a sunset period, and also disagrees that the sunset periods set out below are "*incredibly excessive*". In this regard, ComReg notes that it has reduced the sunset periods in respect of ISDN BRA. Eircom characterises the sunset periods as an unwarranted regulatory restraint distorting an effectively competitive market. ComReg does not share this characterisation of sunset periods and, like other NRAs, considers that sunset periods may be appropriate in circumstances where immediate deregulation of a market would impede the capacity of Access Seekers to, where necessary, make alternative arrangements to assure continued service for end users.

- 11.23 In this respect, ComReg recalls that Article 67(3) EEC requires NRAs to provide notice to parties affected by the withdrawal of SMP obligations *“defined by balancing the need to ensure a sustainable transition for the beneficiaries of those obligations and end-users, end-user choice, and that regulation does not continue for longer than necessary”*. ComReg considers that the absence of a notice period – in the form of the sunset periods described below – on the Urban FACO Markets would endanger the capacity of Access Seekers to assure the transition of their end users to alternative arrangements, in particular, the provision of Managed VoIP RFTS.
- 11.24 In respect of Eircom’s arguments concerning EU NRA precedent, ComReg notes that some of the parallels drawn by Eircom do not appear to be valid. All of the sunset periods which ComReg has proposed are shorter than the UKE 24 month sunset period. In respect of the CRC decision, the EC comments letter noted that *“the length of the proposed transitional period depends on the review of the related retail markets which is entirely at the discretion of CRC”*. As Eircom is aware, this is not the case in respect of ComReg’s approach, which are time-bound and are not contingent on the progress of other market reviews. The SPRK proposed to retain all SMP remedies for a transitional period of 12 months. Again, this is not the case for ComReg’s approach, which is limited to Access remedies being maintained at the prices prevailing upon the Effective Date for the transitional period. Other SMP remedies imposed on Eircom cease to have effect on the Effective Date of this Decision.
- 11.25 The ANACOM withdrawal period to which Eircom alludes is perhaps most similar to ComReg’s own approach, and concerned the retention of a price control obligation for an additional 18 month period with respect to access agreements already in place. Aside from the justifications identified at paragraph 11.15 above, ANACOM also considered that a transitional period was necessary to implement alternative solutions (including individual technical and economic feasibility studies), and ensure a sustainable transition.
- 11.26 In its comments, the EC alluded to ANACOM having provided general justifications only, and to the absence of an analysis of showing how a faster lifting of SMP obligations could harm consumers in a market that is considered effectively competitive.
- 11.27 In respect of its own approach, ComReg has set out detailed justifications for the duration of the withdrawal periods at paragraphs 11.5 to 11.66 and has, where possible, minimised the duration of these periods.
- 11.28 As regards ALTO and BT’s concerns that a fit-for-purpose bulk migration remedy should be in place, ComReg addresses this issue in detail at paragraphs 11.54 to 11.62 below.

- 11.29 In response to Eircom's view that the 2020 Consultation should serve as notice for the withdrawal of obligations, ComReg does not believe that this is a sustainable position. No decision was made in the 2020 Consultation and its proposals were subject to consultation and to the views of Respondents. As such, no notice can reasonably be considered to have been given to Access Seekers affected by the withdrawal of obligations.
- 11.30 Having considered the Respondents' views from the 2020 Consultation¹¹³⁰ and taking into account information provided by Eircom in the context of its request for approval to withdraw ISDN BRA under the 2015 FACO Decision, refused by ComReg,¹¹³¹ ComReg's position that it is appropriate to distinguish between PSTN and ISDN FRA/PRA services, on the one hand, and ISDN BRA services, on the other, so that there shall be two sunset periods of differing length, for the Urban FACO Markets, dependent on the product as follows:
- (a) A PSTN and ISDN FRA/PRA services Sunset Period in the Urban FACO Markets (the '**PSTN and ISDN FRA/PRA Urban Sunset Period**'); and
 - (b) An ISDN BRA services Sunset Period in the Urban FACO Markets (the '**ISDN BRA Urban Sunset Period**')
- which are considered further in turn.
- 11.31 For the avoidance of doubt, the Sunset Periods maintain Eircom's existing obligations of Access (as described in the 2015 FACO Decision) in the Urban FACO Markets. Products, services and facilities must be provided at prices no higher than those prevailing for such products, services, facilities or Associated Facilities on the Effective Date of this Decision. Other obligations (for example, in relation to transparency and non-discrimination, etc.) are removed in the Urban FACO Markets.

PSTN and ISDN FRA/PRA Urban FACO Market Sunset Period

- 11.32 ComReg does not agree with Eircom's views¹¹³² that the PSTN and ISDN FRA/PRA Urban Sunset Period (9 months for new orders and 18 months for existing lines), as set out in the 2020 Consultation, is excessive, and sets out its justification for this reasoning in the following paragraphs.

¹¹³⁰ As described and considered in paragraphs 10.90 to 10.110.

¹¹³¹ Information Notice: Eircom's request to withdraw access to Integrated Services Digital Network (ISDN) Basic Rate Access (BRA), ComReg Document 20/118, dated 09 December 2020.

¹¹³² Eircom Submission, paragraphs 273, 274 and 276 (pages 94-96).

- 11.33 ComReg remains of the view that insofar as PSTN and ISDN FRA/PRA services are concerned, a sunset period of 9 months for new orders and 18 months for existing lines is an appropriate length having regard to the need to allow Access Seekers sufficient time to finalise and implement a migration strategy, and that they will not be in a position to start migrating end users immediately following this Decision. The sunset periods proposed in the 2020 Consultation are, in ComReg's view, appropriate and provide reasonable and sufficient notice to affected Access Seekers, while at the same time protecting end users from potential unnecessary disruption to their services. In particular, as noted at paragraph 11.7, the sunset periods proposed by ComReg have had regard to Eircom's own published product migration processes. ComReg also notes that it has reduced the ISDN BRA withdrawal period from the 18 months proposed in the 2020 Consultation to 12 months, for the reasons set out at paragraphs 11.63 to 11.65 below. ComReg also notes that it has, at paragraphs 11.43 to 11.47 below, set out the potential harms arising from RFTS end users in circumstances where SMP obligations were fully removed, without alternative service provision having first been arranged.
- 11.34 Contrary to what Eircom appears to suggest, the fact that a large majority of SPs listed by ComReg already offer VoIP to their retail end users does not make the 9-month sunset period unnecessary or disproportionate.¹¹³³ All Access Seekers must be provided with the opportunity to put in place appropriate substitute products to enable their end users to migrate from SB-WLR. While most of the SPs will have some VoIP capability, they may not have the full range of products available to align with the SB-WLR product set or the ability to operate them at scale.
- 11.35 This means that Eircom shall not withdraw access to these products, or related services, or facilities on Urban FACO Markets for a period of 18 months from the Effective Date of this Decision. Furthermore, during the first 9 months of the PSTN and ISDN FRA/PRA Urban Sunset Period, Eircom is required to provide access to products, services and facilities related to PSTN and ISDN FRA/PRA set out in Section 7 of the Decision Instrument contained in Appendix H of the 2015 FACO Decision. The 18-month PSTN and ISDN FRA/PRA Urban Sunset Period for the removal of all obligations in the Urban FACO Markets will run in parallel with this 9-month 'new order' period.
- 11.36 ComReg notes that, due to the size of the Urban FACO Markets, Access Seekers may need to upgrade their existing VoIP platforms and processes to cope with anticipated end user volumes. The first 9 months of the PSTN and ISDN FRA/PRA Urban Sunset Period are needed for this activity when considering the related procurement, planning and testing phases which will be required.

¹¹³³ Eircom Submission, paragraph 273 (pages 94-95).

- 11.37 In setting the 9-month PSTN and ISDN FRA/PRA Urban Sunset Period for new orders following this Decision, ComReg also took into account any potential tenders for business by SPs, which may be ongoing at the time of this Decision. Also, Access Seekers will not be informed of the specific list of exchanges in the Urban FACO Markets until the Effective Date of this Decision. The 9-month PSTN and ISDN FRA/PRA Urban Sunset Period for new orders will allow for tenders to progress to completion with certainty and for the Access Seeker's internal processes to be updated.
- 11.38 With regard to the 18-month PSTN and ISDN FRA/PRA Urban Sunset Period following this Decision for existing lines, ComReg has had regard, as set out in the 2020 Consultation, and further clarified in ComReg's Information Notice 20/46,¹¹³⁴ to the large number of end users in the Urban FACO Markets and the likely requirement for SPs in advance of any potential migration, to put in place a customer engagement programme. In particular, in order to ensure successful migration and the least disruption for end users, SPs will have to contact their customers and offer alternative products, post out new equipment (in certain scenarios) and agree the scheduling of migrations.
- 11.39 ComReg notes further that in the Urban FACO Markets, end users include users of standalone SB-WLR as well as users of POTS-based NGA. While migrations from POTS-based NGA may be carried out electronically, they are subject to limitations in volumes as outlined in Eircom's UG Data Contract.¹¹³⁵ Migrations from standalone SB-WLR require installation of an NG Broadband service to enable migration of the telephony service to VoIP and so are more time consuming.
- 11.40 ComReg also does not agree with ALTO, BT, and Vodafone that sunset periods, longer than those set out in the 2020 Consultation¹¹³⁶ (3 years proposed by ALTO and BT, 2 years proposed by Vodafone) are warranted.
- 11.41 The Urban FACO market consists of 304,578 active merchant market SB-WLR lines, served as follows:

¹¹³⁴ Information Notice – ComReg 20/46 Request For Clarification

<https://www.comreg.ie/publication/information-notice-comreg-20-46-request-for-clarification>

¹¹³⁵ UG Data Contract, V41.3, FTP Channel section.

¹¹³⁶ ALTO Submission, pages 12-13; BT Submission, page 21; Vodafone Submission, page 7.

Table 78: Wholesale FACO lines per SP [REDACTED]

SP	Number of Active Lines	WLR with Broadband (including ADSL)	Standalone WLR
BT	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]
Other	[REDACTED]	[REDACTED]	[REDACTED]
Total	304,578	[REDACTED]	[REDACTED]

- 11.42 ComReg's finding that the Urban FACO Markets are no longer susceptible to regulation is based on the availability of, *inter alia*, NG Broadband and VoIP as substitutes for SB-WLR; given the number of lines affected by deregulation, however, it is essential to ensure that sufficient time is provided to SPs so that they can migrate away from SB-WLR (including as part of POTS-based VUA) and offer an adequate substitute to their end users.
- 11.43 A small percentage of the end users have ADSL broadband and may not have a NG Broadband service available to them, while other end users have a POTS-based NGA service but do not use the POTS element of it. However, as Eircom will no longer be required to supply SB-WLR in the Urban FACO Markets following the sunset period, all of the above POTS-based broadband lines in Table 78 may need to be migrated to a standalone service (either CG or NGA broadband), while the telephone number will be either ported out to the SP's VoIP platform or ceased depending on the end user's preference. Based on Eircom's capability to process 1,000 orders per operator per day,¹¹³⁷ migrating current active SB-WLR lines as set out in the Table 78 above will take a minimum of [REDACTED], assuming Access Seeker ability to avail of the maximum daily migration allocation. This timeline falls within the latter 9-month period (of the 18-month period following the Effective Date of this Decision) earmarked for migrations by ComReg. ComReg notes that there is nothing preventing Access Seekers starting migrations earlier if they have the VoIP platform and capacity available together with the necessary processes to support the migrations at scale.

¹¹³⁷ In its Submission (paragraph 276, pages 95-96), Eircom disagreed with ComReg's use of the 1,000 migrations per day limitation, stating that this was an IT limitation only. Eircom implied that this number could be exceeded through the use of an Operator-requested programme-managed migration. However, this is not documented by Eircom and it is not clear what the terms and conditions of such a programme would be, including the maximum number of end users which could be migrated in a single request; whether multiple exchanges could be included in a single request etc. ComReg, accordingly, in the absence of any further reliable information, believes that it is appropriate to use the number of 1,000 migrations as a benchmark.

- 11.44 ComReg does not believe that all standalone SB-WLR end users in Table 78 will wish to migrate to a broadband-based solution, and rather is of the view that a substantial portion of those end users will not. In particular, it is likely that a small portion of these standalone SB-WLR end users cannot get the NG Broadband service they require; other standalone SB-WLR end users will have no requirement for broadband at all; or will not be able to afford it.¹¹³⁸
- 11.45 ComReg notes in this regard that the 2019 Market Research found that 53% of standalone SB-WLR end users kept their phone line in case of emergency, 40% because they always had it, 31% for the call quality of the fixed line over mobile and 30% because certain types of calls were cheaper over fixed line.
- 11.46 It is also the case that there is a sizeable difference in the cost of broadband and PSTN, particularly when comparing the standard rates over the introductory offers. Table 7 above sets out details of the different retail offerings for PSTN only bundles and broadband plus phone bundles. There may also be additional once-off costs for end users when setting up the broadband connection which vary between SPs and technology (FTTC/FTTH/Cable).
- 11.47 For the purpose of analysis, ComReg assumes that 40% ([X ██████████ X]) of the standalone WLR end users will migrate to a NGA broadband service with VoIP. Each of these orders will require a technician installation at the end user premises. Eircom's NGA broadband delivery capacity varies between [X ██████████ X].¹¹³⁹ This equates to [X ██████████ X] total NGA broadband delivery capacity for Eircom. It is reasonable to expect that installation of broadband for these standalone SB-WLR end users can be completed within the initial 9-month PSTN and ISDN FRA/PRA Urban Sunset Period following this Decision. ComReg believes accordingly that the PSTN and ISDN FRA/PRA Urban Sunset Period of 9 months for new orders provides sufficient and adequate notice to SPs and that it would not be reasonable and proportionate to extend it further.
- 11.48 Furthermore, the 18-month and 9-month periods following this Decision should afford SPs a reasonable period within which to manage any associated product changes with end users, and deal with any issue arising from alignment with retail contracts contrary to what Vodafone suggests.¹¹⁴⁰

¹¹³⁸ The 2019 Market Research (see Annex: 4 and Annex: 5) indicated that of those standalone SB-WLR end users who do not have broadband, 64% stated they don't need or use it, 19% said they don't know how to use it, 5% stated that the monthly price was too high, and 6% said the installation price was too high.

¹¹³⁹ Based on Eircom order data for the period Oct 2017 to Jan 2020.

¹¹⁴⁰ Vodafone Submission, page 7.

Migration process

Respondents' Views

11.49 ComReg notes however that one of the reasons why ALTO, BT, Sky and Vodafone found that the proposed sunset periods were too short was related to what they said were serious issues with the migration processes run by Eircom. BT described Eircom's bulk migration process as "*problematic*" and "*not robust*" so that its use could result in leaving thousands of end users stranded with unknown resolution timelines.¹¹⁴¹ ComReg notes BT's request for an "*end-to-end migration obligation*" to be added to Eircom's obligations. ALTO similarly expressed the position that any removal of SMP remedies in the Urban FACO Markets should be contingent on the availability of a robust bulk migration process from Eircom, which was not the case at present.¹¹⁴² Sky submitted that the soft migration process allowing for the migration from POTS-based VUA to standalone VUA with VoIP (VUA Soft Migration) required of Eircom under the 2018 WLA/WCA Decision was not available and there should be no withdrawal of SMP remedies in the Urban FACO markets until such time as Eircom has complied with its VUA Soft Migration obligation from the 2018 WLA/WCA Decision.¹¹⁴³

ComReg's Assessment of Respondents' Views and Position

11.50 Pursuant to the 2018 WLA/WCA Decision, Eircom is required to make available a VUA/Bitstream Soft Migration process, the purpose of which is to provide an efficient migration path from POTS-based NGA to standalone NGA with no interruption of the broadband service and the ability to port the telephone number. "Soft" means that it does not require any physical network intervention at the time of provisioning. The VUA/Bitstream Soft Migration process is an important process for allowing the transition to VoIP in the Urban FACO Markets.¹¹⁴⁴

¹¹⁴¹ BT Submission, paragraph 2.3.

¹¹⁴² ALTO Submission, A.11.

¹¹⁴³ Sky Submission, paragraphs 24-28.

¹¹⁴⁴ With regard to the matter of migrations being available beyond the sunset period, raised by Vodafone, to the extent that an SP continues to avail of SB-WLR in respect of subscribers in the Urban FACO Markets after the sunset period has elapsed under a commercial agreement with Eircom, it will be able to avail of the VUA Soft Migrations process required to be provided by Eircom under the 2018 WLA/WCA Decision, and to the extent that the line is in the Regional WCA Market of the Bitstream Soft Migrations process.

- 11.51 In accordance with the MGA, ComReg has taken into account the existence of this obligation when considering Respondents' comments given it exists in another market. In that context, ComReg does not consider that it would be necessary, appropriate or proportionate to impose on Eircom a new obligation to provide "end-to-end migrations" in respect of a market that is being deregulated. ComReg's view is that the main work to be carried out by Eircom on migrations from POTS-based services to VoIP services centres on the provision of an NGA Broadband service, either a new install or a migration to a standalone service, not on the voice aspect, and this is appropriately addressed by way of regulation of the WLA Market and the Regional WCA Market in the 2018 WLA/WCA Decision.
- 11.52 It is, however, necessary to re-consider the extent to which the current VUA/Bitstream Soft Migrations process may be relied upon by Access Seekers during the Sunset Period in order to achieve a smooth transitioning to VoIP based voice services. A number of features are relevant in this respect. With the VUA/Bitstream Soft Migration order (PNS order type) developed by Eircom, the un-jumpering of the POTS line by a technician does not happen until after the POTS service has been ceased and the migration has taken place. However, the PNS order remains open until such time that the line has been un-jumpered and during the interval between the SB-WLR being ceased, and the un-jumpering of the line, certain orders cannot be placed in respect of that line. ComReg understands¹¹⁴⁵ that it may take 5 or 6 days under standard conditions for un-jumpering to take place after a SB-WLR service has been migrated to standalone NGA, and it is expected that this timeline will increase with bulk migration, as may occur during the sunset period for the Urban FACO Markets. Following analysis in light of the concerns expressed by Respondents, ComReg has found that while the un-jumpering task is outstanding on the PNS order:
- (a) It is not possible to make changes to the standalone NGA service (using orders including CHN, CPN, CEN, QND, PNO);¹¹⁴⁶
 - (b) It is not possible to raise faults via the UG on the standalone NGA service; and
 - (c) It is not possible to raise an order to request the rollback or reverse migration to the WLR service (either POTS-based NGA or standalone SB-WLR) using PWU or PPW orders.

¹¹⁴⁵ Based on information received via email (WPIR 20-10-01) from Eircom.

¹¹⁴⁶ Order types are defined in the Open eir UG Data Contract. The order types mentioned here are: CHN: "Change NGA"; CPN: "Change Profile for NGA"; CEN: "Cease NGA"; QND: "Query NGA Details"; and PNO: "Provide NGA from Other".

- 11.53 As issues under (a) and (b) are not matters that are relevant to the FACO Markets, they are therefore not addressed in this Decision. As for (c), issues which may arise on the end user side after migration include:¹¹⁴⁷
- (a) The VoIP configuration or firmware on the modem is incorrect and not repairable resulting in the end user having no access to voice service; or
 - (b) Home or medical alarm no longer works without SB-WLR service.
- 11.54 To an extent, these issues can be adequately addressed and mitigated by SPs through the development of appropriate migration strategies. The 18-month PSTN and ISDN FRA/PRA Urban Sunset Period allows SPs adequate time to integrate and test migrations with Eircom's IT systems and ensure adequate substitute products as required by their end users. It is incumbent on SPs in this regard to seek to engage with Eircom as early as possible to resolve any issues with their migration strategy and maximise the use of the PSTN and ISDN FRA/PRA Urban Sunset Period provided under this Decision. It is also incumbent on SPs to set up and test solutions for end users previously relying on SB-WLR for services such as medical alarms, home alarms and in-home wiring, and engage with those of their end users availing of in-home services and advise them of associated risks and how to minimise issues which may arise.
- 11.55 However, ComReg acknowledges that in any mass migration (as is required during the PSTN and ISDN PRA\FRA Urban FACO Market sunset period), exceptional circumstances will occur which need to be remediated in a short timeframe.
- 11.56 In order for ComReg to address fully the issues described at paragraph 11.52 (a) and (b) above, ComReg has issued a direction to Eircom in accordance with Regulation 18 of the Access Regulations.¹¹⁴⁸ ComReg has directed Eircom in respect of Soft Migrations as defined under the 2018 WLA/WCA Decision, that where a VUA/Bitstream Soft Migration is being carried out and a new order is made on the standalone broadband line, Eircom shall, save as regards orders for NGA fault handling purposes, accept such an order and ensure that the order is progressed within five days of being made, whether or not an unjampering task is required.
- 11.57 In addition, Eircom is required to update its documentation for migrations to take account of the changes it makes to its process for migrations in light of the direction. The requirements in the direction must be complied with by Eircom no later than 29 April 2022 and the documentation shall be updated to reflect the changes made on or before 1 February 2022 (having notified ComReg on or before 3 January 2022).

¹¹⁴⁷ List not exhaustive

¹¹⁴⁸ As referenced in Information Notice 21/53.

- 11.58 Together with having issued a direction under Regulation 18 of the Access Regulations, ComReg also considers that it is necessary to attach a condition to the provision of Access during the Sunset Periods prior to the withdrawal of remedies in the Urban FACO Markets. In respect of any line migrated during the PSTN and ISDN FRA/PRA Urban Sunset Period from SB-WLR or POTS-based NGA (VUA or Bitstream), for the duration of that Sunset Period, Eircom shall provide an expedited/escalation process (either manual or automatic) for the rollback of the line to the pre-existing SB-WLR or POTS based NGA service, at the request of the Access Seeker concerned, where the un-jumpering task remains outstanding. For the avoidance of doubt, the escalation process must not require un-jumpering (of the POTS service) to take place followed by subsequent re-jumpering prior to SB-WLR being restored. While the jumper is in place, Eircom shall provide the ability to electronically restore the pre-existing SB-WLR or POTS based NGA service. Therefore, ComReg expects that Eircom will restore the service as soon as possible and no later than within one business day. ComReg notes that Eircom has proposed to ComReg as part of the draft direction dialogue, a new automated rollback procedure to enable Access Seekers to roll back to the original service settings within 1 business day for as long as the unjumpering task remains outstanding and a technician has not been dispatched to carry this task out.
- 11.59 ComReg understands that the implementation of the condition outlined in paragraph 11.58 will require IT development on the part of Eircom (particularly if an automatic solution is chosen by Eircom). ComReg also notes that Access Seekers must be able to test their respective migration strategies in advance of the PSTN migration beginning in earnest. Taking these considerations into account, particularly the point that the solution may be a manual option, Eircom shall implement the condition (outlined in paragraph 11.58 above) within five months from the Effective Date of this Decision. To ensure Access Seekers are fully informed how the condition is implemented, Eircom shall also update the product migration documentation on its publicly available wholesale website,¹¹⁴⁹ one month before any new product is implemented.

¹¹⁴⁹ <https://www.openeir.ie/products/voice/product-migrations/>

- 11.60 Together with the direction issued by ComReg under Regulation 18 of the Access Regulations, ComReg believes that this condition constitutes an effective and proportionate mechanism that is sufficient to address the issues and concerns raised by the Respondents. ComReg notes that Eircom has implemented a rollback procedure for its network modernisation project in respect of lines migrated from legacy PSTN switching equipment to MSAN technology. In addition, on 5 May 2021, Eircom wrote to ComReg to suggest potential changes to its PNS order type. One of those changes was to develop a new order type to allow the migrating provider to cancel the PNS and undo any changes made to the inventory on the basis that Eircom considered this solution could be of interest to Access Seekers. The proposed solution is very similar to the condition which ComReg is now including in this Decision. ComReg considers that the fact that Eircom proposed a version of this solution is supportive of the proportionality of imposing this condition.
- 11.61 ComReg reserves the right to use its statutory powers in the event of non-compliance of Eircom with this condition of withdrawal of SMP remedies within the required timelines.
- 11.62 At this time, ComReg does not believe that it is necessary or appropriate to otherwise link the withdrawal of SMP remedies in the Urban FACO Markets to compliance with requirements to offer bulk migration and VUA/Bitstream Soft migration processes under the 2018 WLA/WCA Decision as suggested by ALTO and Sky, or to link migrations to in-home service orders, as suggested by Vodafone.¹¹⁵⁰

¹¹⁵⁰ Vodafone Submission, paragraph (ii), page 8.

ISDN BRA Urban Sunset Period

- 11.63 In contrast to its position in respect of the PSTN and ISDN FRA/PRA Urban Sunset Period, having considered the Respondents' views from the 2020 Consultation¹¹⁵¹ and taking into account information provided by Eircom in the context of its request for approval to withdraw ISDN BRA under the 2015 FACO Decision, refused by ComReg,¹¹⁵² ComReg is of the view that it is appropriate to shorten the sunset period proposed in the 2020 Consultation for ISDN BRA services in the Urban FACO Markets. For the reasons set out below ComReg is satisfied that it is sufficient to maintain, in relation to new requests for ISDN BRA, Eircom's obligation to provide access to the products, services and facilities related to ISDN BRA set out in Section 7 of the Decision Instrument contained in Appendix H of the 2015 FACO Decision, at prevailing prices, for 2 months following from the Effective Date of this Decision (down from 9 months in the 2020 Consultation). For existing ISDN BRA lines, Eircom is required to maintain access for a period of 12 months (down from 18 months in the 2020 Consultation). The 12-month ISDN BRA Urban Sunset Period will run in parallel with the 2-month period for new orders.
- 11.64 In amending the sunset period proposed in the 2020 Consultation for ISDN BRA, ComReg has had regard to Eircom's Submission regarding ISDN BRA,¹¹⁵³ and also the challenges which Eircom has in sourcing ISDN BRA NTUs.¹¹⁵⁴ It is noted that ISDN BRA services have been declining over the years at an increasing rate, particularly in the last 12 months. The rate of decline has been faster in the Urban FACO Market than the Regional FACO Market, indicating the availability of substitute products within the Urban FACO Market. ComReg notes that the number of ISDN BRA lines¹¹⁵⁵ in the Urban FACO Market is low in comparison to PSTN lines and so it will be possible for Access Seekers to prioritise the migration of ISDN BRA lines.

¹¹⁵¹ As described and considered in paragraphs 10.90 to 10.109.

¹¹⁵² Information Notice, Eircom's Request to withdraw access to ISDN BRA, ComReg 20/118.

¹¹⁵³ Eircom Submission, paragraphs 227-229.

¹¹⁵⁴ Information Notice: Eircom's request to withdraw access to Integrated Services Digital Network (ISDN) Basic Rate Access (BRA), ComReg Document 20/118, dated 09 December 2020.

¹¹⁵⁵ In Q3 2020, there were [§< ██████████ §>] in the Urban FACO Market

- 11.65 The volume of ISDN BRA end users is much lower than PSTN end users in the Urban FACO Markets. Also, ISDN BRA cannot be delivered on the same line as NGA Broadband, so the migration from ISDN BRA to Managed VoIP is a simpler process. Considering this, ComReg is satisfied that where and if required, prioritising ISDN BRA migrations (to Managed VoIP) in advance of PSTN or ISDN FRA/PRA migrations is an option available to Access Seekers, including in light of the PSTN and ISDN PRA Urban Sunset Period, so that the ISDN BRA Urban Sunset Period is an appropriate and proportionate withdrawal notice period for affected Access Seekers.

Summary of Urban Sunset Period

- 11.66 Access to any products, services, facilities or Associated Facilities provided by Eircom shall be provided at prices no higher than those prevailing for such products, services, facilities or Associated Facilities on the Effective Date of this Decision for the following periods of time, as outlined in Table 79:

Table 79: Summary of Urban Sunset Periods

Product	New Lines	Existing Lines
PSTN and ISDN FRA/PRA services	9 months	18 months
ISDN BRA services	2 months	12 months

11.3 Updating the Assessment over the period of the Market Review

- 11.67 In the 2020 Consultation, ComReg proposed to carry out a Mid-term Assessment (MTA) 24 months after the Effective Date of this Decision. The MTA was intended to reassess the Regional FACO Markets to determine whether conditions of competition at EAs constituting the Regional FACO Markets had changed in the intervening period and, if so, whether there was sufficient evidence that those EAs were no longer characterised by the presence of SMP. In such cases, ComReg would consider whether it would be appropriate, on the basis of a competition assessment, to deregulate any of those EAs. If ComReg's assessment suggested that conditions of competition were no longer uniform across all EAs constituting the Regional FACO Market, then it would proceed to apply the 80% wholesale NG Broadband coverage criterion to determine which EAs were characterised by unchanged competitive conditions, and which EAs appeared to have changed competitive conditions over the intervening period. The application of the 80% coverage criterion would likely take into account Eircom VDSL, Eircom FTTP, and SIRO coverage, and ComReg also indicated that it would assess whether it would, at that stage, be appropriate to account for additional wholesale NG Broadband rollout engaged in by other SPs such as, for example, NBI.

Respondents' Views

- 11.68 A number of Respondents offered views on ComReg's preliminary MTA proposals, which ComReg addresses below:
- (a) Eircom argued that ComReg's proposal to carry out an MTA did not negate the need to carry out a market review on a sufficiently forward-looking basis, but that ComReg had not done so, given its failure to appropriately account for NBI rollout on a forward-looking basis;
 - (b) Eircom considered that any MTA should be conducted annually, as it is a *'straightforward mechanical exercise'*, given the dynamic nature of network roll-out activity anticipated during the period of this review; and
 - (c) Vodafone suggested that the MTA take place not only with a view to easing regulation following further NG broadband network rollout, but also as a mechanism to review Eircom's conduct in the existing Urban FACO markets.

ComReg's Assessment of Respondents' Views and Final Position

- 11.69 In light of the requirement to ensure that to the extent possible, market reviews are forward-looking, and taking into account the potential dynamic nature of the Regional FACO Markets – including the ongoing rollout of NG Broadband networks by Eircom, SIRO, Virgin Media, and NBI – ComReg proposes to keep regulation current by conducting a MTA of the Regional FACO Markets during the lifetime of the market review.
- 11.70 As part of the MTA, ComReg proposes to carry out an assessment of the EAs constituting the Regional FACO Markets by reapplying the five geographic assessment conditions used in this Decision. Should that assessment suggest that those EAs are characterised by differing competitive conditions, the MTA will then reapply the 80% wholesale NG Broadband criterion used to distinguish differences in competitive conditions on the Relevant FACO Markets, to those EAs constituting the Regional FACO Market. If the MTA leads to a finding that competitive conditions have altered at certain Regional FACO Market EAs, such that, on the basis of a competition assessment, ComReg forms the view that regulation is no longer appropriate at those EAs, then specific MTA sunset periods, as discussed further below, would apply. ComReg will consult 24 months after the Effective Date of this Decision on the outcome of its assessment of the geographic market definition.
- 11.71 As part of the MTA, ComReg reserves its rights to include consideration of whether regulation in any revised Regional FACO Market remains necessary, and the form of any such regulation.

- 11.72 In respect of Eircom's argument that the MTA does not justify ComReg's failure to appropriately account for NBI on a forward-looking basis, this point is addressed in greater detail at paragraphs 5.426 to 5.428 above. As regards Eircom's proposal that the MTA should be carried out on an annual basis, ComReg notes that, in carrying out a market review, it must balance the imperatives of, on the one hand, carrying out a sufficiently forward-looking analysis while, on the other hand, affording a level of certainty and predictability to market participants in respect of regulation, to facilitate strategic and investments decisions by SPs including Access Seekers, network operators, and potential market entrants. ComReg considers that an annual MTA would fail to strike the right balance between these two imperatives. While it would take a maximally forward-looking approach to the market, it would increase regulatory uncertainty by potentially altering the level of regulation every year for at least five years. Accordingly, ComReg considers that a single MTA halfway through the lifetime of the market review period allows ComReg to remove the FACO regulatory burden on Eircom where it is appropriate to do so, while also affording a level of certainty in respect of regulatory intentions for market participants other than Eircom which ComReg intends will facilitate investment planning, particularly in the context of long-term switching from FNA to NG Broadband infrastructure.
- 11.73 Vodafone commented specifically¹¹⁵⁶ on the MTA, suggesting that it is used by ComReg to monitor commercial activity in the Urban FACO Markets. ComReg, however, does not believe that the MTA could be used appropriately for that purpose given that the Urban FACO Markets will no longer be regulated. The main purpose of the MTA is to ensure that regulation is retained only at those EAs which continue to be characterised by the presence of SMP, having regard to competitive conditions at the time of the MTA including, *inter alia*, NG Broadband rollout. This does not mean that the position in the Urban FACO Markets will go unchecked. As noted in the 2020 Consultation, ComReg will continue to monitor the effectiveness of competition within the Urban FACO Markets and Relevant RFTS Markets, notwithstanding the proposed removal of regulation, and in accordance with its statutory functions. ComReg can intervene as and if necessary, in respect of these markets under either the regulatory framework in the context of a fresh market analysis, or using its competition law powers, whichever ComReg finds most appropriate in the relevant circumstances.
- 11.74 Absent any other comments, ComReg remains of the view that a MTA should be conducted during the lifetime of the market review and a consultation issued within 24 months of the Effective Date on ComReg's proposals as regards competition on EAs constituting the Regional FACO Markets.

¹¹⁵⁶ Vodafone Submission, paragraph vii, page 9.

MTA Sunset Periods

- 11.75 ComReg also proposed in the 2020 Consultation that the sunset periods arising from any further deregulation after the MTA (including consultation) should be shorter than those following this Decision. ComReg noted that, by the time of the MTA Decision Date, SPs will already have installed or procured alternative Managed VoIP capability for providing FACO services following the removal of regulation from the Urban FACO Markets. In addition, changes to regulation resulting from the MTA will not be at the same scale as those which will follow the removal of regulation from the Urban FACO Markets. This is because the number of SB-WLR lines in the Regional FACO Markets is lower and any changes to regulation arising from the MTA will therefore mean the volume of switching from FNA-based FACO to Managed VoIP is also likely to be substantially lower.
- 11.76 The reasons supporting ComReg's finding above that there should be two different periods for PSTN and ISDN FRA/PRA services and ISDN BRA¹¹⁵⁷ would also apply to the sunset periods following any removal of regulation after the MTA. ComReg accordingly distinguishes below between:
- (a) a PSTN and ISDN FRA/PRA services MTA Sunset Period in the Regional FACO Markets (the '**PSTN and ISDN FRA/PRA Regional Mid-term Sunset Period**'); and
 - (b) an ISDN BRA services MTA Sunset Period in the Regional FACO Markets (the '**ISDN BRA Regional Mid-term Sunset Period**').

PSTN and ISDN FRA/PRA Regional Mid-term Sunset Period

- 11.77 For PSTN and ISDN FRA/PRA services, upon any removal of regulation on specific EAs in the Regional FACO Markets, based on the MTA, ComReg has decided that Eircom shall not withdraw access to these products, or related services, or facilities on those markets for a period of 9 months from the MTA Decision Date. During the first 3 months of this 9-month PSTN and ISDN FRA/PRA Regional Mid-term Sunset Period, Eircom will be required to provide access to new orders for the relevant products, services and facilities. The 9-month PSTN and ISDN FRA/PRA Regional Mid-term Sunset Period will run in parallel with the 3-month period for new orders.
- 11.78 ComReg does not agree with Eircom's views¹¹⁵⁸ that the 3-month and 9-month sunset periods for new orders and existing lines respectively, as set out in the 2020 Consultation, following the MTA are excessive.

¹¹⁵⁷ As described in paragraph 11.21 above.

¹¹⁵⁸ Eircom Submission, paragraph 283.

- 11.79 It is correct that, by then, Access Seekers will have substitute products in place and should have the required capacity on their VoIP platforms. However, SPs will not know the specific list of EAs which may face an altered regulatory environment until the MTA Decision Date. The 3-month sunset period will also allow potential tenders for business by SPs which may be ongoing at the time of the MTA to progress and complete with certainty. Customer engagement programmes, including contacting end users, offering alternative products, posting out new equipment (in certain scenarios) and scheduling migrations, will have to be completed in a manner consistent with the Urban Sunset Periods.
- 11.80 In order to estimate how many end users may potentially be involved in a migration following the publication of the MTA, ComReg used the number of end users within the 70%-80% NG Broadband coverage range. If these EAs were to pass the 80% threshold by the MTA, this would result in a further 189 EAs where regulation may be removed. As of Q4 2020, there are [X ██████████ X] active FACO lines in these EAs. [X ██████████ X] of these lines are standalone SB-WLR.
- 11.81 ComReg expects that NG Broadband coverage over FTTC will remain largely static, since new investment in NG Broadband is predominantly in FTTH technology. ComReg notes that, depending on the responsiveness of the end user interaction with SPs, migration orders for existing lines may not materialise until the fourth month following the MTA Decision Date. [X ██████████ ██████████ ██████████ ██████████ ██████████ X].¹¹⁵⁹ In that context, ComReg finds that the 3-month and 9-month sunset periods following the MTA will allow SPs time to address these issues and to carry out the migration of end users within Eircom's existing service delivery capacity.

¹¹⁵⁹ Based on Eircom order data for the period Oct 2017 to May 2020.

ISDN BRA Regional Mid-term Sunset Period

11.82 For ISDN BRA services, for the same reasons set out in respect of the ISDN BRA Urban Sunset Period,¹¹⁶⁰ in particular the difficulties in sourcing ISDN BRA NTUs and the smaller number of lines concerned, ComReg has reduced the proposed sunset period to a period of 6 months after the MTA Decision Date. During that time, upon any removal of regulation on specific EAs in the Regional FACO Markets, Eircom shall not withdraw access to this product, or related services, or facilities on those EAs for a period of 6 months from the MTA Decision Date. During the first month of this 6-month period, Eircom is required to provide access to products, services and facilities related to ISDN BRA set out in Section 17 of the Decision Instrument contained in Annex: 14 of this Decision. The 6-month ISDN BRA Regional Mid-term Sunset Period for the removal of obligations in certain EAs in the Regional FACO Markets will run in parallel with this 1-month 'new order' period.

11.83 ComReg is satisfied that this notice period is appropriate and allows Access Seekers sufficient time to migrate ISDN BRA lines (to Managed VoIP).

Summary of Mid-term Assessment Sunset Period

11.84 In EAs within the Regional FACO Markets found no longer to be characterised by the presence of SMP following the MTA Decision Date, access to any products, services, facilities or Associated Facilities provided by Eircom shall be provided at prices no higher than those prevailing for such products, services, facilities or Associated Facilities on the MTA Decision Date,¹¹⁶¹ as outlined in Table 80.

Table 80: Summary of Mid-term Assessment Sunset Periods

Product	New Lines	Existing Lines
PSTN and ISDN FRA/PRA services	3 months	9 months
ISDN BRA service	1 month	6 months

¹¹⁶⁰ As described in paragraphs 11.63 to 11.65 above.

¹¹⁶¹ As defined in the Decision Instrument at Annex: 14 below, the MTA Decision Date means the date of ComReg's decision made on the basis of ComReg reapplying certain criteria in this Decision to the Regional FACO Markets and consultation on that assessment.

11.4 Applicable price during the Sunset Period

11.85 Access to any products, services, facilities or Associated Facilities in the Relevant Urban FACO Markets provided by Eircom shall be provided at prices no higher than those prevailing for such products, services, facilities or Associated Facilities on the Effective Date of this Decision for the duration of the sunset periods stipulated at Table 79 above. Apart from this and the aforementioned access requirements, Eircom will not be required to meet other obligations (for example, in relation to transparency, non-discrimination etc.) during this period.

Respondents' Views

- 11.86 In its response to the 2020 Consultation, Sky highlighted three specific areas of concern:
- (a) In the WLA market, Sky believes that FTTC VUA tariffs are too high and are used to 'subsidise' FACO services;¹¹⁶²
 - (b) In the Urban FACO Markets, Sky believes that the removal of cost orientation affords Eircom additional flexibility to recover the higher costs of uneconomic FACO lines; and¹¹⁶³
 - (c) Sky believes that Eircom has not sought a USO fund to address the shortfall in cost recovery for "*uneconomic lines*."¹¹⁶⁴
- 11.87 ComReg notes Sky's submission. However, it is outside of the scope of the FACO Decision. ComReg will respond to these views in the Separate ANM Pricing Decision expected before the end of 2021.

¹¹⁶² Sky Submission, paragraph 12.

¹¹⁶³ Sky Submission, paragraph 14.

¹¹⁶⁴ Sky Submission, paragraph 11.

12 FACO Regulatory Impact Assessment

12.1 Introduction

- 12.1 A Regulatory Impact Assessment ('**RIA**') is a detailed consideration of the likely effect of proposed new regulations - or changes to existing regulations - on SPs, end users, Access Seekers and other stakeholders. A RIA seeks to establish if such proposals are necessary and, in doing so, identifies any possible effects which might result from their implementation. A RIA identifies alternative regulatory options and, ultimately, establishes whether a regulation is likely to have the desired impact. It is a structured approach to policy development, and analyses the impact of the regulation, and other regulatory options, on different stakeholders. Appropriate use of a RIA should assure identification of the most effective regulatory option.
- 12.2 Four Respondents to the 2020 Consultation commented on the draft RIA set out at Section 12 thereof. ALTO, BT and Vodafone all broadly agreed with the assessment set out in the RIA, while expressing reservations in respect of the sunset period for the withdrawal of regulation. Eircom disagreed with the RIA, and considered that it was not fit for purpose, and deficient in a number of areas.
- 12.3 In carrying out a RIA, ComReg adheres to its RIA Guidelines¹¹⁶⁵ and takes account of the Better Regulation programme.¹¹⁶⁶ ComReg is also cognisant of international best practice, such as guidance from the EC¹¹⁶⁷ and the Organisation for Economic Co-operation and Development ('**OECD**').¹¹⁶⁸
- 12.4 Section 13(1) of the Communications Regulation Act 2002 (as amended) requires ComReg to comply with Ministerial Policy Directions. Section 6 of the Ministerial Policy Direction to ComReg of 21 February 2003 requires that, prior to imposing regulatory obligations on Undertakings, ComReg shall conduct a RIA in accordance with international best practice, and in accordance with measures adopted under the Better Regulation programme.

¹¹⁶⁵ [ComReg Document 07/56a](#), ComReg, "Guidelines on ComReg's Approach to Regulatory Impact Assessment", 10 August 2007 (the '**RIA Guidelines**').

¹¹⁶⁶ Department of the Taoiseach, "Regulating Better", January 2004. See also "Revised RIA Guidelines: How to conduct a Regulatory Impact Analysis", June 2009, (the '**Revised RIA Guidelines**'), available from: http://publicspendingcode.per.gov.ie/wp-content/uploads/2012/07/Revised_RIA_Guidelines_June_20091.pdf

¹¹⁶⁷ COMMISSION STAFF WORKING DOCUMENT - Better Regulation Guidelines, Brussels, 7 July 2017 [SWD (2017) 350]. Available online at <https://ec.europa.eu/info/sites/default/files/better-regulation-guidelines.pdf>

¹¹⁶⁸ OECD Best Practice Principles for Regulatory Policy: Regulatory Impact Assessment, February 2020. Available online at <https://www.oecd.org/gov/regulatory-policy/regulatory-impact-assessment-7a9638cb-en.htm>

- 12.5 The aim of conducting a RIA of the approach to regulation of the Relevant FACO Markets is to ensure that any regulatory measures are implemented in an appropriate, proportionate and justified manner. In particular, Article 68(4) requires that obligations imposed on undertakings pursuant to a finding of SMP shall be:
- (a) based on the nature of the problem identified by a NRA in its market analysis;
 - (b) proportionate, having regard, where possible, to the costs and benefits;
 - (c) justified in light of the objectives laid down in Article 3 of the EECC; and
 - (d) imposed following consultation.
- 12.6 ComReg's approach to carrying out a RIA follows five steps:
- Step 1:** Describe the policy issue and identify the objectives;
 - Step 2:** Identify and describe the regulatory options;
 - Step 3:** Determine the impact on stakeholders;
 - Step 4:** Determine the impact on competition; and
 - Step 5:** Assess the impacts on stakeholders and competition and choose the best regulatory option.
- 12.7 The purpose of carrying out a RIA is to aid decision-making through identifying regulatory options and analysing the impact of those options in a structured manner. The Revised RIA Guidelines state that:
- “RIA should be conducted at an early stage and before a decision to regulate has been taken.”*¹¹⁶⁹
- 12.8 The EC, in its review of impact assessments, notes that:
- “Impact assessments need to be conducted earlier in the policy development process so that alternative courses of action can be thoroughly examined before a proposal is tabled.”*¹¹⁷⁰
- 12.9 In determining the impacts of the various regulatory options, best practice recognises that a full cost benefit analysis should be carried out where it would be proportionate to do so, or, in exceptional cases, where robust, detailed and independently verifiable data are available. Such a comprehensive review may be undertaken by ComReg when necessary and relevant.

¹¹⁶⁹ See paragraph 2.1 of the Revised RIA Guidelines.

¹¹⁷⁰ EC Communication, “Second strategic review of Better Regulation in the European Union”, COM(2008)32, p.6.

- 12.10 A RIA should be carried out as early as possible in the assessment of potential regulatory options, where appropriate and feasible. The consideration of regulatory impacts facilitates the discussion of options, and a RIA should therefore be integrated into the overall analysis. This is the approach which ComReg follows in this Decision and this RIA should be read in conjunction with the overall Decision.
- 12.11 ComReg now conducts a RIA, having regard to the regulatory remedies set out in Section 10 of this Decision, along with consideration of other options. The following sections, along with the analysis and discussion set out elsewhere in this Decision represent a RIA. It sets out an assessment of the potential impact of regulatory obligations for the Regional FACO Markets, and the removal of regulatory obligations in the Urban FACO Markets and the Relevant RFTS Markets, as set out in Sections 10 and 11.

12.2 Principles in Selecting Remedies

- 12.12 In Sections 2 and 10, ComReg sets out the legislative basis for the imposition of remedies on Eircom, which is designated with SMP in the Regional FACO Markets. In choosing appropriate remedies, ComReg is obliged, pursuant to Regulation 8(6) of the Access Regulations¹¹⁷¹ and Article 68(4) EECC to ensure that they are:
- (a) Based on the nature of the problem identified;
 - (b) Proportionate and justified in the light of the objectives laid down in Section 12 of the Communications Regulation Act 2002 (as amended), Regulation 16 of the Framework Regulations,¹¹⁷² and Article 3 EECC;
 - (c) Only imposed following consultation in accordance with Regulations 12 and 13¹¹⁷³ of the Framework Regulations and Article 23 and 32 EECC.
- 12.13 Section 12(1)(a) of the Communications Regulation Act 2002 (as amended) sets out the objectives of ComReg in exercising its functions in relation to the provision of electronic communications networks, services and associated facilities, namely to:
- (a) Promote competition;
 - (b) Contribute to the development of the internal market; and
 - (c) Promote the interests of users within the European Union.

¹¹⁷¹ As mirrored at Article 68(4) of the EECC.

¹¹⁷² As mirrored at Article 3 of the EECC.

¹¹⁷³ As mirrored at Articles 23 and 32 of the EECC.

12.3 Regional FACO Markets Regulatory Impact Assessment

Step 1: Describe the Policy Issue and Identify the Objectives

- 12.14 The EC acknowledges the need for the imposition of *ex ante* regulatory obligations to mitigate the potentially abusive exercise of market power by SMP SPs, and to ensure the development of effective competition within, and across, communications markets. ComReg noted at Section 7 above that, since FACO is not included in an EC recommendation on relevant markets susceptible to *ex ante* regulation, it is now for NRAs to decide on an individual basis if, and based on national circumstances, whether, FACO markets should continue to be regulated, in the first instance by carrying out a 3CT. This ultimately forms the basis for the assessment set out in this Decision.
- 12.15 In this Decision, ComReg has set out its analysis and position on the Relevant FACO Markets and Relevant RFTS Markets. In doing so, its policy objectives are to identify whether or not any SP operating on each of those Relevant Markets has SMP, whether competition concerns arise and, if so, how best to address these. This includes the following:
- (a) In Sections 2, 4 and 5, ComReg sets out its position on the definitions of the Relevant FACO Markets and the Relevant RFTS Markets, which provide the boundaries within which competition has been assessed;
 - (b) In Sections 6 and 7, ComReg carried out competition assessments and sets out its position that, having failed the 3CT, the Relevant RFTS Markets, and the Urban FACO Markets, are effectively competitive.¹¹⁷⁴ However, having passed the 3CT, the Regional FACO Markets are not deemed to be effectively competitive, and are susceptible to *ex ante* regulation. ComReg has accordingly designated Eircom with SMP on the Regional FACO Markets;
 - (c) In Section 9, ComReg assessed the ability and incentives of Eircom to engage in various anti-competitive conducts to the ultimate detriment of competition and end users on the Regional FACO Markets (and related downstream markets);
 - (d) In Section 10, ComReg justified proportionate remedies which it is imposing on Eircom to address these identified competition problems; and

¹¹⁷⁴ In the case of the Relevant RFTS Markets, the 3CT fails on the assumption that the Regional FACO Markets continue to be regulated.

- (e) In Section 11, ComReg set out its position with respect to the withdrawal of remedies from the Relevant RFTS Markets and the Urban FACO Markets, and sets out the sunset period which applies to the removal of regulation on the Urban FACO Markets only, as well as the intention to carry out a MTA on those markets in order to ensure that regulation only continues to be applied where warranted having regard to any material, but as of yet unforeseeable, future developments.
- 12.16 As noted in Section 10, in order to address identified competition problems, ComReg is required to impose on SMP SPs such of those obligations set out below, as it deems appropriate:
- (a) Transparency;
 - (b) Non-Discrimination;
 - (c) Access;
 - (d) Price Control and Cost Accounting;
 - (e) Accounting Separation; and
 - (f) Statement of Compliance ('**SoC**').
- 12.17 As also noted at Article 68(2) EECC, ComReg shall impose any of the above obligations on SPs which it proposes to designate with SMP.
- 12.18 Having regard to the competition problems identified in Section 9, ComReg's objectives are to mitigate the effects of competition problems in the Regional FACO Markets, and any impacts on related markets. In so doing, ComReg aims to prevent the emergence of restrictions or distortions in competition among SPs, to the ultimate benefit of consumers. ComReg also seeks to provide regulatory certainty to SPs through the development of an effective and efficient forward-looking regulatory regime that serves to promote competition between SPs.
- 12.19 In pursuing these objectives, ComReg aims to influence the behaviour of Eircom, to mitigate the harmful effects that can potentially arise from the ability and incentives for Eircom to engage in anti-competitive conduct in the Regional FACO Markets. In this regard, ComReg considers that the regulatory measures set out in Section 10 address, in a justified and proportionate way, the relevant competition problems and the consequent impacts on competition and consumers.
- 12.20 In Section 10, ComReg considered the impact of the specific nature of the regulatory obligations deemed necessary in the Regional FACO Markets and formed the view that the range of remedies specified is both appropriate and justified in light of the analysis set out in Section 9. The various regulatory options for the Regional FACO Markets are, in the context of the RIA, further considered below.

Respondents' Views

- 12.21 Eircom argued that ComReg ignored its own policy objectives when carrying out a RIA. Instead, it asserted that ComReg is pursuing a policy objective of defining an ever-smaller subset of the market, arising from the intent to prove a specific pre-determined outcome that regulation continues to be warranted to some extent, instead of assessing the existing evidence on its own merits to determine the actual realities of competition.
- 12.22 Eircom accordingly argued that the RIA fails at Step 1 because ComReg has - in Eircom's view - erred in:
- (a) defining the Relevant FACO and RFTS Markets, thus incorrectly determining the parameters within which competition is assessed;
 - (b) concluding that the 3CT passes for the Regional FACO market; and
 - (c) assessing the ability and incentives of Eircom to engage in anti-competitive behaviour.
- 12.23 In support of its assertions, Eircom summarised and repeated arguments which it had advanced in responses to other questions posed in the 2020 Consultation, in which it disagreed with ComReg's assessment of the Relevant RFTS Market and Relevant FACO Market. Eircom also reiterated arguments advanced in response to Question 7, in which it disagreed with ComReg's 3CT assessment of the Regional FACO Markets, in support of its argument that continuing regulation of a declining market is not a proportionate intervention in the specific circumstances of the market. Lastly, Eircom repeated a number of arguments it advanced in response to Question 9, in refuting ComReg's view that Eircom has the ability and incentive to engage in anti-competitive behaviour, and added that the Regional FACO Markets are not large enough to justify micro-analysis and – in its view, undue regulation.

ComReg's Assessment of Respondents' Views and Position

- 12.24 As outlined in Section 2.3 above, ComReg has carried out its analysis in line with the approach recommended by the EC and, accordingly, takes an evidence-based approach to assessing the conditions of competition on markets. Having assessed the competitive conditions, made a finding of SMP, and subsequently identifying the potential competition problems which might arise absent regulation, ComReg is then obliged to impose regulation on the duly-defined market to address the specific competition problems identified. Having followed the required approach upon conducting this market review, ComReg is, accordingly, satisfied that it has examined the Relevant RFTS Markets and Relevant FACO Markets on their own merits. ComReg has not, therefore, pre-determined any outcome or engaged in micro-regulation, and has, instead, set out its position, based on a careful and evidence-based analysis of the markets in question. Furthermore, ComReg has also set out its intention to carry out a MTA between full market review periods in order to ensure that regulation continues to be only imposed where market circumstances require it.
- 12.25 ComReg notes that Eircom's arguments in support of its contention have been addressed in previous Sections in this Decision. Eircom's claim that ComReg failed to correctly delineate the market parameters, within which competition is assessed, is discussed in Sections 4 and 5. Section 7 addresses Eircom's comments regarding the 3CT on the Relevant FACO Markets, while Section 9 discusses Eircom's arguments in terms of its ability and incentives to engage in anti-competitive behaviour.
- 12.26 Eircom has not provided material evidence in support of its assertion that the Regional FACO Markets are not large enough to justify analysis and regulation. Moreover, ComReg is unaware of any guidance or legislation which permits ComReg to take a *de minimis* approach to market regulation, whereby markets are not assessed below some level of appreciability. As set out at Table 55, the Regional FACO Markets consist of 699,724 premises and 376,165 RFTS lines and nonetheless remains a substantial portion of the overall market. It, therefore, requires appropriate analysis and, should there be a finding of SMP, ComReg is obliged to impose proportionate and justified regulations to address the competition problems which could result from the exercise of SMP, absent regulation.

Step 2: Identify and Describe the Potential Regulatory Options

- 12.27 ComReg recognises that regulatory measures should be restricted to the minimum necessary to address the identified market failure in an effective, efficient and proportionate manner. A range of regulatory options is available to ComReg to address the competition problems that would arise in the Regional FACO Markets, absent regulation.

- 12.28 In this regard, regulation should be incremental, such that only those obligations which are necessary and proportionate to address the identified competition problems are imposed, as set out in Regulations 9 to 13 of the Access Regulations.¹¹⁷⁵ Article 68(2) of the EECC requires that, in accordance with the principle of proportionality, an NRA must choose the least intrusive way of addressing the problems identified in the market analysis. For example, ComReg could initially impose an obligation of transparency. Should this be insufficient to address competition problems on its own, ComReg could apply a non-discrimination obligation. If this is still not sufficient, ComReg could next consider the imposition of an access obligation, SoC obligations, or price controls, with accounting separation obligations potentially required where price control obligations are imposed.
- 12.29 The questions of regulatory forbearance and the incremental imposition of one or more of the above obligations in the Regional FACO Markets are considered below.

Forbearance from regulating the Regional FACO Markets

- 12.30 Forbearance is not permissible in the case of the Regional FACO Markets. As set out in Section 7, these markets are not effectively competitive, nor are they likely to become effectively competitive within the timeframe covered by this market review. ComReg has also identified competition problems in Section 9. Therefore, pursuant to Regulation 8(1) of the Access Regulations and Regulation 27(4) of the Framework Regulations,¹¹⁷⁶ in the case of the Regional FACO Markets, ComReg is required¹¹⁷⁷ to impose some level of regulation on Eircom, having designated it with SMP.
- 12.31 In Section 9, ComReg set out its position that, absent regulation, Eircom would have the ability and incentive to engage in a range of exploitative, exclusionary and leveraging behaviours. In view of this, absent the imposition of any remedies on the Regional FACO Markets, it is ComReg's position that such markets (and impacted adjacent markets) would not function effectively, ultimately to the detriment of downstream competition and end users.
- 12.32 By not imposing any regulatory obligations on an SP designated with SMP, ComReg would fail to discharge its statutory obligations. Per Regulation 8(1) of the Access Regulations and Regulation 27(4) of the Framework Regulations, once SMP has been identified, ComReg is obliged to impose at least some level of regulation on the SP designated with SMP. The question is, therefore, which regulatory obligations are appropriate. ComReg examines these regulatory options below.

¹¹⁷⁵ As mirrored at Articles 69 to 74 of the EECC.

¹¹⁷⁶ As mirrored at Articles 67 and 68(1) of the EECC.

¹¹⁷⁷ In accordance with Regulation 8(1) of the Access Regulations, as mirrored at Article 68(1) of the EECC.

Regulatory Options on Obligations in the Regional FACO Markets

12.33 As discussed in paragraph 9.5, it is ComReg's position that competition problems would arise as a result of Eircom SMP in the Regional HL FACO Market and the Regional LL FACO Market, absent regulation. Therefore, ComReg is of the view that it is appropriate, proportionate, and justified, to address the relevant regulatory options and apply the same suite of remedies in the Regional LL-FACO and HL-FACO Markets.

FACO Transparency Obligations

12.34 ComReg's position, set out in Section 9, is that, due to the ability and incentives of Eircom to engage in the identified anti-competitive behaviours, transparency obligations¹¹⁷⁸ are necessary to facilitate the development of effective downstream competition. ComReg has specified transparency remedies, including requirements to publish a RIO setting out contractual terms and conditions, and the technical basis upon which SPs can obtain access to FACO and associated facilities, along with requirements to publish FACO prices and provide advance notification of changes to them.

12.35 ComReg considers that Eircom should be required to comply with these transparency obligations in order to minimise information asymmetries and, therefore, facilitate timely and efficient access to FACO and associated facilities. It is envisaged that these obligations will promote effective competition in downstream markets.

12.36 As set out in Section 10, ComReg does not consider that transparency obligations, in isolation, will sufficiently address competition problems in the Regional FACO Markets. For example, transparency obligations do not directly address concerns regarding denial of access, discrimination (on price or non-price grounds), or excessive pricing.

FACO Non-Discrimination Obligations

12.37 Having reviewed competition problems with respect to the Regional FACO Markets in Section 9, ComReg set out its position in Section 10 that non-discrimination obligations were necessary to ensure that Access Seekers being provided with FACO are treated in an equivalent manner.¹¹⁷⁹ These obligations would also ensure that Access Seekers are provided with information and services in a manner consistent with that which Eircom provides to its own downstream arm.

¹¹⁷⁸ See paragraphs 10.211 to 10.242 above.

¹¹⁷⁹ See paragraphs 10.190 to 10.210 for non-discrimination remedies in the Regional FACO Markets.

- 12.38 Such non-discrimination obligations are designed to promote pro-competitive behaviours in the Regional FACO Markets, by requiring equivalent treatment of Access Seekers (with the transparency obligation providing a means of observing that discrimination is not occurring). In view of potential issues of discriminatory treatment (on price or non-price terms), transparency obligations alone would not address such issues. Furthermore, a non-discrimination obligation (or coupled with transparency) does not address what type of product or service should be offered, or how it should be priced.
- 12.39 Thus, the non-discrimination and transparency obligations alone are not considered by ComReg to be sufficiently adequate in providing a means of ensuring *ex ante* that Eircom provides access to FACO and associated facilities, and does so in a fair, reasonable and timely manner.

FACO Access Obligations

- 12.40 Having reviewed the competition problems identified in Section 9, ComReg set out its position in Section 10 that access obligations are necessary to prevent the actual denial of, or effective refusal to provide, access to FACO and associated facilities.¹¹⁸⁰ Transparency and non-discrimination obligations are necessary supporting obligations, but ComReg holds the position that such obligations alone are incapable of effectively addressing access issues.
- 12.41 ComReg's position is that obligations to provide FACO and access to associated facilities (including physical interconnect infrastructure necessary for effecting such access) are both proportionate and justified. An access obligation on Eircom will promote regulatory predictability and ensure that Access Seekers are treated in a consistent fashion.
- 12.42 ComReg's position is that the specified access obligations are fundamental requirements in the Regional FACO Markets. Taking account of Regulation 12(1) of the Access Regulations,¹¹⁸¹ the absence of such obligations would hinder the development of effectively competitive RFTS markets by restricting or distorting competition among SPs, to the detriment of end users.
- 12.43 These access obligations are therefore considered necessary and appropriate in achieving the objectives of Section 12 of the Communications Regulation Act 2002 (as amended) and Regulation 16 of the Framework Regulations, namely the promotion of competition, contributing to the development of the internal market, and protecting the interests of end users.¹¹⁸²

¹¹⁸⁰ See paragraphs 10.51 to 10.188 for access remedies in the Regional FACO Markets.

¹¹⁸¹ As mirrored at Article 23(1) of the EECC.

¹¹⁸² These overarching objectives are mirrored at Recital 23 of the EECC.

FACO Price Control and Cost Accounting Obligations

- 12.44 Having identified competition problems with respect to the Regional FACO Markets in Section 9 above, ComReg set out its position in Section 10 above that wholesale charges for access to FACO and associated facilities should be subject to both price control and cost accounting obligations.¹¹⁸³
- 12.45 ComReg imposes price control and cost accounting obligations on Eircom with respect to access to FACO and associated facilities, the details of which are discussed in paragraphs 10.243 to 10.321 above. ComReg's analysis in Section 7 and Section 9 indicates that Eircom has both the ability and incentive to engage in excessive pricing, absent regulation. Imposing a price control obligation on Eircom will provide regulatory certainty to all stakeholders, including both Access Seekers and end users.
- 12.46 If specific price control obligations are to be meaningful, it is necessary to have a clear and comprehensive understanding of the costs associated with the provision of FACO by Eircom. ComReg continues to impose a cost accounting obligation on Eircom, having regard to its integrated position across several upstream and downstream markets, in particular, noting its SMP designations in a number of these markets.

FACO Accounting Separation Obligations

- 12.47 ComReg has decided to reduce the burden of the accounting separation obligations imposed on Eircom as discussed in paragraphs 10.322 to 10.344 above.

FACO Statement of Compliance Obligations

- 12.48 Section 9 sets out a series of competition problems and impacts which are likely to arise, absent regulation in the Regional FACO Markets, due to Eircom's SMP designation. It is ComReg's position that, due to the ability and incentives of Eircom to engage in the identified anti-competitive behaviours in this market, which would ultimately have a negative impact on competition in downstream and/or adjacent markets, a SoC obligation is considered both proportionate and justified, having regard to the need to ensure effective monitoring and enforcement of all regulatory obligations placed on Eircom.
- 12.49 It is ComReg's position that an SoC obligation will ensure Eircom's adherence to the other remedies set out in Section 10, thereby facilitating the achievement of the overall objectives described in paragraph 12.13, namely promoting competition, contributing to the development of the market, and protecting the interests of end users.

¹¹⁸³ See paragraphs 10.243 to 10.260 for price control and cost accounting remedies in the Regional FACO Markets.

Step 3: Determine the Impacts on FACO Stakeholders

- 12.50 Given that Eircom holds SMP in the Regional FACO Markets, it is ComReg's position, as outlined in paragraphs 12.30 and 12.32 above, that the option of regulatory forbearance is not available.
- 12.51 Having regard to the SMP designation in Section 6 (which requires ComReg to impose some level of regulation),¹¹⁸⁴ as well as the review of competition problems and remedies in Sections 9 and 10 respectively, ComReg identifies, on an incremental basis, why a range of remedies are necessary, proportionate and justified, while also discounting other remedies, where appropriate.
- 12.52 Having regard to the assessment of the Regional FACO Markets, ComReg sets out the four options it considers in terms of the bundles of regulatory obligations which could, in principle, be imposed on Eircom on those markets:
- Option 1:** Impose Transparency, Non-Discrimination, and Statement of Compliance obligations;
 - Option 2:** Impose Transparency, Non-Discrimination, Statement of Compliance, and Access obligations;
 - Option 3:** Impose Transparency, Non-Discrimination, Statement of Compliance, Access and Price Control & Cost Accounting obligations; or
 - Option 4:** Impose Transparency, Non-Discrimination, Statement of Compliance, Access, Price Control & Cost Accounting, and Accounting Separation obligations.
- 12.53 Having set out the four options for regulation in the Regional FACO Markets, ComReg summarises below in Table 81 the implications of these options for Eircom, Access Seekers, and end users.

Respondents' Views

- 12.54 Eircom reiterated the argument it made in response to Question 9 that ComReg had overstated the risk of competition problems arising on the Regional FACO Markets by relying on theoretical possibilities which are not reflective of market conditions. Eircom also asserted that the Regional FACO Markets are not characterised by the presence of high barriers to entry. Lastly, Eircom considered that ComReg had made no attempt to quantify the impact and proportionate costs of retaining price controls and cost accounting on the Regional FACO Markets, despite suggesting that the incremental burden of such obligations was unlikely to be significant.

¹¹⁸⁴ Pursuant to Regulation 8(1) of the Access Regulations and Regulation 27(4) of the Framework Regulations.

ComReg's Assessment of Respondents' Views and Position

12.55 ComReg notes that Eircom's views on Option 3 in regard to competition problems and high barriers to entry to the market have been addressed previously in Sections 7 and 9. Eircom's final point, with respect to quantifying the price control and cost accounting remedies, is addressed in Section 10.

Table 81: Option 1 – Impose Transparency, Non-Discrimination, and Statement of Compliance Obligations

Impact on Eircom, as the SMP SP	Impact on Access Seekers	Impact on End Users
<p>Eircom benefits from a reduced regulatory burden, compared to the 2015 FACO Decision.</p> <p>The amendments to Eircom's existing SoC obligations would place a greater onus on it to demonstrate compliance with the obligations imposed under the Decision.</p> <p>Eircom would, absent any form of access obligation, refuse to provide Access Seekers with access to SB-WLR, thereby removing competition in downstream markets. This would enable it to set prices above a competitive level and, as a result, generate supernormal profits.</p> <p>Relatively low burden of compliance as SB-WLR and line rental charges are published online as part of Open eir's RIO obligation, enabling transparency for all relevant stakeholders.</p> <p>Eircom has, absent other obligations, flexibility to price SB-WLR above efficient cost and/or obstruct access by existing rivals and/or new entrants in downstream markets. Could facilitate extraction of excessive rents.</p>	<p>Risk that, even though non-discrimination mandated in principle, there would be scope for exploitative and exclusionary practices such as excessive pricing which may, in practice, amount to discrimination. Effective denial of access and/or delaying tactics could <i>inter alia</i> also be invoked to extract excessive prices and/or raise rivals' costs.</p> <p>This could also contribute to raising entry barriers for newer or smaller RFTS participants. Negative impact on competition increases Eircom's RFTS market share grows, further increasing the disparity in bargaining power between SPs.</p> <p>FACO prices, if set above efficient costs, could limit scope for RFTS pricing innovation by downstream competitors.</p> <p>Regulatory certainty is reduced, given wholesale pricing and access uncertainty. Disputes over FACO prices or access could also raise legal and regulatory costs for Access Seekers.</p>	<p>Absent effective access and price control obligations, scope for SB-WLR access to be undermined through <i>inter alia</i> excessive pricing, refusals to supply, delaying tactics, etc. would contribute to reduced scope of RFTS (limited interoperability or higher cost service) for end users.</p> <p>If downstream competition is distorted or investments discouraged through FACO prices which are above efficient cost, end users would potentially have reduced service choice, quality and innovation.</p> <p>Where FACO prices are set above efficient cost, this could put upward pressure (or slow the rate of any decline) on RFTS prices. Higher wholesale prices would also limit scope for retail pricing innovations, potentially depriving end users of new and innovative retail bundles/ packages.</p>

<p>Eircom incentives to innovate (including via retail pricing) and increase efficiency may be reduced where prices set above efficient cost are paid for by competitors and, in turn, by their end users.</p> <p>Risk of disputes and legal challenges if price of FACO set above efficient cost.</p>		
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Respondents' Views

- 12.56 Eircom argued that the risks identified by ComReg would not arise, for the reasons given in its response to Questions 7 and 9, and reiterated that it would not have the ability or the incentive to engage in anti-competitive behaviour.
- 12.57 In respect of the SoC obligation, Eircom argued that ComReg did not attempt to weigh the benefits arising from the SoC obligation against the associated compliance costs such an obligation would require Eircom to bear, noting the changes to the existing SoC obligations which ComReg proposes. Eircom considered that this would add a significant burden without due consideration of the declining size of this market or the operational impact, and also failed to reflect the enhancements that have already been made to Eircom's RGM.

ComReg's Assessment on Respondents' Views and Position

- 12.58 ComReg notes that it has addressed Eircom's response in respect of Questions 7 and 9, and reiterated in response to Question 12, at Sections 7 and 9 above.
- 12.59 ComReg also notes that Eircom's argument in respect of the SoC obligation has been addressed previously in Section 10. Further to this, ComReg observes that the SoC remedy will only be imposed on those Relevant Markets where there is a finding of SMP. Its primary aim is to enhance and strengthen the transparency of the Regulatory Governance process underpinned by effective and proportionate regulation. ComReg disagrees that it has added any significant burden on Eircom, by means of this particular remedy, without due consideration for its impact.

Table 82: Option 2 – Impose Transparency, Non-Discrimination, Statement of Compliance, and Access Obligations

Impact on Eircom, as the SMP SP	Impact on Access Seekers	Impact on End Users
Eircom would benefit from a reduced regulatory burden relative to 2015 FACO Decision.	While risk of impeding access to FACO may be moderated, effective FACO may still be	Availability of FACO would enable subscribers of other networks to contact Eircom's subscribers. However, high risk

<p>The amendments to Eircom's existing SoC obligations would place a greater onus on it to demonstrate compliance with the obligations imposed under the Decision.</p> <p>There would be increased flexibility for Eircom to use its SMP at wholesale level to engage in exploitative or leveraging behaviours and negatively influence developments at the RFTS level, or in adjacent wholesale markets. Could also facilitate extraction of excessive rents from FACO and related markets and, ultimately, end users.</p> <p>Eircom's incentives to innovate and increase efficiency may be reduced where prices set above efficient cost are paid for by competitors and, in turn, by end users.</p> <p>Increased risk of disputes and legal challenges involving Eircom FACO arising from ineffective transparency and other preventative measures to protect against non-discrimination.</p> <p>Disputes could increase legal and regulatory costs faced by Eircom.</p>	<p>undermined through high or inefficient FACO pricing.</p> <p>Where access is provided to downstream competitors on exploitative or exclusionary terms, this could significantly disadvantage existing rivals and distort, restrict or eliminate existing competition in downstream or adjacent markets.</p> <p>Ineffective access to FACO (through exploitative or exclusionary pricing) could also raise barriers to entry and expansion for new entrants or existing participants.</p> <p>Pricing above efficient cost would raise financial barriers to entry and expansion for smaller or newer entrants and existing participants in downstream or adjacent retail markets.</p>	<p>that, even though access mandated in principle, there would be significant scope for such access to be effectively undermined through excessive pricing.</p> <p>If downstream competition is distorted or investments discouraged due to ineffective FACO, end users would potentially have reduced RFTS choice, quality and innovation.</p> <p>Above-cost FACO prices, if applied, could put upward pressure (or slow the rate of any decline) on RFTS prices.</p> <p>Above-cost prices would also limit scope for RFTS pricing innovations, thereby potentially depriving consumers of new and innovative bundles/packages.</p>
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Respondents' Views

12.60 Eircom reiterated that the risks identified by ComReg would not arise, and referred in this regard to its responses to Questions 7 and 9.

ComReg's Assessment on Respondents' Views and Position

12.61 ComReg notes that Eircom's comments on the above have been addressed previously in Sections 7 and 9 above.

Table 83: Option 3 – Impose Access, Transparency, Non-Discrimination, Statement of Compliance, and Price Control & Cost Accounting Obligations

Impact on Eircom, as the SP with SMP	Impact on Access Seekers	Impact on End Users
<p>As Eircom is currently subject to price control and cost accounting obligations, the incremental burden of such obligations is not likely to be significant.</p> <p>The amendments to Eircom's existing SoC obligations would place a greater onus on it to demonstrate compliance with the obligations imposed under the Decision.</p> <p>Eircom's regulatory burden under Option 3 would not be significantly less than under Option 4, as Eircom is already subject to accounting separation obligations in other SMP markets.</p> <p>Under Option 3, there would be increased flexibility for Eircom to obscure internal transfer prices and the real costs of FACO if no accounting separation obligation was imposed. There would thus be an increased opportunity for Eircom's non-discrimination and/or price control obligations to be undermined.</p> <p>Risk of disputes and legal challenges involving Eircom's FACO prices may be eased relative to Options 1 and 2 due to price control obligation. However, lack of accounting separation may generate uncertainty regarding Eircom's compliance with non-discrimination and price control obligations, thus also contributing to risk of disputes.</p>	<p>Regulating FACO prices at efficient cost would reinforce the effectiveness of the access, transparency and non-discrimination obligations, thus reducing risk of competitive distortions or restrictions (including foreclosure) in downstream RFTS or adjacent markets, and potentially lowering barriers to entry / expansion for smaller SPs and existing participants.</p> <p>This would also contribute to reducing the impact of any inefficient financial transfers or cross subsidies from Access Seekers to Eircom and thereby contribute to a level playing field between all SPs.</p> <p>Regulating FACO prices at efficient cost could potentially provide greater scope for RFTS pricing options (such as flat rate pricing or large inclusive bundles of minutes to fixed phone numbers) by Eircom's downstream rivals.</p> <p>Greater consistency with EU guidance and other regulatory decisions would promote legal certainty and a more predictable environment for potential investors, although lack of accounting separation obligations may render monitoring of potential exclusionary behaviour less transparent, further impacting on investment incentives for new entrants.</p>	<p>Reduced risk of competitive distortions or restrictions, a more level playing field in downstream and adjacent markets, and greater wholesale pricing certainty helps facilitate retail price and service innovations (e.g. in terms of packages/bundles offered).</p> <p>Reduced risk of high FACO prices being passed through to end users in the form of higher prices, relative to Options 1 and 2 above.</p> <p>Potential for undetectable discriminatory behaviour due to lack of accounting separation may impact on downstream competition and investment with consequent negative implications in terms of price and service choice over time.</p>

Respondents' Views

12.62 Eircom reiterated the argument it made in response to Question 9 that ComReg had overstated the risk of competition problems arising on the Regional FACO Markets by relying on theoretical possibilities which are not reflective of market conditions. Eircom also asserted that the Regional FACO Markets are not characterised by the presence of high barriers to entry. Lastly, Eircom considered that ComReg had made no attempt to quantify the impact and proportionate costs of retaining price controls and cost accounting on the Regional FACO Markets, despite suggesting that the incremental burden of such obligations was unlikely to be significant.

ComReg's Assessment on Respondents' Views and Position

12.63 ComReg notes that Eircom's views on Option 3 in regard to competition problems and high barriers to entry to the market have been addressed previously in Sections 7 and 9.

12.64 Eircom's final point, with respect to quantifying the price control and cost accounting remedies, is addressed in Section 10.

12.65 ComReg disagrees with Eircom that they have not considered the impact of retaining price controls in the Regional Markets. ComReg assessed each of the price control remedies in Section 10 and outlined why the price control remedies are necessary to protect Access Seekers as well as end users.

12.66 ComReg disagrees with Eircom that ComReg has not considered the impact of cost accounting remedies. ComReg believes that Eircom must maintain appropriate cost accounting systems to support the obligation of price control. In addition, ComReg's view is that Eircom must maintain cost accounting systems that justify its prices for products, services and facilities in the Regional FACO markets, and that retaining the existing cost accounting requirements may be less burdensome than implementing them at a sub-national level. The cost accounting remedies are discussed in more detail in Section 10.

Table 84: Option 4 – Impose Access, Transparency, Non-Discrimination, Statement of Compliance, Price Control & Cost Accounting, and Accounting Separation Obligations

Impact on Eircom, as the SP with SMP	Impact on Access Seekers	Impact on End Users
<p>Reducing the regulatory burden on Eircom (per 2015 FACO Decision).</p> <p>The amendments to Eircom's existing SoC obligations would place a greater onus on it to demonstrate compliance with the obligations imposed under the Decision.</p> <p>Risk of disputes and legal challenges involving Eircom's FACO prices would be eased relative to Options 1, 2 and 3.</p>	<p>General impacts associated with price control are as set out for Option 3 above.</p> <p>As set out for Option 3 above, greater consistency with EU guidance and other regulatory decisions would promote legal certainty and a more predictable environment for potential investors.</p> <p>Greater certainty that FACO prices would be set at efficient cost, complemented by greater visibility of internal transfers to support non-discrimination obligation, moderates risk of disputes relative to Options 1, 2 and 3.</p>	<p>Reduced risk of competitive distortions and restrictions, therefore facilitating a more level playing field in downstream markets.</p> <p>Greater wholesale pricing certainty helps facilitate RFTS price and service innovations (e.g. in terms of packages/bundles offered).</p> <p>Reduced risk of above-cost inefficient FACO prices being passed through to end users in form of higher prices relative to Options 1 and 2 above.</p> <p>Dynamic competition from SPs (facilitated by effective price control and appropriate preventative measures for discriminatory behaviour in respect of Eircom FACO) should help facilitate ongoing delivery of price and service innovations, and choice to end users over time.</p>

Respondents' Views

- 12.67 Eircom disagreed that the existing regulatory burden on Eircom would remain the same. It argued that it would face an increased regulatory burden, given the need to comply with separate regimes in different markets, as well as different sunset periods, depending on whether ComReg adjudged an EA to be competitive at final Decision stage, or at MTA stage.
- 12.68 Eircom added that maintaining some obligations, and upgrading others, in a small and declining market would, itself, be disproportionate, and would increase Eircom's relative costs of compliance.

ComReg's Assessment on Respondents' Views and Position

- 12.69 ComReg notes that Eircom appears to be suggesting that it faces an increased regulatory burden on the basis that it is being required to adhere to separate "*regimes*" in respect of the FACO Markets. This is in spite of ComReg's proposal to deregulate 69% of the market (measured by premises) in accordance with the withdrawal period, and to further deregulate the market, where warranted, by means of the MTA. Eircom suggests that ComReg's progressive deregulation of the market has, counter-intuitively, the effect of increasing, rather than decreasing, the regulatory burden on Eircom. ComReg refutes this suggestion and notes that Eircom is not being required to adhere to separate "*regimes*" in respect of the FACO Markets which might increase their burden. The regulatory obligations imposed on Eircom lie only in the Regional FACO Markets, in which ComReg has determined that regulation is, in fact, warranted. The only regime Eircom must comply with in respect of the Urban FACO Markets is in terms of the sunset period for the withdrawal of existing regulatory obligations, which ComReg is satisfied is necessary in order to effectively remove regulation from that Market and, ultimately, to minimise any disruption at the retail level. Further to this, in Section 10, ComReg notes that it has individually assessed whether each of the obligations to be imposed on Eircom in the Regional FACO Markets, as the SMP SP, has increased its regulatory burden since the 2015 FACO Decision. Taking account of this assessment and, given the reduced size of market on which these regulations are imposed, and also the reduced burden of the Accounting Separation obligation, ComReg considers that the regulatory burden on Eircom is likely to decrease.

Step 4: Determine the Impacts on Competition in the Provision of FACO

- 12.70 ComReg's position is that, absent regulation, Eircom would have the ability and incentive to engage in exploitative and exclusionary behaviours which would impact on competition and consumers in the Regional FACO Markets. In Section 9, ComReg provided examples of potential competition problems and their impact on competition and consumers.¹¹⁸⁵ ComReg has also highlighted its objectives in regulating the Regional FACO Markets, in particular, preventing the restriction or distortion of competition in affected downstream markets.
- 12.71 The imposition of appropriate *ex ante* remedies to address such competition problems was discussed and justified in Section 10, with each of the specific remedies designed to promote the development of effective competition. This approach will benefit SPs by allowing them to compete fairly at RFTS level.

Step 5: Assess Likely Impacts and Choose Best Option in respect of FACO

- 12.72 In its approach to imposing and withdrawing remedies in this Decision, ComReg has taken full account of its obligations under Regulation 8(6) of the Access Regulations,¹¹⁸⁶ as well as its relevant objectives as set out under Section 12 of the Communications Regulation Act 2002 (as amended).
- 12.73 ComReg's position is that, absent regulation, Eircom, as the SMP SP, has the ability and incentive to engage in exploitative and exclusionary behaviours which would impact on competition and consumers. In Section 9, ComReg provided examples of potential competition problems and their impact on competition and, ultimately, end users.
- 12.74 Based on its assessment above and throughout this Decision, and having considered the impacts on stakeholders and competition, including the impact on the development of competition within the internal market, it is ComReg's position that Option 4 represents the most justified, reasonable and proportionate of the approaches to regulation of the Regional FACO Markets.

¹¹⁸⁵ See discussion in paragraphs 9.12 to 9.75 above.

¹¹⁸⁶ As mirrored at Article 68(4) of the EECC.

- 12.75 The imposition of appropriate *ex ante* remedies to address competition problems was discussed and justified in Section 10, and each of the specific remedies is designed to promote the development of effective competition, and to protect end users. ComReg applies a suite of remedies to Eircom. Accordingly, ComReg is of the view that the risk of competition problems and associated impacts resulting from Eircom's SMP position in the Regional FACO Markets should be minimised. This will ultimately be to the benefit of SPs and end users of downstream RFTS.
- 12.76 The regulatory obligations do not unduly discriminate against Eircom, in that the obligations address specific competition problems, and are proportionate, in that they are the least burdensome means of achieving this objective.
- 12.77 ComReg considers that it has met its transparency obligations by setting out the remedies which it imposes on Eircom, outlining the justification for the obligations, issuing a reasoned public consultation on these matters, and considering in detail the responses which it has received to this public consultation.

Respondents' Views

- 12.78 ALTO, BT, and Vodafone all agreed with ComReg's selection of Option 4 as the most appropriate bundle of regulatory options to impose on Eircom.
- 12.79 Eircom disagreed, arguing that ComReg had not produced any concrete evidence that the examples of anti-competitive effects and concerns submitted by it were actually likely to occur. Instead, Eircom asserted that ComReg had relied on the theoretical possibility of exclusionary behaviour. Eircom cross-refers in this regard to its response to Question 9.
- 12.80 Eircom also disagreed with ComReg's proposal on remedies which, it argued, was disproportionate in the context of a declining legacy market and, in any event, unnecessary, given Eircom's willingness to offer Proposals in respect of the SMP area.

ComReg's Assessment of Respondents' Views and Position

- 12.81 Eircom has cross referred to its response under Question 9, having reiterated its statement that ComReg has not produced any concrete evidence in regard to the competition problems identified and whether they have occurred, or were likely to occur, in the Regional FACO Markets. ComReg has addressed these assertions in Section 9 and again notes that the regulatory framework does not require ComReg to demonstrate that actual abuses have occurred.
- 12.82 ComReg also notes that the issue of Eircom's Proposals, and, in particular, whether it is entitled to accept such Proposals, given its statutory powers, as of May 2021, is addressed at length in Section 10.

12.4 Urban FACO Markets and RFTS Markets

- 12.83 As noted in Sections 6 and 7, ComReg's position is that the Urban FACO Markets and the Relevant RFTS Markets fail the 3CT, noting that high and non-transitory barriers to entry are no longer present, and that these markets are tending towards effective competition. Having failed to meet the 3CT, the Urban FACO Markets and RFTS Markets are no longer susceptible to *ex ante* regulation.
- 12.84 On that basis, ComReg has decided to remove regulation from these markets. Therefore, ComReg's regulatory options in each of these markets are limited to the withdrawal of existing obligations. ComReg does not impose any sunset period in respect of the deregulation of the Relevant RFTS Markets for the reasons set out in paragraphs 6.194 to 6.205.
- 12.85 As set out in Section 11, in removing obligations in the Urban FACO Markets, ComReg distinguishes between products, namely PSTN and ISDN FRA/PRA services, on the one hand, and ISDN BRA services, on the other, when setting out the relevant sunset periods for the withdrawal of remedies. These differing sunset periods are referred to as:
- (a) The PSTN and ISDN FRA/PRA Urban Sunset Period; and
 - (b) The ISDN BRA Urban Sunset Period.
- 12.86 In terms of PSTN and ISDN FRA/PRA, an 18-month sunset period is applied with respect only to the withdrawal of existing Access obligations imposed on Eircom. This will run in parallel with a 9 month 'new order' period as described in paragraph 11.32.
- 12.87 For ISDN BRA, a 12-month sunset period is also applied with respect only to the Access obligations imposed on Eircom, while this 12-month ISDN BRA Urban Sunset Period will run in parallel with a 2-month period for new orders.
- 12.88 For the avoidance of doubt, Access shall be provided by Eircom to any products, services, facilities or Associated Facilities in the Urban FACO Markets at prices no higher than the prices prevailing on the Effective Date of this Decision for the duration of both the PSTN and ISDN FRA/PRA Urban Sunset Period, and the ISDN BRA Urban Sunset Period. Similarly, Eircom shall not refuse new orders for access to products, services, facilities or Associated Facilities in the Urban FACO Markets during the currency of the sunset periods (as outlined in paragraphs 12.86 to 12.87 above). ComReg's reasoning for applying these sunset periods is set out in Section 11.¹¹⁸⁷

¹¹⁸⁷ ComReg would not expect Eircom to significantly alter its terms and conditions given the presence of competition.

- 12.89 From the Effective Date of this Decision, Non-Discrimination and Transparency obligations are removed immediately in the Urban FACO markets, requiring no sunset period in each case.
- 12.90 To ensure the protection of end user interests, ComReg will continue to monitor the effectiveness of competition within the Urban FACO Markets and Relevant RFTS Markets, notwithstanding the removal of regulation. In this respect, ComReg reserves its right to re-examine competitive conditions within these markets and, if appropriate, to intervene accordingly.
- 12.91 ComReg notes that the tendency towards the presence of sufficient competitive constraints on the Urban FACO Markets means that this market outcome now facilitates the removal of existing obligations on Eircom. These dynamics also facilitate a reduction in Eircom's regulatory burden and, given the current market dynamics, can operate effectively absent regulation.

Respondents' Views

- 12.92 ALTO submitted that challenges exist in dealing with SMP in the Urban FACO Markets, which ComReg had not appeared to have properly addressed, and which should be reconsidered fully.
- 12.93 BT also alluded to the presence of, in its view, ongoing competition problems in the Urban FACO Markets.
- 12.94 Vodafone agreed with ComReg's proposal to continue to monitor the effectiveness of competition on the Urban FACO Markets and the Relevant RFTS Markets.

Respondents' Views on Sunset Period

- 12.95 BT, ALTO, Vodafone, and Eircom all commented on the timing of the withdrawal of existing obligations on the Urban FACO Markets.
- 12.96 ALTO submitted that any sunset clause should be:
- (a) of a minimum three years' duration for the removal of SMP obligations,
 - (b) linked in commencement to the offering of fit for purpose bulk migration offerings, and
 - (c) assessed independently as fit for purpose.
- 12.97 BT cross-referred to its response to Question 11, in which it noted that, notwithstanding its view that deregulation is not warranted on those markets, the sunset period for existing customers should be extended to at least three years, given the slow rate of customer migration. In BT's view the proposed 9 month 'new order' period would only be of use in cases where customers have access to NG Broadband.

- 12.98 Vodafone also cross-referred to its response to Question 11, in which it argued that sunset periods of 12 months and 24 months at minimum should apply for new provide orders and existing lines, given that most RFTS contracts are of at least 12 months' duration, and investment will be required in platforms.
- 12.99 Eircom noted that, in respect of the Urban FACO Markets, ComReg stated that its regulatory options are limited to the timing of the withdrawal of existing obligations. However, ComReg did not undertake any assessment on the impact of varying sunset periods or provide any justification as to why the chosen length can be considered appropriate, or how an eventual faster lifting of SMP obligations could cause harm to consumers in a market that is considered effectively competitive.

ComReg's Assessment of Respondents' Views and Position

- 12.100 ComReg notes that ALTO's and BT's concerns regarding SMP and competition problems in the Urban FACO Markets are addressed in Sections 7 and 9 respectively and reiterates that its analysis has not demonstrated sufficient evidence of the presence of SMP on the Urban FACO Markets.

ComReg's Assessment of Respondents' Views and Position on Sunset Period

- 12.101 The Submissions from ALTO, BT and Vodafone on the timing of the withdrawal of existing obligations on the Urban FACO Markets mirror or cross refer to their responses to Question 11 in the 2020 Consultation. Accordingly, ComReg has addressed Submissions on these issues in Section 11.¹¹⁸⁸
- 12.102 ComReg notes Eircom's statement, with respect to the Urban FACO Markets, that it has not undertaken any assessment or provided any justification as to why the chosen length of the varying sunset periods are considered appropriate. ComReg has, accordingly, provided a further explanation of the appropriateness of the chosen lengths of the relevant withdrawal periods in Section 11.¹¹⁸⁹

12.5 Summary of Conclusions on RIA

- 12.103 In conclusion, having regard to the Submissions to the 2020 Consultation, ComReg is satisfied that the RIA has identified, in Option 4, the most appropriate, proportionate and justified remedies to address each of the competition problems outlined in Section 9.

¹¹⁸⁸ See paragraphs 11.40 to 11.48 above.

¹¹⁸⁹ See paragraphs 11.32 to 11.39 above.

12.104 ComReg has also considered each of the Submissions pertaining to sunset periods for the withdrawal of remedies on the Urban FACO Markets. Taking account of Respondents' views, for which it notes are predominantly addressed in Section 11, ComReg has amended the respective sunset periods, which it is now satisfied are more reflective of market conditions.

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13 Next Steps

- 13.1 ComReg has set out its position in the preceding sections regarding its analysis of the Relevant RFTS Markets and the Relevant FACO Markets, and has today published its Decision on its publicly available website, www.comreg.ie.
- 13.2 ComReg proposes to carry out a Mid-term Assessment to assess whether conditions of competition have altered materially at any EAs constituting the Regional FACO Markets in the form prescribed at paragraph 11.70 above following 24 months from the Effective Date of this Decision, and to consult on the preliminary conclusions thereof.
- 13.3 Eircom Limited (trading as eir), which is subject to the regulatory obligations set out in the Decision Instrument appended to this Decision, is hereby notified of this Decision.

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Annex: 1 Consultation with the Competition and Consumer Protection Commission

A 1.1 Copy of letter from CCPC to ComReg, dated 16 June 2021:



PRIVATE AND CONFIDENTIAL

Garret Blaney
Chairperson
Commission for Communications Regulation
1 Dockland Central
Guild Street
Dublin 1, D01 E4X0

By e-mail only: dave.oconnell@comreg.ie

16 June 2021

Re: Commission for Communications Regulation draft decision on retail telecom markets

Dear Garrett,

Pursuant to Regulation 27(1) of the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011), the Commission for Communications Regulation ("ComReg") has consulted the Competition and Consumer Protection Commission (the "Commission") with respect to ComReg's proposed draft decision concerning the retail telecom markets for Fixed Access Call Origination ("FACO") and Retail Fixed Telephony Services ("RFTS") in the State.

On the basis of the facts and analysis presented by ComReg, the Commission is satisfied that there are no compelling grounds to disagree with ComReg's conclusions on the market definitions for FACO and RFTS, and that regulation should be restricted only to those areas where Access Seekers are still more heavily reliant on Eircom FNA wholesale inputs. The Commission agrees with ComReg's assessment that regulation should be withdrawn from the Urban FACO markets, and that Eircom should be designated with SMP on the Regional LL-FACO market and Regional HL-FACO market, respectively.

Yours sincerely,

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Dublin 1, Ireland
+353 1 402 5500

www.ccpic.ie



Comisiún um
Iomláocht agus
Cosaint Tomhaltóirí

Competition and
Consumer Protection
Commission

A handwritten signature in black ink, appearing to read 'Ibrahim Bah', written over a horizontal line.

Ibrahim Bah

Director – Competition Enforcement and Mergers

Direct line: (+353)1 470 3683

E-mail: ibrahimbah@ccpc.ie

Non-confidential

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www.ccpc.ie

Annex: 2 European Commission Response to ComReg's Notified Draft Measures

A 2.1 Copy of letter from the European Commission to ComReg [To Be Completed].

Non-confidential

Annex: 3 ComReg's Consideration of the European Commission Response to ComReg's Notified Draft Measures

A 3.1 [To Be Completed].

Non-confidential

Annex: 4 2019 Residential Market Research

- A 4.1 The 2019 Residential Market Research conducted for ComReg by RedC Research & Marketing Ltd was published alongside the 2020 Consultation as ComReg Document 20/46a.¹¹⁹⁰

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¹¹⁹⁰ See <https://www.comreg.ie/publication/2019-residential-market-research>.

Annex: 5 2019 SME Market Research

- A 5.1 The 2019 SME Market Research conducted for ComReg by RedC Research & Marketing Ltd was published alongside the 2020 Consultation as ComReg Document 20/46b.¹¹⁹¹

Non-confidential

¹¹⁹¹ See <https://www.comreg.ie/publication/2019-sme-market-research>.

Annex: 6 Eircom Proposals and related correspondence

- A 6.1 A non-confidential version of the February 2020 Proposals made by Eircom to ComReg in February 2020 was published alongside the 2020 Consultation as ComReg Document 20/46c.¹¹⁹²
- A 6.2 A non-confidential version of the April 2021 Proposals made by Eircom to ComReg in April 2021, together with the associated correspondence between Eircom and ComReg, is published alongside this Decision as ComReg Document 21/65a.

¹¹⁹² See <https://www.comreg.ie/publication/proposed-eircom-voluntary-commitments>.

Annex: 7 Retail Price Sensitivity

Introduction

- A 7.1 The purpose of this Annex is to summarise the price sensitivity analysis undertaken by ComReg in relation to the Relevant RFTS Markets, which are set out in Sections 4¹¹⁹³ and 5¹¹⁹⁴ (in context of indirect constraints) of this Decision.
- A 7.2 The analysis draws on the 2019 Market Research undertaken by RedC on behalf of ComReg, which included a range of questions that examined residential and SME consumer behaviour and consumers' anticipated responses to hypothetical increases in the price of RFTS. In particular, the research examined the extent to which end users would be likely to switch to different communications methods, or cancel their RFTS subscriptions, in response to a SSNIP. It should be noted that the 2019 Market Research is by no means definitive, and ComReg interprets these results along with the other factors considered throughout this Decision.
- A 7.3 Residential and SME respondents' sensitivities to cost were examined separately, with four SSNIP questions asked in each case.¹¹⁹⁵ However, due to the very specific criteria pertaining to each base group, only the results from two SSNIP questions in the 2019 Residential Market Research Report are included in this analysis, as in all other cases, the limited number of respondents qualifying for each scenario was too small, meaning the results are not deemed to be either significant, or representative, of the population. In this Annex, the perceptions of both residential and SME respondents of the cost of their RFTS packages, along with the results stemming from the two relevant SSNIP questions, will be analysed.

Perception of cost for RFTS Package

- A 7.4 To understand both residential and SME respondents' perceptions of the cost breakdown of their RFTS bills, respondents who purchase line rental and calls from separate suppliers were asked "*When you are thinking about the cost of your fixed landline telephone package or bundle, do you think about the cost of the line rental and calls separately?*" The results of this question, for both residential and SME respondents, are described below.

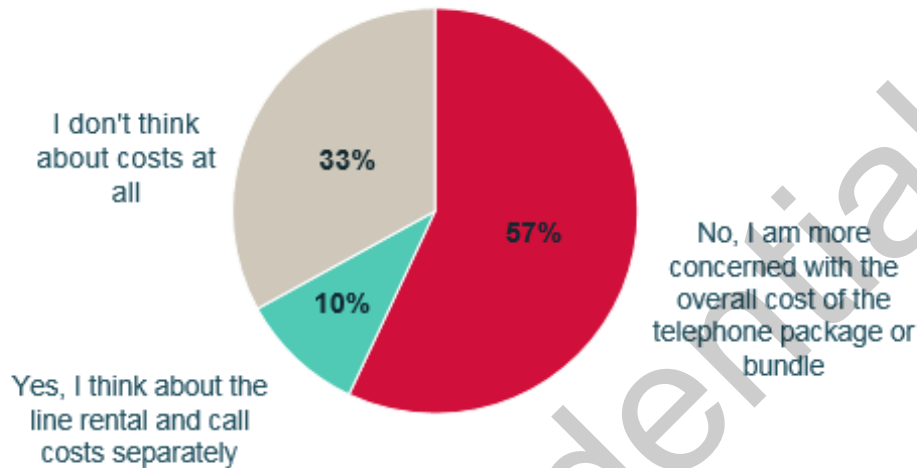
¹¹⁹³ See paragraph 4.144 and subsequent paragraphs.

¹¹⁹⁴ See paragraphs 5.217 to 5.361.

¹¹⁹⁵ The specific criteria pertaining to each base group and the details of each SSNIP question are outlined on slide 103 of the 2019 Residential Market Research.

- A 7.5 Figure A7.1 below suggests that the majority of residential respondents (57%) think of the overall cost of the RFTS package, rather than the costs of the components separately, 10% stated that they do monitor the price of RFVA and RFVC separately, and the remaining 33% did not think about costs at all.

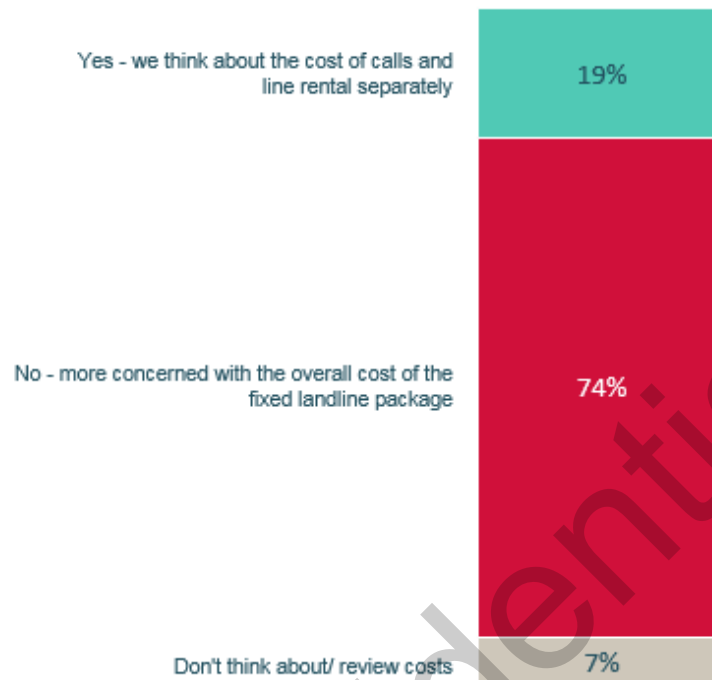
Figure A7.1: Consumer perspective when assessing the costs of line rental and telephone calls¹¹⁹⁶



- A 7.6 Further to the above, Figure A7.2 shows that SME respondents also mostly thought about the overall cost of the RFTS package, and not the cost of individual components.

¹¹⁹⁶ 2019 Residential Market Research, slide 34 (n=27). Respondents who purchase their line rental and calls from separate SPs, were asked "When you are thinking about the cost of your fixed line telephone, do you think about the cost of the line rental and calls separately?"

Figure A7.2: SME perspective when assessing costs of line rental & telephone calls¹¹⁹⁷



A 7.7 ComReg further summarises the responses provided in the 2019 Market Research survey by the above cohorts of residential¹¹⁹⁸ and SME respondents.¹¹⁹⁹ In doing so, ComReg notes that respondents reported having low levels of awareness of call charges, but generally had a higher degree of awareness around the cost of their overall RFTS package. This suggests that many consumers are more likely to respond to changes in the overall bill amount, rather than changes in the cost of individual elements of the service (such as the cost of calls or line rental).

Price Sensitivity of Residential Respondents

A 7.8 Residential respondents with a fixed line telephone¹²⁰⁰ were asked about their likely response to hypothetical price increases. Respondents were grouped according to whether they:

- (a) have a standalone landline service and pay for both calls (RFVC) and access (RFVA) together from a single SP; or

¹¹⁹⁷ SME Market Research, slide 48 (n=361). SME respondents were asked “When you are thinking about and reviewing the cost of fixed telecommunication services for your business, do you think about the cost of calls and line rental separately?”

¹¹⁹⁸ 2019 Residential Market Research slides 32-44.

¹¹⁹⁹ 2019 SME Market Research slides 37-51.

¹²⁰⁰ 2019 Residential Market Research slides 90-95

- (b) purchase their fixed landline service as part of a broader bundle from their SP.

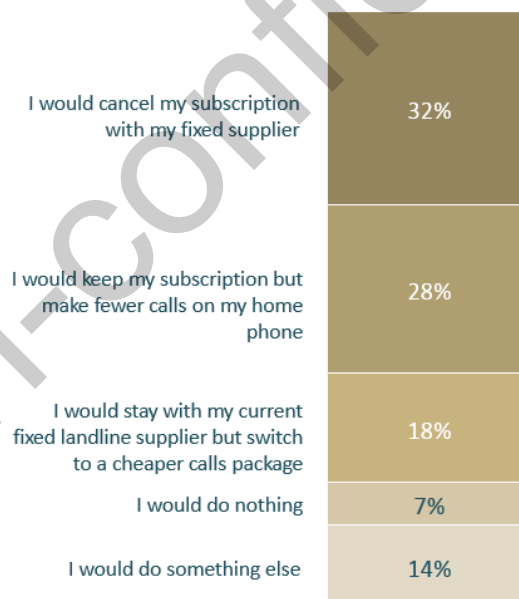
A 7.9 Results, in the case of both scenarios, are detailed below.

Respondents who purchase Standalone RFTS

A 7.10 This group comprises residential respondents with a standalone fixed landline, who purchase RFVC and RFVA together (RFTS package is supplied by a single SP). This represents 171 respondents (69% of those who reported having a Standalone Landline, or 8.5% of the total number of respondents surveyed) with a fixed line telephone.¹²⁰¹

A 7.11 These respondents were asked how they would react to a €4 increase in the total price of their bill. When asked to consider what action they might take in response to this increase in their total bill, 31% (n=67) said they would either definitely (11%) or possibly (20%) change their behaviour, while 68% stated that they would not change their behaviour.¹²⁰² Those that stated that they would definitely or maybe change their behaviour were asked what they would do, with the stated responses shown in Figure A7.3 below.¹²⁰³

Figure A7.3: Reaction to a €4 increase in the total cost of bill



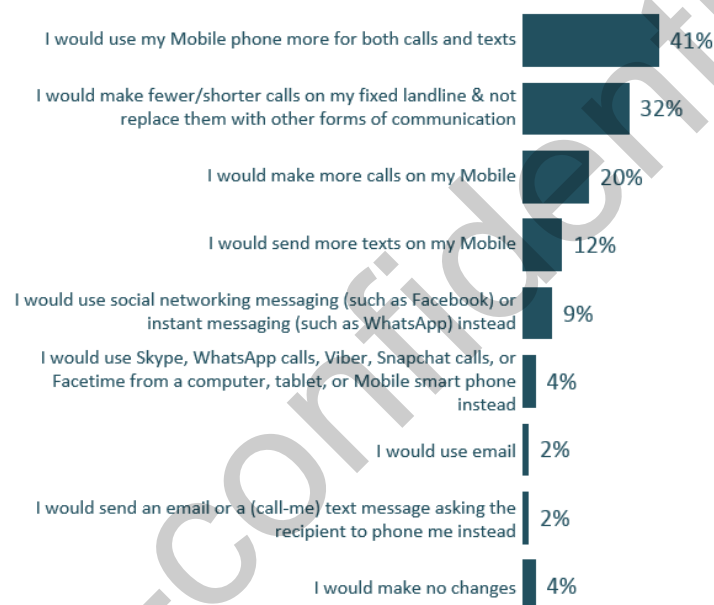
¹²⁰¹ 2019 Market Research – Slide 90. 171 respondents, taken as a percentage of overall number surveyed, and as a percentage of total respondents with a Standalone Landline not as part of a bundle.

¹²⁰² 2019 Residential Market Research, slide 90.

¹²⁰³ 2019 Residential Market Research, slide 91.

- A 7.12 Of those respondents who said they would definitely or possibly change their behaviour, significantly more respondents reported they would either keep their subscription but make fewer calls (28%) or switch to a cheaper package (18%) than would cancel their subscription (32%). Just 7% of respondents reported that they would do nothing.
- A 7.13 Those respondents who said they would stay with their supplier and make fewer calls, or move to a cheaper package (46%) were then asked to identify the specific behavioural change they would make. Figure A7.4 below outlines these changes.

Figure A7.4: Behavioural change if staying with current SP



- A 7.14 As shown in Figure A7.4 above, 32% of these respondents said they would make fewer calls and not replace them with any other form of communication, 73% said they would use their mobile more for calls and/or texts, while 17% said they would use some other forms of communication.

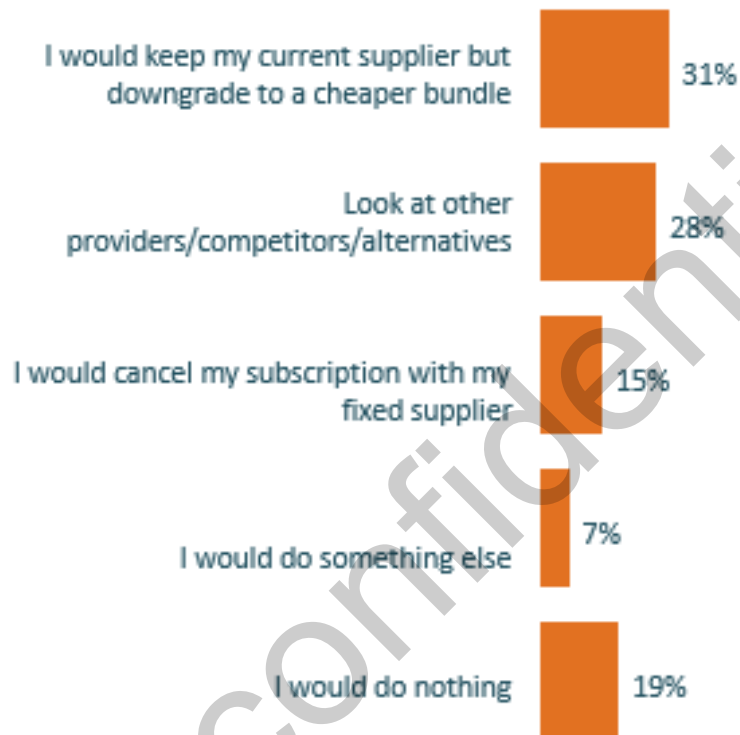
Respondents who purchase RFTS in a bundle

- A 7.15 Of the 979 respondents who own a landline, 77% purchase their landline as part of a bundle.¹²⁰⁴

¹²⁰⁴ 2019 Residential Market Research, Slide 108.

A 7.16 These respondents were asked about their reaction to a €2 increase in the price of their bundled services. When asked to consider what action they might take in response to this €2 increase, 26% of respondents said they either definitely (6%) or possibly (20%) would change their behaviour. Of the 26% of respondents that indicated they would change their behaviour, their reported behavioural response is shown in Figure A7.5 below.

Figure A7.5: Reaction to a €2 increase in the total cost of bill¹²⁰⁵

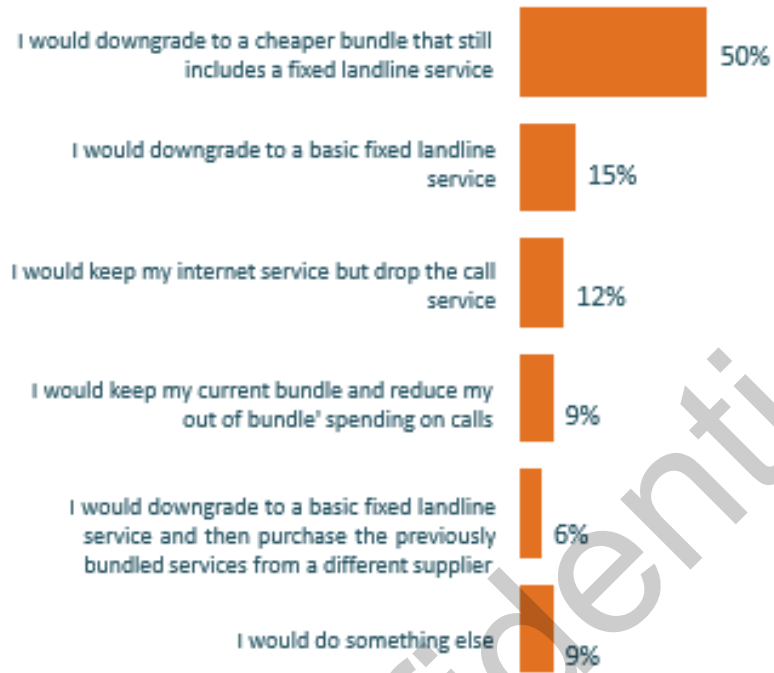


A 7.17 As outlined in Figure A7.6, of the 31% of respondents (n = 26) who would remain with their current supplier in response to the €2 increase, but downgrade to a cheaper bundle, 50% said they would downgrade to a bundle that still included a fixed landline service.¹²⁰⁶ However, 15% of respondents said they would downgrade to a basic standalone fixed landline service.

¹²⁰⁵ 2019 Residential Market Research, Respondents were asked “Which of the following would describe what you would be most likely to do?” (In response to a €2 increase in the cost of the fixed landline component of their bundle), Slide 94.

¹²⁰⁶ 2019 Residential Market Research, Slide 95.

Figure A7.6: Respondents who do not purchase RFTS in a bundle - change in purchasing behaviour when remaining



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Annex: 8 Market Definition: Assessing Potential Substitutes

Approach to Assessing Potential Substitutes for Market Definition purposes

- A 8.1 When assessing whether or not potential substitute products fall within a particular relevant product market, ComReg typically takes account of the following:
- (a) Demand-side substitution;
 - (b) Supply-side substitution; and
 - (c) In respect of wholesale product markets only, the indirect retail constraint generated by self-supply of vertically-integrated SPs.
- A 8.2 These analytical concepts are briefly described below.

Demand-Side Substitution

- A 8.3 Demand-side substitution measures the extent to which a purchaser of services would, in response to the levying by a HM of a SSNIP¹²⁰⁷ of the relevant focal product above the competitive level, switch to an alternative product such that it would render the price increase unprofitable. If the level of switching away from the HM to the alternative product is sufficient to render the focal product price increase unprofitable (for instance, due to the resulting loss of sales), then the alternative product will be included in the relevant product market.
- A 8.4 As noted in paragraph 13 of the Notice on Market Definition, demand-side substitution constitutes the most immediate and effective disciplinary force on the suppliers of a product. If the relevant focal product is priced above the competitive level, a switch to an alternative product may render the price increase unprofitable. If the level of switching away from the HM to the alternative product is sufficient to render the focal product price increase unprofitable, then the alternative product will be included in the relevant product market.

*“...the assessment of demand substitution entails a determination of the range of products which are viewed as substitutes by the consumer”.*¹²⁰⁸

¹²⁰⁷ Typically, a long-term ‘non-transitory’ price increase in the range of 5% to 10%.

¹²⁰⁸ See paragraph 15 of the Notice on Market Definition.

- A 8.5 For products to be considered effective demand-side substitutes and included in the relevant market, it is necessary that a sufficient number of customers are not only capable of switching between such products, but that they would be likely to actually do so in the short term (usually one year), in response to a relative price change.
- A 8.6 In this regard, the SMP Guidelines state¹²⁰⁹ that demand-side substitution must effectively restrain the pricing of the parties' products in the short term. Furthermore, in order for two products to be considered to fall within the same relevant market, demand must be sufficiently responsive to small changes in relative prices above the competitive level.
- A 8.7 For the purposes of market definition, the Notice on Market Definition suggests that constraints imposed by actual competitors are among the most relevant elements to be assessed:

"The objective of defining a market in both its product and geographic dimension is to identify those actual competitors of the Undertakings involved that are capable of constraining those Undertakings' behaviour and of preventing them from behaving independently of effective competitive pressure".¹²¹⁰

Supply-Side Substitution

- A 8.8 ComReg also considers the impact of supply-side substitution, that is, the extent to which a producer not currently active in supplying the candidate products within the market would, in response to a HM's SSNIP above the competitive level, switch production in the immediate to short term without incurring significant costs, and start supplying potential substitute products of equivalent characteristics and/or prices and, as a consequence of such provision, render the HM's price increase unprofitable.¹²¹¹
- A 8.9 Such an alternative potential substitute product could be included within the overall product market as a supply-side substitute if the production facilities (or network) would provide a sufficient competitive constraint to prevent a profitable price increase by the HM supplier of the candidate product(s), say because of the resulting loss of sales through switching to the alternative producer's product.
- A 8.10 In such circumstances, the Notice on Market Definition indicates that supply-side substitutes can be included within the product market.¹²¹²

¹²⁰⁹ SMP Guidelines, paragraph 33.

¹²¹⁰ Notice on Market Definition, paragraph 2.

¹²¹¹ See paragraph 41 of the SMP Guidelines.

¹²¹² Notice on Market Definition, paragraph 20.

“...in those situations in which its effects are equivalent to those of demand substitution in terms of effectiveness and immediacy. This means that suppliers are able to switch production to the relevant products and market them in the short term¹²¹³ without incurring significant additional costs or risks in response to small and permanent changes in relative prices. When these conditions are met, the additional production that is put on the market will have a disciplinary effect on the competitive behaviour of the companies involved. Such an impact in terms of effectiveness and immediacy is equivalent to the demand substitution effect.”

A 8.11 The Notice on Market Definition also notes that:¹²¹⁴

“When supply-side substitutability would entail the need to adjust significantly existing tangible and intangible assets, additional investments, strategic decisions or time delays, it will not be considered at the stage of market definition. In these cases, the effects of supply-side substitutability and other forms of potential competition would then be examined at a later stage.”

A 8.12 Therefore, any potential relevant supply-side substitutes should be sufficiently imminent in terms of their presence in the market in order to be capable of constraining a SSNIP.

A 8.13 The SMP Guidelines also suggest that, when defining a relevant market, mere hypothetical supply-side substitution is not sufficient.¹²¹⁵

“NRAs will need to ascertain whether a given supplier would actually use or switch its productive assets to produce the relevant product or offer the relevant service (for instance, whether their capacity is committed under long-term supply agreements, etc.).”

Self-Supply of vertically-integrated Service Providers

A 8.14 The indirect retail constraint generated by means of self-supply of wholesale/retail inputs on electronic communications networks by vertically-integrated SPs may also fall within the relevant market, if such self-supply exerts an effective competitive constraint on the market being considered. Having regard to the SMP Guidelines, the 2020 Explanatory Note and the Notice on Market Definition, the following criteria are typically considered by ComReg in determining whether self-supply on a given network falls within the relevant product market:

- (a) Whether sufficient demand-side substitution would be likely to arise if the self-supplied product was made available to third parties in the merchant market;

¹²¹³ That is, such a period that does not entail a significant adjustment of existing tangible and intangible assets.

¹²¹⁴ See paragraph 23 of the Notice on Market Definition.

¹²¹⁵ See paragraph 41 of the SMP Guidelines.

- (b) Whether the network offers the coverage expected by Access Seekers;
- (c) Whether provision of the self-supplied product to third parties is technically feasible;
- (d) Whether the SP whose self-supply is under consideration has sufficient capacity to provide the self-supplied product to third parties; and
- (e) Whether the SP whose self-supply is under consideration would provide the self-supplied product to third parties in the short term without incurring significant additional costs or risks, and would be likely to do so in response to small and permanent changes in relative prices.

A 8.15 Where these criteria are met, it is likely that the self-supplied service could act as an effective competitive constraint on the focal product. On that basis, the inclusion of self-supplied services in the product market is warranted.

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Annex: 9 Critical Loss Test for Direct and Indirect Constraints

Introduction

- A 9.1 In this Annex, ComReg outlines the computation of the Critical Loss Test ('CLT') set out in paragraphs 5.246 onwards above. The CLT provides further evidence in assessing the extent to which direct or indirect constraints might impact upon the definition of the Relevant RFTS Markets and the Relevant FACO Markets. The CLT supports the SSNIP analysis by providing an estimate of the percentage of customers that would have to divert away from the focal product in response to a SSNIP to make the increase in price of the focal product unprofitable.
- A 9.2 The CLT utilises data on prices of RFTS purchased both on a standalone basis, and as part of a bundle (as outlined in A 9.12 to A 9.15), FACO prices and costs, and subscriber numbers. These data, alongside other relevant information, support the overall conclusions set out in this Decision.
- A 9.3 The framework used to assess the scope of a market is the HMT, also known as the SSNIP test. The test begins by considering whether a nominal focal product constitutes a market in and of itself, and can be assessed by evaluating whether a market is worth monopolising. In order to determine whether a given product, or group of products, is worth monopolising, the pricing behaviour of a HM is considered. If the HM could impose a profitable SSNIP, then the market is considered to be no wider than the focal product(s).
- A 9.4 It is not necessary that all customers switch to a given potential substitute product in order for it to be defined as falling within the same relevant product market as the focal product(s). Rather, it only needs to be the case that a sufficient number of customers would switch to such alternative products, in order to prevent the SSNIP from being profitable.
- A 9.5 To implement the HMT, a framework known as 'critical loss analysis' is used. The CLT estimates the percentage of customers that would have to divert away from the focal product in response to a SSNIP, for that price rise to be unprofitable. A prediction of actual loss can then be compared to the critical loss value ('CLV'), and if the number of customers switching exceeds the CLV, then the SSNIP is considered likely to be unprofitable. The market is thus no wider than the focal product(s). Thus, the amount of demand substitution from the focal product to the potential substitute must be greater than the critical loss estimate, in order for the potential substitute to be deemed to fall in the same relevant market as the focal product.

Deriving the CLT

A 9.6 The CLT measures the percentage reduction in demand due to a SSNIP that would leave profits unaffected. If the reduction in demand due to a SSNIP is greater than the CLT, then the SSNIP will be unprofitable, and vice versa.

A 9.7 The change in profits following a SSNIP is given by:

$$\pi_1 - \pi_0 = (p_1 q_1 - p_0 q_0) - c(q_1 - q_0) \quad (1)$$

where π is profit, c is marginal cost, p_0 is the price before the SSNIP, p_1 is the price after the SSNIP, q_0 is the original number of subscribers, and q_1 is the post SSNIP number of subscribers. The equation states that the change in profit equals the change in revenue less the change in costs (i.e. marginal costs), which are assumed to fall if the number of subscribers falls.

A 9.8 If we specify $p_1 = p_0(1 + s)$, $q_1 = q_0(1 + L)$, $c = (\alpha p_0)$ and $\pi_1 - \pi_0 < 0$ the CLT can be expressed as a function of the SSNIP:

$$L < -\frac{s}{1 + (s - \alpha)} \quad (2)$$

where L is the critical loss, s is the SSNIP, and α is the ratio of marginal cost to price.

A 9.9 Alternatively, the critical loss can be computed as:¹²¹⁶

$$\frac{s}{(1 - \alpha) + s}$$

or

$$\frac{s}{m + s}$$

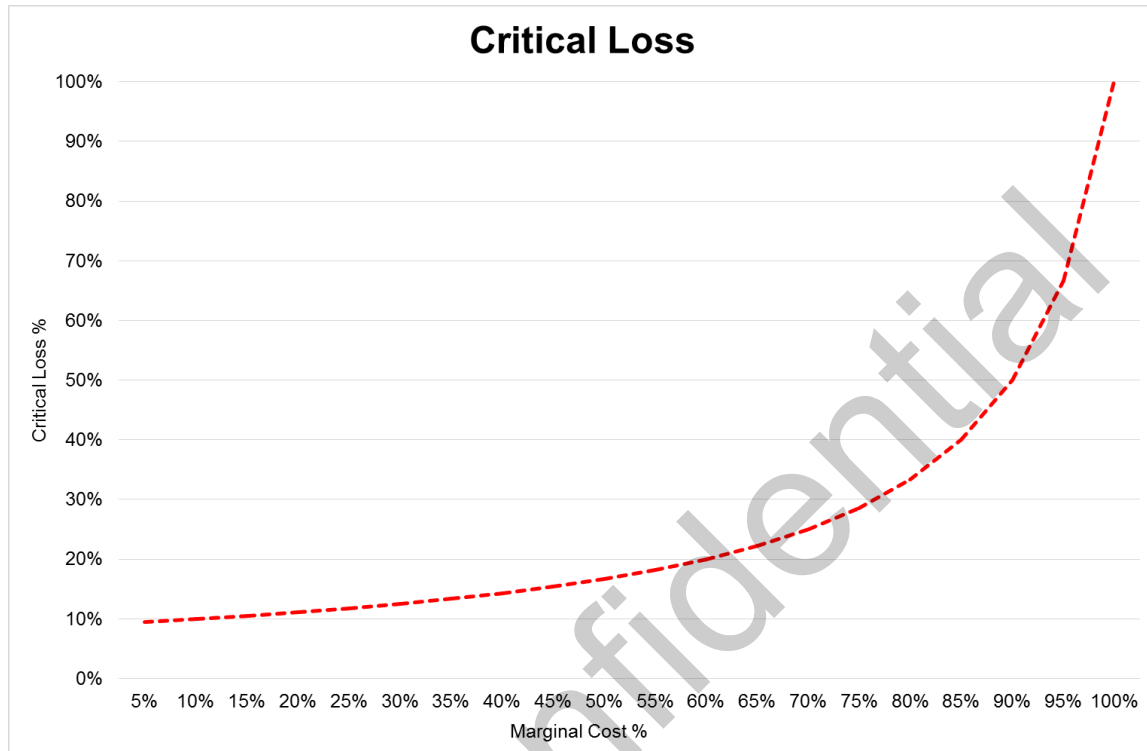
Where $m = (1 - \alpha)$ i.e. the margin as opposed to the ratio of marginal cost to price.

A 9.10 Figure A9.1 below plots the critical loss if a number of assumptions for α are made (i.e. that it is as low as 5%, or as high as 100%). If α is 100% (i.e. it is equal to the retail price charged), the lost revenue from customers who switch SP in response to the SSNIP would be offset by the costs saved from not serving those customers. In this case, profits would amount to the increase in retail prices multiplied by the number of customers who do not switch.

¹²¹⁶ 'Could' or 'would'? The difference between two hypothetical monopolists', Oxera, November 2008. <https://www.oxera.com/wp-content/uploads/2018/03/Hypothetical-monopolists-1.pdf>

- A 9.11 Conversely, if the marginal costs are as low as 5%, then the lost revenue would come from those who switch, with only a 5% associated cost saving. The lost revenue would be greater than the increase in revenue from customers who do not switch if demand falls by more than 10%:

Figure A9.1: Critical Loss with assumed values for α



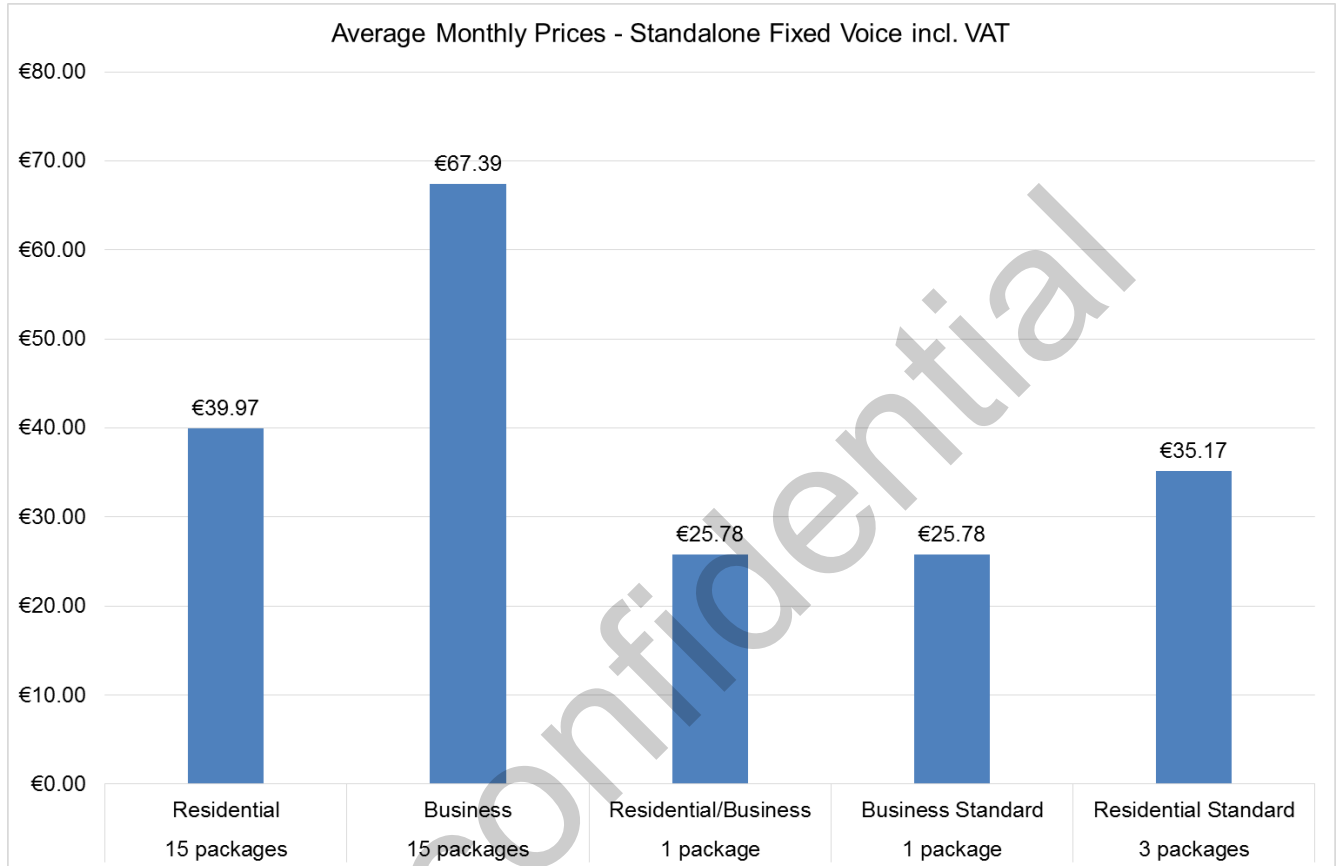
Price and cost data

- A 9.12 The CLT requires detailed information regarding a number of parameters, including marginal costs. Where such relevant information is absent, ComReg uses proxies for the various parameters that are used to calculate the critical loss. The CLT is therefore no more than a general guide for ComReg's assessment of constraints. It is by no means determinative in and of itself, and is considered alongside other information in seeking to determine whether the response by end users to an increase in the price of RFTS resulting from the SSNIP in FACO would be likely to constrain the profitability of such a SSNIP.
- A 9.13 In Figure A9.2 and Figure A9.3 below, ComReg shows average prices across all SPs and offerings for standalone and bundled fixed voice packages. The average price per month for a standalone fixed voice package is close to €40 for residential end users and €67 for non-residential end users. This is consistent with the 2019 FACO Market Research, which indicated that the average RFTS price per month paid by residential end users is €58.¹²¹⁷

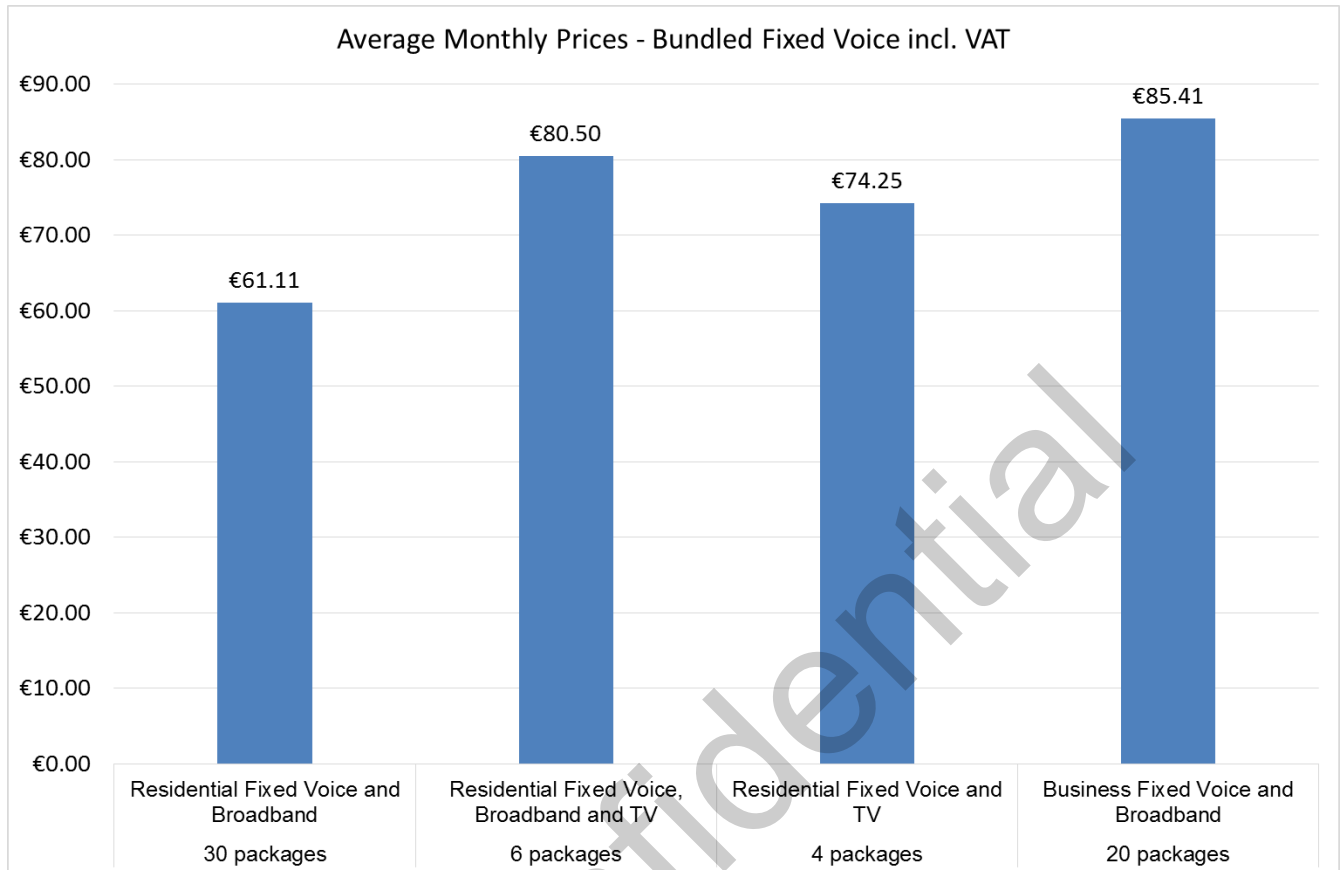
¹²¹⁷ See 2019 Market Research in Annex: 1.

A 9.14 For bundled fixed voice (i.e. fixed voice with broadband, TV etc.), average monthly residential prices were €61 for a bundle of fixed voice and broadband, rising to €80 for a bundle of fixed voice, broadband and TV. For non-residential end users, bundles of fixed voice and broadband came in at €85:

Figure A9.2: Average Monthly Prices – Standalone Fixed Voice



Source: ComReg calculations based on tariff data from SP websites, accessed June 2019

Figure A9.3: Average Monthly Prices – Bundled Fixed Voice

Source: ComReg calculations based on tariff data from SP websites, accessed June 2019

A 9.15 Monthly wholesale line rental charges are outlined in Table A9.1 below, for PSTN and ISDN BRA, FRA and PRA, as set out in the open air RIO:

Table A9.1: FACO Costs, May 2021

WLR Service	Monthly Wholesale Rental Charge
PSTN	€16.59
ISDN BRA	€27.95
ISDN FRA	€143.18
ISDN PRA	€238.25

A 9.16 Monthly RFTS line rental charges are outlined in Table A9.2 below, for PSTN and ISDN BRA, FRA and PRA, as set out in the Eir's retail price list:

Table A9.2: RFTS Costs, May 2021

WLR Service	Monthly Rental Charge
PSTN	€20.96
ISDN BRA	€36.81
ISDN FRA	€215
ISDN PRA	€355

FACO Market CLT

- A 9.17 ComReg has used Eircom's Historical Cost financial statements for June 2020 to estimate Eircom's margins for FACO products, i.e. $m=(1-\alpha)$, and has calculated critical loss estimates accordingly.¹²¹⁸ This actual historical accounting data is used to approximate the critical loss calculation where the margin 'm' is estimated based on Eircom's reported service-specific return (profit) relative to its corresponding revenue.
- A 9.18 The estimates in Table A9.3 below represent the end user demand response that would be required following the pass-through of a SSNIP of FACO, in order to prevent a profitable SSNIP of FACO by Eircom.
- A 9.19 Table A9.3 estimates the critical loss for SB-WLR at 12-14% for a 5% SSNIP, and 20-25% for a 10% SSNIP. This implies that, if a HM imposed a SSNIP of 10%, it would be rendered unprofitable if demand fell by more than 20%. These critical loss estimates indicate the extent to which demand would need to switch from Eircom's FACO products for a given alternative retail product to fall within the Relevant FACO Markets:

Table A9.3: Estimates of Critical Loss for SSNIP of FACO [PARTIALLY REDACTED]

Inputs	5% SSNIP	10% SSNIP
FACO	€'000	€'000
Eircom wholesale revenue	████████	████████
Eircom wholesale return	████████	████████
Gross margin	████	████
SSNIP	5%	10%
Break-even critical loss	14%	25%
Profit-maximising critical loss	12%	20%

RFTS Market CLT

- A 9.20 ComReg has used Eircom's Additional Financial Information ('AFI') for June 2020 to estimate Eircom's margins for RFTS products, i.e. $m=(1-\alpha)$, and has calculated critical loss estimates accordingly.
- A 9.21 The estimates in Table A9.4 below represent the end user demand response that would be required following a SSNIP of RFTS, in order to prevent a profitable SSNIP of RFTS by Eircom.

¹²¹⁸ https://www.eir.ie/opencms/export/sites/default/.content/pdf/regulatoryinformation/hca_accounts_2020.pdf

A 9.22 Table A9.4 estimates the critical loss for RFTS at 12-13% for a 5% SSNIP, and 19-24% for a 10% SSNIP. This implies that, if a HM imposed a SSNIP of 10%, it would be rendered unprofitable if demand fell by more than 19%. These critical loss estimates indicate the extent to which demand would need to switch from Eircom's RFTS products for a given alternative retail product to fall within the Relevant RFTS Markets:¹²¹⁹

Table A9.4: Estimates of Critical Loss for SSNIP of RFTS [PARTIALLY REDACTED]

Inputs	5% SSNIP	10% SSNIP
RFTS	€'000	€'000
Eircom RFTS revenue	██████	██████
Eircom RFTS return	██████	██████
Gross margin	████	████
SSNIP	5%	10%
Break-even critical loss	13%	24%
Profit-maximising critical loss	12%	19%

¹²¹⁹ CLVs have been calculated based on Eircom accounting data which does not distinguish between RFTS purchased on a standalone basis, and RFTS purchased as part of a bundle. 83% of RFTS subscriptions are purchased as a part of a bundle. For these end users, a 5-10% SSNIP of RFTS would lead to a smaller overall increase in the price of their bundle, where the cost of other bundle components remained unchanged. Thus, the impact of a SSNIP of RFTS on purchasers of bundled RFTS is likely to be diluted.

Annex: 10 Other Criteria for SMP Assessment

- A 10.1 As noted in paragraph 7.279, ComReg has considered other factors that could be used to indicate the potential market power of an SP but which, for the reasons set out below, are considered of little or no relevance for the purposes of the SMP assessment in the Relevant FACO Markets.

Technological advantages or superiority

- A 10.2 Technological advances or superiority can represent a barrier to entry as well as conferring the ability for an SP to achieve cost or production advantages/efficiencies over its competitors. However, the technologies being used to provide FACO have little or no bearing on the assessment of SMP in the FACO Markets. In particular, it would appear that any technological advancement made by one operator could, from a purely technological point of view, be adopted over time by others. This criterion is, therefore, considered of less relevance in the FACO Markets.

Easy or privileged access to capital markets/financial resources

- A 10.3 Easy or privileged access to capital markets may act as a barrier to entry in markets where small, private companies are competing with a large incumbent in RFTS markets, and are not able to leverage sufficient finance to invest in alternative infrastructure and use it to compete effectively with the incumbent.
- A 10.4 ComReg considers that this is unlikely to be a factor in the FACO markets, considering that the main potential entrants are subsidiaries of large parent companies e.g. BT, Vodafone Ireland, Sky, and Virgin Media. These SPs are equally able to access capital markets and are therefore not at a disadvantage relative to the incumbent. This criterion is, therefore, considered of little or no relevance.

A highly developed distribution and sales network

- A 10.5 The need to establish distribution systems might delay short-term market entry. However, entry into the FACO Markets is unlikely to involve establishing extensive distribution and sales networks, since there are only a small number of Access Seekers.
- A 10.6 In any case, given that potential entrants are most likely to be RFTS SPs with a significant existing RFTS distribution and sales network (for example, Virgin Media, Vodafone or Sky), a highly developed sales and distribution network is unlikely to represent a significant barrier to entry in the FACO Markets.

Annex: 11 FACO Geographic Market Assessment

Introduction

- A 11.1 This Annex sets out in greater detail ComReg's approach to the geographic assessment of the Relevant FACO Markets, and is structured as follows:
- (a) Framework for Relevant FACO Geographic Market Assessment (paragraphs A 11.3 to A 11.45);
 - (b) Assessment of differences in competitive conditions in the Relevant FACO Geographic Markets (paragraphs A 11.46 to A 11.58); and
 - (c) Overall Conclusion on Relevant FACO Geographic Market Assessment (paragraphs A 11.59 to A 11.61).
- A 11.2 This Annex should be read in conjunction with the analysis set out in Section 5 of the Decision.

Framework for Relevant FACO Geographic Market Assessment

- A 11.3 This section sets out the framework according to which ComReg defines the geographic boundaries of the Relevant FACO Markets. ComReg's framework for assessing the boundaries of these markets follows these steps:
- (a) **Establishing the relevant geographic unit:** ComReg considers the appropriate geographic unit, taking into account the range of services offered by Eircom, and by other SPs, including those using wholesale NG Broadband inputs to provide products falling into the Relevant FACO Product Markets (discussed in paragraphs A 11.5 to A 11.32 below).
 - (b) **Establishing criterion for assessing competitive conditions:** ComReg sets out the criterion by which it assesses any sufficient differences in competitive conditions in the geographic areas in question (see paragraphs 5.496 to 5.573 above).
 - (c) **Analysis of criterion:** ComReg examines factors inputting to the criterion, which assist in distinguishing geographic areas characterised by sufficiently different conditions of competition (see paragraphs A 11.33 to A 11.45 below).
- A 11.4 The rationale for the selection of this assessment framework is discussed below.

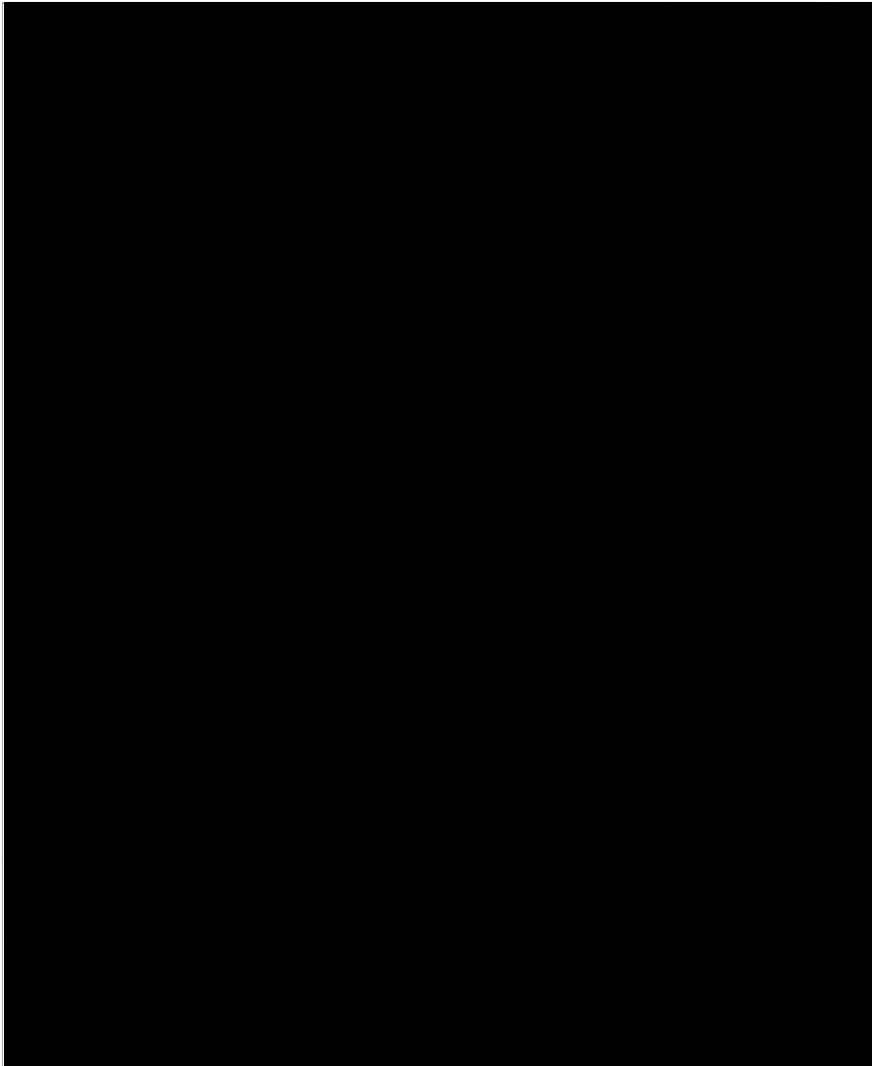
Relevant Geographic Unit for assessment of competitive conditions in the FACO Markets

- A 11.5 In general, the process of defining the geographic boundaries of markets involves identifying any geographic areas where a distinct break in competitive conditions can be observed. This approach places weight on the underlying structural and behavioural factors that are relevant in determining any competitive differences within a market.
- A 11.6 ComReg has considered the appropriate geographic unit to be employed in undertaking the Relevant FACO Geographic Market assessment.
- A 11.7 In forming its view, ComReg has taken utmost account of the 2020 Recommendation and the 2014 BEREC Common Position, as well as having regard to EC comments letters on NRA market analyses. The 2020 Explanatory Note¹²²⁰ indicates that, when NRAs are examining the geographic scope of a market, they should ensure that geographic units are:
- (a) of an appropriate size;
 - (b) able to reflect the network structure of all relevant SPs; and
 - (c) have clear and stable boundaries over time.
- A 11.8 The 2014 BEREC Common Position adds that geographic units should satisfy a number of quantitative criteria, namely that:
- (a) they are mutually exclusive and less than national;
 - (b) the network structure of all relevant SPs and the services sold on the market can be mapped onto the geographic units;
 - (c) they have clear and stable boundaries; and
 - (d) they are small enough for competitive conditions to be unlikely to vary significantly within the unit but, at the same time, large enough that the burden on SPs and NRAs with regard to data delivery and analysis is reasonable.
- A 11.9 Having regard to the above, ComReg's view is that geographic units should be small enough to avoid significant variations in competitive conditions within each chosen unit, but also large enough to avoid a resource intensive and burdensome micro-analysis that could lead to an unwarranted fragmentation of a market which did not reflect the reality of differing competitive conditions.
- A 11.10 The boundaries of any geographic unit should also be relatively stable and easily understood by SPs. When applying a network structure that is not familiar to all SPs, sufficient information must be available to all parties who may use the information when considering any future changes to network structure or rollout.

¹²²⁰ At page 19.

A 11.11 The network structures of SPs vary. Eircom, as the former state-owned monopoly, operates a legacy FNA network with ubiquitous coverage. Access Seekers using Eircom FNA FACO inputs accordingly have access to coverage which approximates Eircom's coverage (in those areas where they purchase SB-WLR or WLV products, services and facilities). Eircom's WLA and WCA products also follow this topology, where Access Seekers that purchase these products can interconnect at the local Exchange or further up in the network such as at an Aggregation Node or at a higher level (in the case of WCA). This means that wholesale NG Broadband services purchased from Eircom can also align to the FNA network topology. However, the presence of other networks complicates the mapping of differing network structures onto one geographic unit (e.g. Eircom Exchange Area ('EA') boundaries). This is because other networks may have different – sometimes organically grown – flatter network topologies that can diverge significantly from Eircom's (historic) FNA network layout. Similarly, SPs rolling out FTTP networks tend to develop rollout plans to optimise network coverage and minimise the amount of fibre rollout required. Figure A11.1 below illustrates Eircom Exchange Area boundaries, of which there are 1,202. The 2020 Consultation assessed the Relevant FACO Markets on the basis of an overall count of 1,203 EAs nationwide. As Adelaide Road EA (ADL) is fully decommissioned and no longer operates as an EA, this Decision assesses the Relevant FACO Markets excluding ADL, and therefore on the basis of a count of 1,202 EAs:

Figure A11.1: Eircom Exchange Area boundaries for FNA network [REDACTED]



A 11.12 When assessing geographic market boundaries, ComReg notes that NRAs sometimes choose to use administrative units (such as local authority boundaries), rather than network-based geographic units used by SPs.¹²²¹ While administrative boundaries are relatively stable over time, in the context of this market review, they do not accurately reflect the network structure of SPs in the Irish market. Accordingly, ComReg's position is that the use of administrative units in this context would lead to an unnecessary administrative burden on SPs, thus causing ComReg to fail to meet the objectives set out at paragraphs A 11.7 and A 11.8 above.

¹²²¹ For example, FICORA, the Finnish NRA, has used administrative units as (incumbent) networks match these areas well. Similarly, ANACOM, the Portuguese NRA uses parishes as the geographic unit.

Accounting for coverage of NG Broadband networks

- A 11.13 In this section, ComReg explains how it accounts for the presence and competitive impact of NG Broadband networks which can be used to support the delivery of Managed VoIP services by Access Seekers. Coverage is referred to in terms of premises passed for a given network, i.e. premises that can be served by that network.
- A 11.14 The networks considered in this analysis are Eircom's FTTx network, Virgin Media's DOCSIS 3.0 CATV network, SIRO's FTTP network and, on a forward-looking basis, NBI's FTTP network (in the latter case, to the extent that it has been built). ComReg also considered whether enet's network should be taken into account. enet operates an FTTP network¹²²² covering [redacted] premises which allows Access Seekers to self-supply FACO via Managed VoIP. ComReg is, however, of the view that enet's FTTP network is unlikely to be of a sufficient size that it is likely to contribute to differences in competitive conditions between EAs.

Eircom NG Broadband networks

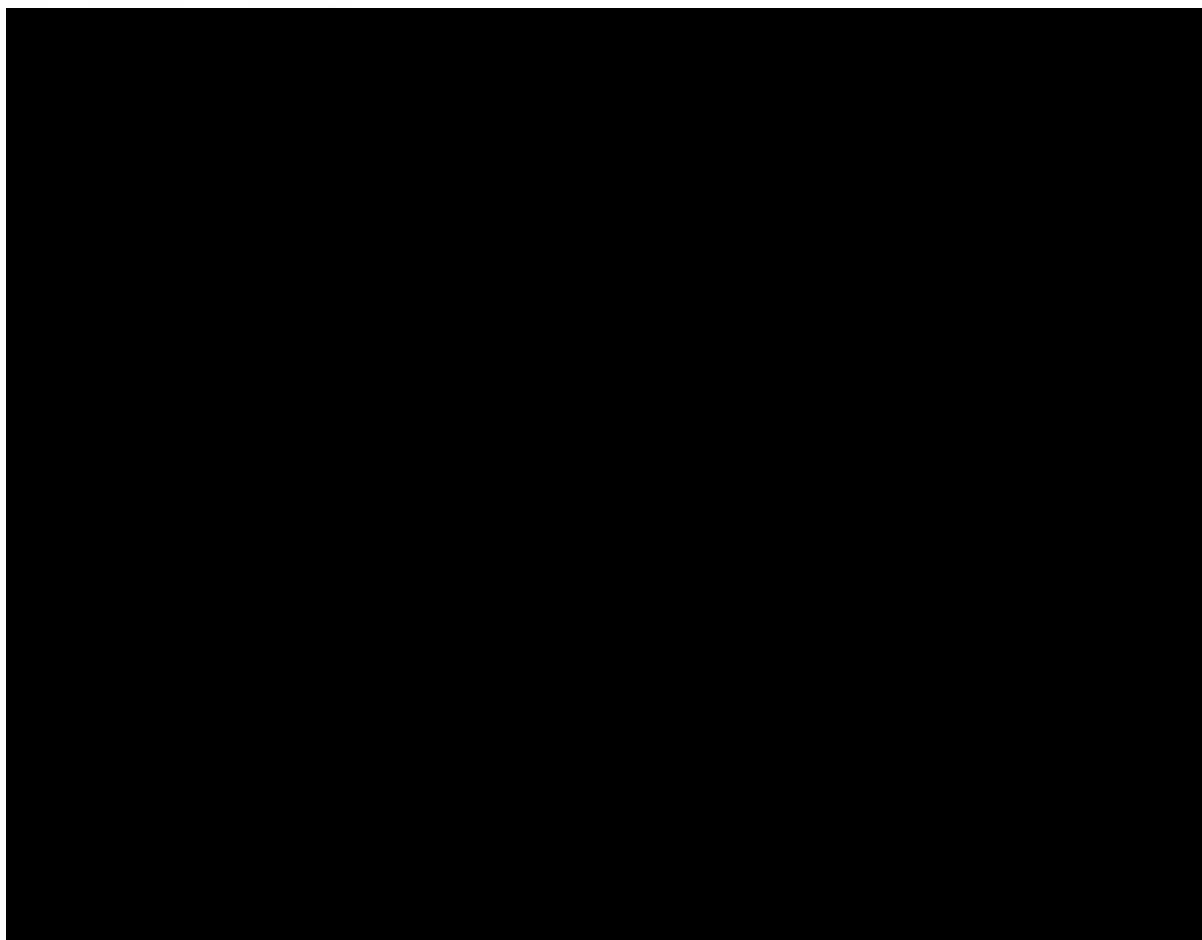
- A 11.15 Figure A11.2 below illustrates Eircom VDSL coverage which amounted to [redacted] premises as of Q4 2020. Eircom has begun upgrading some of its VDSL network to full FTTP in urban areas in the State:¹²²⁴

¹²²² <https://www.enet.ie/coverage.html>

¹²²³ Measured in terms of postal addresses passed

¹²²⁴ <https://www.eir.ie/pressroom/eir-launches-0.5-billion-fixed-network-investment-programme/>

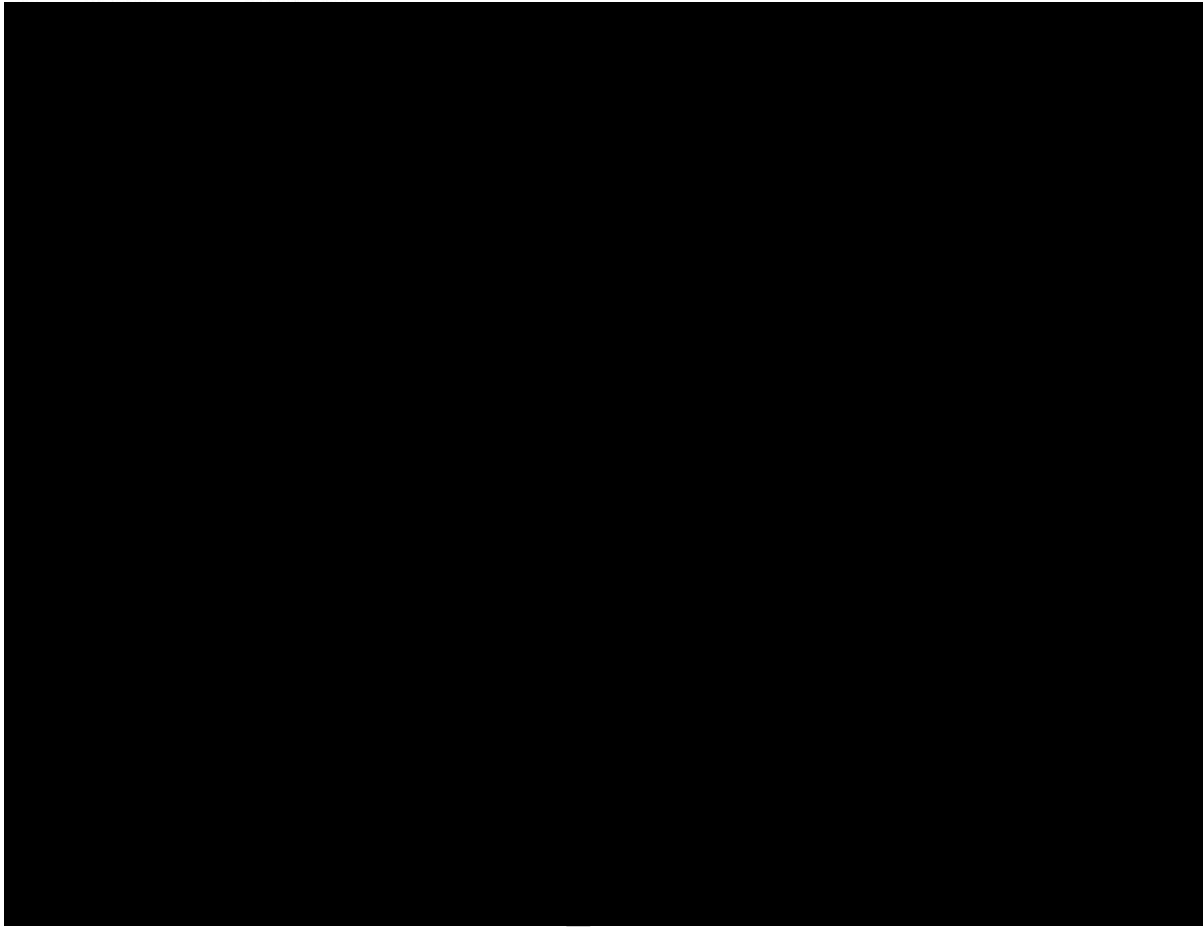
Figure A11.2: Eircom VDSL Coverage as of Q4 2020 [REDACTED]



A 11.16 Figure A11.3 below illustrates Eircom's FTTP network which covered [REDACTED] premises,¹²²⁵ as of Q4 2020:¹²²⁶

¹²²⁵ Measured in terms of postal addresses passed

¹²²⁶ https://www.eir.ie/pressroom/eir-announces-second-quarter-FY21-results-to-31-December-2020/#_ftn1

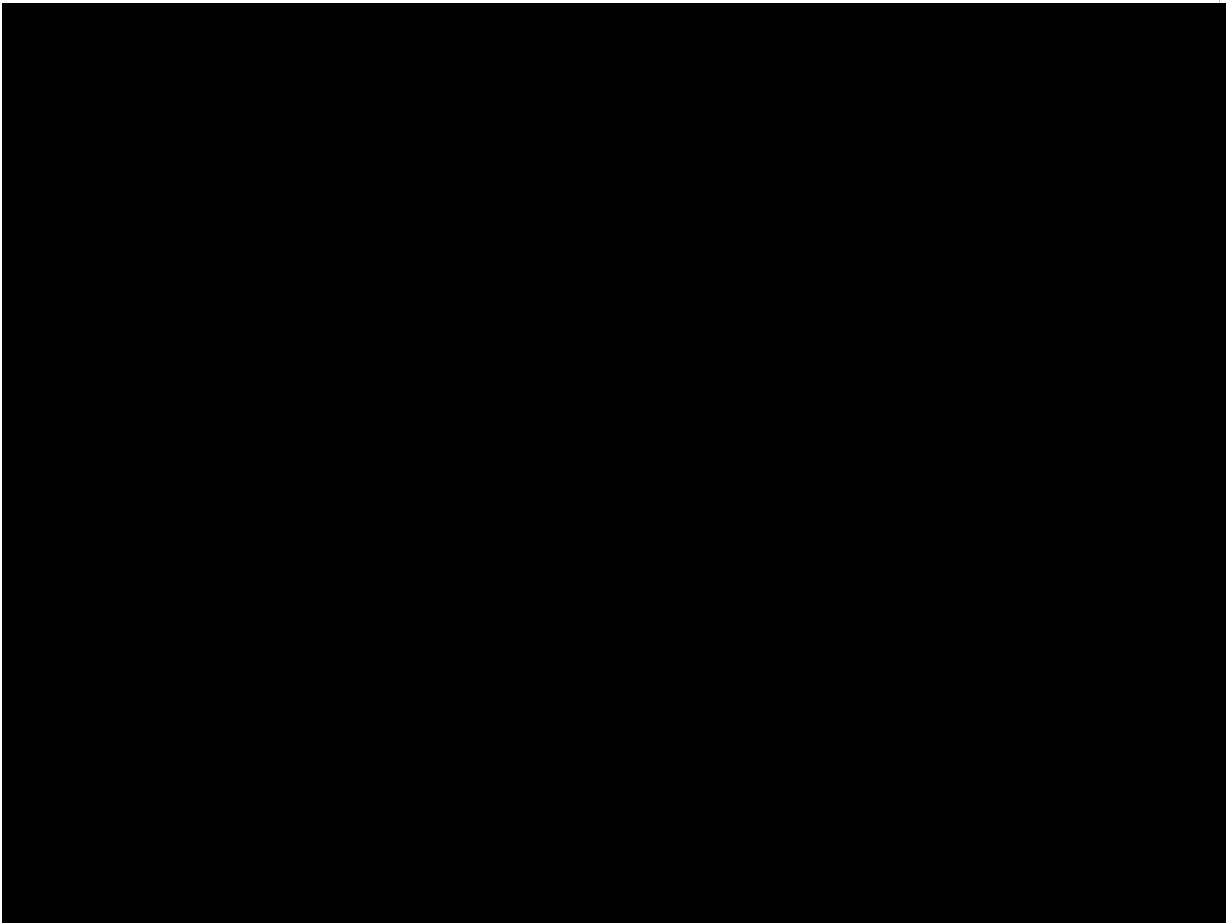
Figure A11.3: Eircom FTTP Coverage as of Q4 2020 [REDACTED]

Virgin Media

- A 11.17 Virgin Media's CATV network does not necessarily align with Eircom's network in terms of network topology or precise coverage. Virgin Media's network covers 946,500 premises (c.39% of total premises nationally), largely homes, with approximately 300,000 RFTS subscribers on its network as at Q4 2020.¹²²⁷
- A 11.18 In terms of network expansion plans, Virgin Media has not indicated publicly any new network expansion plans in Ireland. ComReg accordingly considers that Virgin Media's network coverage is unlikely to change significantly during this market review period.
- A 11.19 As shown in Figure A11.4, the Virgin Media network footprint is concentrated in urban areas, in particular, around Dublin, Galway, Limerick and Cork:

¹²²⁷ Liberty Global Q4 2020 Fixed Income Release, page 22. <https://www.libertyglobal.com/wp-content/uploads/2021/02/Virgin-Media-Fixed-Income-Q4-2020-Release.pdf>

Figure A11.4: Virgin Media's Network Coverage as of Q4 2020 [REDACTED]



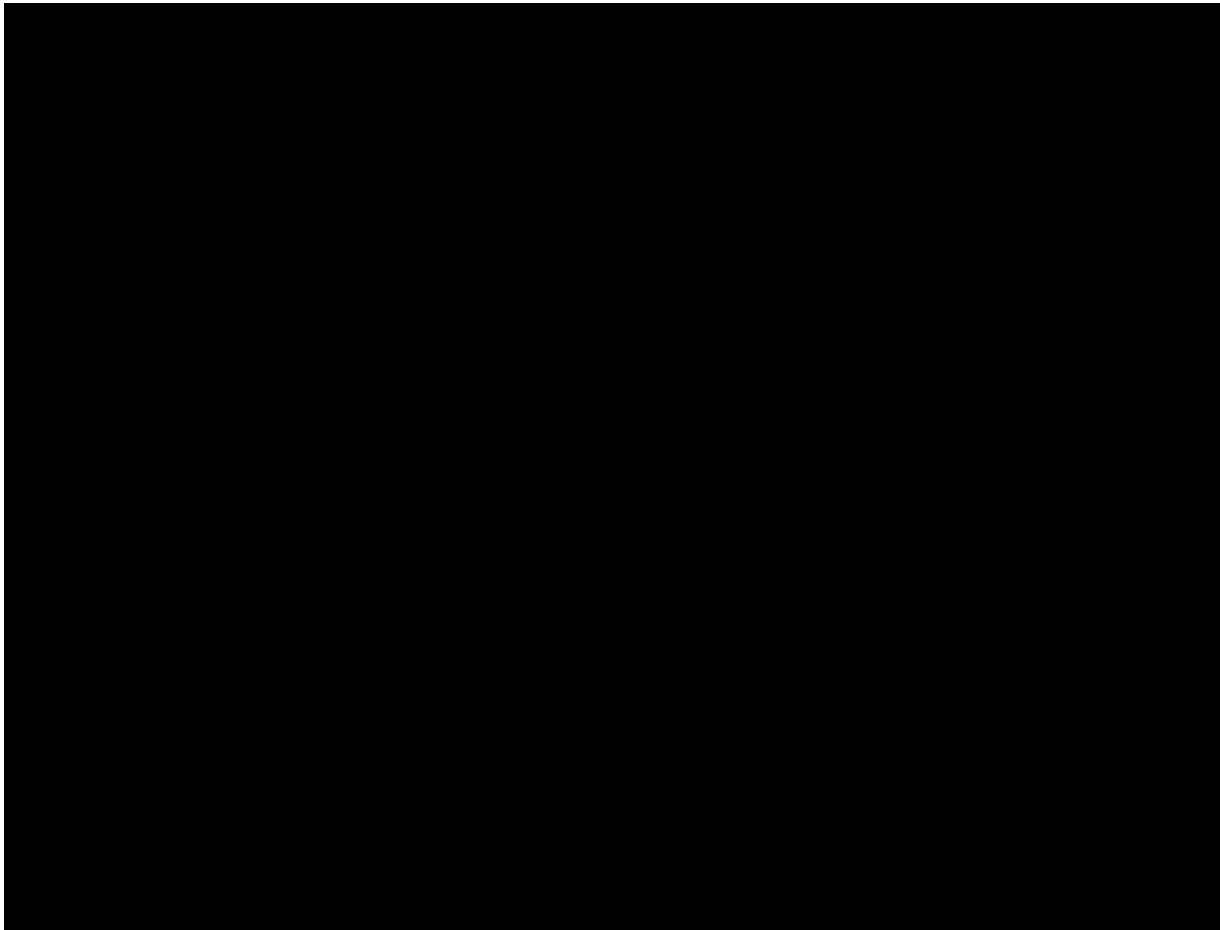
SIRO

- A 11.20 As set out in Section 3 of this Decision, SIRO is in the process of rolling out an FTTP network in certain locations in the State. SIRO reports that its FTTP network passed 360,000 premises as of Q4 2020.¹²²⁸
- A 11.21 While SIRO only operates at the wholesale level supplying a WLA-based VULA service, Vodafone is one of its retail partners (as well as being part-owner of SIRO), while other Access Seekers, including Pure Telecom, BT, Digiweb and Sky have signed wholesale access agreements with SIRO for the provision of WLA services.¹²²⁹ As shown in Table A11.3, SIRO is present at [REDACTED] EAs, with varying levels of premises coverage within these. Figure A11.5 below shows a map of SIRO's FTTP network:

¹²²⁸ ESB Annual Report 2020, at p.13. Available online at https://esb.ie/docs/default-source/investor-relations-documents/esb-annual-financial-results-2020.pdf?sfvrsn=12f907f0_2.

¹²²⁹ www.siro.ie

Figure A11.5: SIRO's Network Coverage as of Q4 2020 [REDACTED]



- A 11.22 In analysing the SIRO and Virgin Media networks, ComReg obtained maps and Eircode locations of the network assets of each such network, as well as figures on active and inactive subscriptions for each local network node.
- A 11.23 On the basis of its analysis, ComReg therefore concluded that it was not reasonable to define relevant geographic units on the basis of network assets, because these networks do not have ubiquitous national coverage, nor do they sufficiently relate to the network structures of other networks. For example, if the relevant geographic unit were defined on the basis of Virgin Media's network, substantial parts of the State may be excluded from the analysis. Alternatively, some means of accounting for areas of the State where Virgin Media is not present would have to be developed. In addition, Access Seekers which purchase FACO from Eircom also follow the Eircom EA topology, which therefore suggests that it is appropriate to use EAs as the relevant geographic unit.

NBI

A 11.24 Table A11.1 below outlines proposed NBI coverage in the IA over the 7-year lifespan of the project. ComReg notes there are 544,000 premises in the NBI rollout,¹²³⁰ but only [X [REDACTED] X] unique coordinates. The difference here covers situations where there are multiple units at a coordinate (e.g. apartment, office block), or where premises have both business and residential uses (e.g. B&B).

Table A11.1: Premises to be passed by NBI¹²³¹ [X[REDACTED]X]

NBP	Premises
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

A 11.25 Table A11.2 summarises the coverage of each network as of Q4 2020:

Table A11.2: Independent network coverage, Q4 2020 [X[PARTIALLY REDACTED]X]

	Coverage (premises passed)	% Total premises
Total Premises (postal addresses)¹²³²	2,273,306	
Eircom FNA	[REDACTED]	[REDACTED]
Eircom VDSL	[REDACTED]	[REDACTED]
Eircom FTTP	[REDACTED]	[REDACTED]
SIRO FTTP	[REDACTED]	[REDACTED]
Virgin Media CATV	946,500 ¹²³³	42%
NBI FTTP	[REDACTED]	[REDACTED]

¹²³⁰ <https://nbi.ie/rollout-plan/> ComReg notes that the NBI rollout is based on 'Delivery Points' as defined by Eircode.

¹²³¹ Initial rollout of NBI network was Q2 2020, with Year 1 ending at Q4 2020. NBI did not meet its 2020 rollout target, and has revised its 2021 rollout target downwards.

¹²³² The table above uses Eircode data to estimate the total number of premises by Exchange Area, based on 'postal addresses' as defined by Eircode. See Eircode Address Database Product Guide, Edition 2, Version 7: <https://www.eircode.ie/business/products-and-services>.

¹²³³ Liberty Global Q4 2020 Fixed Income Release, page 22. <https://www.libertyglobal.com/wp-content/uploads/2021/02/Virgin-Media-Fixed-Income-Q4-2020-Release.pdf>

Accounting for coverage of SPs using wholesale NG Broadband inputs

- A 11.26 SPs offer products falling within the Relevant FACO Product Markets arising from their purchase of upstream WLA/WCA inputs, either in selling FACO to other SPs (in the case of BT), or self-supplying FACO to provide Managed VoIP-based RFTS to their own end users. ComReg applies the MGA in carrying out the geographic market definition exercise. The MGA posits a hypothetical scenario in which regulation is not present on the Relevant FACO Markets, or on downstream RFTS (and related) markets. Regulation of the upstream WLA and WCA markets is taken into account.
- A 11.27 In the 2018 WLA/WCA Decision, ComReg designated Eircom with SMP in the Relevant WLA Market and in the Regional WCA Market. This requires Eircom to fulfil regulatory obligations, including requirements to provide access to a range of WLA and WCA products, services and associated facilities. In this context and, having regard to the MGA, SPs would likely be able to continue to operate in the Relevant FACO Markets, or in the RFTS and other retail markets using Eircom WLA inputs (VUA) or, in the Regional WCA Market, Eircom WCA inputs (Bitstream Plus), absent regulation of the Relevant FACO Markets. However, this will only be the case in EAs where Eircom VUA or Bitstream Plus, capable of delivering Managed VoIP, is available.
- A 11.28 SPs (typically larger SPs) making use of Eircom WLA inputs have invested in backhaul facilities to purchase VUA at a number of Eircom's EAs. Where EAs incur the costs of backhaul, they have the capacity to serve additional premises at addition unbundled EAs. As of Q4 2020, Eircom supplies Access Seekers with approximately¹²³⁴ 220,852 VUA lines, and 141,561 VDSL Bitstream lines.
- A 11.29 ComReg also notes that SIRO provides a small, but growing, number of WLA inputs to third parties on a commercial and unregulated basis. As of Q4 2020, SIRO provided [~~]¹²³⁵ VULA subscriptions, of which the significant majority [~~] were provided to Vodafone (as noted above, Vodafone is one party to the JV that owns SIRO).~~~~
- A 11.30 Access Seekers use WLA and WCA inputs to provide a range of downstream wholesale and/or retail products, including but not limited to retail broadband and RFTS. LLU-based WLA is in decline, with Access Seekers utilising NG VUA products offered by Eircom or SIRO (where available) instead. As set out above, ComReg is of the view that Managed VoIP can only be delivered over NG Broadband inputs, given the absence of appropriate bandwidth, speed, capacity, and QoS parameters on FNA-based broadband.

¹²³⁴ ComReg QKDR Q4 2020.

¹²³⁵ Less than 85,000.

A 11.31 ComReg's view is that SPs purchasing Eircom WLA inputs are well accustomed to, and understand, Eircom's network topology. Eircom is obliged to provide Access Seekers with information pursuant to various obligations imposed on it by ComReg, such as via its Access Reference Offer,¹²³⁶ and its Unified Gateway.

Conclusion on Relevant Unit for Geographic Assessment

A 11.32 Having regard to best practice guidance on geographic units, and having considered the above factors, including the presence of other networks, and SPs' use of upstream WLA and WCA inputs, ComReg's position is that Eircom EAs are the appropriate unit for geographic market assessment on the Relevant FACO Markets.

Analysis of Geographic Criterion

A 11.33 As set out in detail at Section 5 above,¹²³⁷ ComReg carried out its analysis of the boundaries of the Relevant FACO Geographic Markets applying a determinative criterion, the presence of wholesale NG Broadband networks capable of delivering Managed VoIP at a minimum of 80% of premises in an EA, on either a standalone or a cumulative basis.

A 11.34 ComReg has altered its approach to counting premises coverage, for the reasons set out at paragraphs 5.553 to 5.557 above, and sets out below the steps it takes to calculate wholesale NG Broadband (i.e. SIRO, Eircom FTTH, or Eircom VDSL) coverage at an EA. Steps 1 to 3 assign EAs to a Relevant FACO Market if it is possible to do so, based on premises that are fully mapped. Subsequent steps also take into account premises which are not fully mapped.

A 11.35 **Step 1:** Count EAs where SIRO is not present. Identify premises passed by counting premises passed by Eircom FTTH and Eircom VDSL, and subtracting any premises passed by both Eircom FTTH and Eircom VDSL, based on Eircom ARD ID premises identifiers. Assign EAs to the Urban FACO Markets or the Regional FACO Markets as appropriate, based on whether the 80% threshold is passed or not.

A 11.36 **Step 2:** Count EAs where SIRO is present. Based on Eircode data (since ARD ID are not used by SIRO), identify premises passed by Eircom FTTH, Eircom VDSL, or SIRO, subtracting premises passed by more than one technology. Assign EAs to the Urban FACO Markets if the 80% threshold is passed by the coverage of a single technology. All other EAs continue to Step 3.

¹²³⁶ Such Reference Offers are required in markets where ComReg has designated Eircom with SMP and imposed related transparency obligations. Section 7 and Section 12 of the 2018 WLA/WCA Decision contain obligations regarding the publication and maintenance by Eircom of Reference Offers in both the Relevant WLA Market and Regional WCA Market.

¹²³⁷ At paragraph 5.448 onwards.

- A 11.37 **Step 3:** Repeat Step 2, but in this instance, assign EAs to the Urban FACO Markets if the 80% threshold is passed by the cumulative coverage of more than one technology, having accounted for any overlaps in coverage at premises. All other EAs continue to Step 4.
- A 11.38 **Step 4:** For Eircom lines which are not mapped to an Eircode, construct two hypothetical scenarios. Scenario 1 assumes that all of these lines serve premises that are not already served by wholesale NG Broadband. Thus, coverage at an EA will increase by the full amount of these unmapped lines. Scenario 2 assumes, according to a set of logical inferences, that as many of these lines as possible overlap to premises that are already served by wholesale NG Broadband. Thus, coverage at an EA will not increase at all, or will only increase by the amount of unmapped lines that cannot be assigned to overlap a premises, according to the logical inferences (for example, an unmapped Eircom VDSL line cannot be assigned to overlap a premises served by a mapped Eircom VDSL line, but can be assigned to overlap a premises served by a SIRO line).
- Where an EA fails to meet the 80% threshold under Scenarios 1 and 2, it is assigned to the Regional FACO Market as, even under the most optimistic hypothetical coverage case, the threshold is not met.
 - Where an EA exceeds the 80% threshold under Scenarios 1 and 2, it is assigned to the Urban FACO Market as, even under the most pessimistic hypothetical coverage case, the threshold is met.
 - Where an EA exceeds the 80% threshold under Scenario 1, but fails under Scenario 2, it is brought forward to Step 5.
- A 11.39 **Step 5:** At this stage, an EA can only be assigned to the Urban or Regional FACO Market by making assumptions about the unmapped lines at that EA. Of a total of 1,202 EAs, eight EAs were assessed at Step 5. The remaining 1,194 EAs were all successfully assigned to a market based on mapped lines only, or based on both mapped lines and unmapped lines, where the assumption underpinning the unmapped lines did not alter whether the EA met the coverage threshold.
- A 11.40 At these eight EAs, ComReg assigned the unmapped lines in the same ratio as the mapped lines to premises which were overlapped, and premises which were not overlapped. Thus, if counting mapped lines only, 66% of premises were overlapped and 33% were not, the unmapped lines were assigned in the same ratio. Carrying out this exercise resulted in four EAs being assigned to the Urban FACO Markets, and four EAs being assigned to the Regional FACO Markets.

A 11.41 Thus, the coverage threshold may be satisfied where a single wholesale NG Broadband network is capable of delivering Managed VoIP at a minimum of 80% of premises in an EA, or by the non-overlapping coverage of two or more wholesale NG Broadband networks. This information indicates that Eircom likely faces greater existing and potential competition in a number of EAs arising from the presence of SPs capable of generating effective direct or indirect constraints (and is thus suggestive of sufficiently differing competitive conditions across certain EAs) over wholesale NG Broadband inputs.

A 11.42 While ComReg has included the ability to provide, and the current provision of, RFTS (or the wholesale equivalent) on the basis of the purchase of wholesale NG Broadband inputs (including SIRO) in its analysis (on the basis of indirect retail constraints), SIRO itself is not active on the Relevant FACO Markets, and therefore has no market share. ComReg will continue to seek information from SIRO (and other SPs) regarding network footprint and active lines. The SIRO network, at the end of Q4 2020, has passed 360,000 premises. The SIRO network is present in [REDACTED] Eircom EAs, with a total network coverage of [REDACTED] across total premises in these respective EAs:

Table A11.3: SIRO Network Coverage by EA Q4 2020 [REDACTED]

SIRO Network Coverage	< 25%	25-50%	50-75%	>75%
Number of EAs	[REDACTED] ¹²³⁸	[REDACTED] ¹²³⁹	[REDACTED] ¹²⁴⁰	[REDACTED] ¹²⁴¹

A 11.43 Table A11.4 below outlines EA presence by the largest RFTS Access Seekers, including EAs where they purchase from Eircom and SIRO.

Table A11.4: EA presence by wholesale NG Broadband Access Seeker SPs, Q4 2020 [PARTIALLY REDACTED]

	Eircom Wholesale inputs (WLA/WCA)	SIRO WLA	Total EAs where SP present ¹²⁴²
BT/Sky	[REDACTED]	[REDACTED]	[REDACTED]
Digiweb	[REDACTED]	[REDACTED]	[REDACTED]
Pure Telecom	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]
Total Eircom EAs	1,202		

¹²³⁸ Less than 100.

¹²³⁹ Less than 40.

¹²⁴⁰ Less than 60.

¹²⁴¹ Less than 20.

¹²⁴² Note that there is overlap by each of these networks, e.g. an SP may be interconnected within Eircom at an EA but also have SIRO availability at the EA through interconnection with SIRO there or elsewhere.

A 11.44 For the purposes of the geographic market assessment, in applying the 80% NG Broadband coverage criterion, as outlined at paragraph A 11.33, the percentage coverage is derived by dividing total premises in an EA covered by NG Broadband by the total number of premises in an EA.

Conclusion on Analysis of Geographic Criteria

A 11.45 Having regard to the above analysis, ComReg applies the 80% wholesale NG Broadband criterion to EAs, for consideration as to whether there are sufficient differences in competitive conditions between EAs, which are set out at paragraph A 11.33 above.

Assessment of Differences in Competitive Conditions in the Relevant FACO Markets using the Geographic Criteria

- A 11.46 ComReg has obtained information from SPs relating to:
- (a) Network maps and location of active voice/NG Broadband lines; and
 - (b) Network coverage.
- A 11.47 ComReg takes Eircom's EA map as the basis for the assessment, overlaying Eircom's VDSL and FTTP networks, and SIRO's WLA network coverage onto this map. Using the inputs described above, ComReg applied the 80% wholesale NG Broadband criterion in paragraph A 11.33 above to each EA in the State.
- A 11.48 When looking at NG Broadband coverage, ComReg looks at the number of unique premises with NG Broadband availability, as there is some overlap between Eircom VDSL and FTTP networks, and SIRO's FTTP network, such that adding together all the networks may represent double counting if a premises is connected to more than one NG Broadband network.
- A 11.49 The data set out at Table A11.5 below are suggestive that there are likely to be differing competitive conditions across two separate geographic areas – as evidence from differences in coverage of NG Broadband which would allow Access Seekers and other SPs to self-supply Managed VoIP-based RFTS absent FACO regulation. This suggests that in those areas where there are lower levels of NG Broadband, there may exist a barrier to entry for Access Seekers to provide RFTS absent FACO regulation. There are also variations in the number of SPs present; in the Urban FACO Market (407 EAs), indicated below, 258 EAs have 5 SPs present at the EA in terms of WLA/WCA or own network (Virgin Media), with 136 EAs having 6 SPs present. Conversely, in the Regional FACO Market (795 EAs), 128 EAs have only 2 SPs present and only 12 having 6 SPs present.

A 11.50 As shown in the table below, the Urban FACO market, comprising those EAs with at least 80% NG Broadband availability for Access Seekers, includes 69% of premises, 74% of total RFTS lines (including all SPs in the market and all platforms (FNA and Managed VoIP), and 72% of FNA FACO lines (i.e. SB-WLR and WLV).

Table A11.5: Differences in competitive conditions by EA, applying 80% coverage criterion, Q4 2020

FACO Markets	No. of EAs	Premises in EAs	% Total premises	Total RFTS lines in EAs	% Total RFTS lines	Total SB-WLR lines in EAs ¹²⁴³	% Total FACO (SB-WLR) lines
Urban	407	1,573,582	69%	1,076,521	74%	672,364	72%
Regional	795	699,724	31%	376,165	26%	259,965	28%
Total	1,202	2,273,306	100%	1,452,686	100%	932,329	100%

A 11.51 Table A11.6 below outlines the market shares both nationally under regulation and in each of the Urban FACO Markets and Regional FACO Markets, the former under regulation and the latter absent regulation. Market shares are based on current (Q4 2019) FACO lines by SP under the assumption that, where WLA/WCA is available at those SB-WLR lines, such FACO lines (672,364 lines in the Urban FACO market from Table A11.5 above) can be switched to self-supply of Managed VoIP, absent FACO regulation. Eircom's market share is highest in the Regional FACO Market as competitive constraints are lower compared to the Urban FACO Market as there are fewer SPs by EA and the extent of NG Broadband availability is lower, constraining Access Seeker SPs' ability to self-supply Managed VoIP absent FACO regulation. In EAs where a given Access Seeker SP is not present (in terms of buying or ability to buy WLA/WCA from Eircom/SIRO) at an EA, it is assumed that their respective FACO-based RFTS reverts to Eircom retail.

Table A11.6: Market shares in the Urban and Regional FACO Markets, absent FACO regulation, Q4 2020 [XREDACTEDX]

	National RFTS Market Share, <u>with regulation</u> in the FACO Market ¹²⁴⁴	Market Shares Urban FACO Market	Market Shares Regional FACO Market
BT/Sky	████	████	████
Digiweb	████	████	████
Eircom	████	████	████
Pure Telecom	██	████	████

¹²⁴³ Including both merchant market SB-WLR and Eircom self-supply readily convertible to SB-WLR.

¹²⁴⁴ This is measured in active RFTS lines; the shares vary slightly from ComReg's QKDR (Q4 2019, Figure 2.2.3 page 19) as the latter measured RFTS market shares in terms of subscriptions and in some cases a subscription (account) will have multiple RFTS lines.

Virgin Media	██████	██████	██████
Vodafone	██████	██████	██████
OAOs	██████	██████	██████
Total	100%	100%	100%

A 11.52 Table A11.7 below shows the breakdown of NG Broadband network coverage across the Urban FACO Markets and Regional FACO Markets, including the prospective supply in the NBP Intervention Area ('IA') rollout over the 7-year rollout period.

Table A11.7: Urban and Regional FACO Market EAs and breakdown of NG Broadband networks, Q4 2020 [PARTIALLY REDACTED]

FACO Market	EAs	Premises in		
		NBP IA	SIRO	Eircom VDSL
Urban	407	██████	██████	██████
Regional	795	██████	██████	██████
Total	1,202	██████	██████	██████

A 11.53 Based on ComReg's assessment, ComReg therefore groups EAs into two Relevant FACO Geographic Market areas:

- (a) The Urban FACO Markets: the 407 EAs where the relevant criterion has been met; and
- (b) The Regional FACO Markets: the 795 EAs where the relevant criterion has not been met.

A 11.54 It is important at this stage to note that the Urban FACO Geographic Markets and the Regional FACO Geographic Markets both encompass two separate product markets: the Low-Level FACO Market, and the High-Level FACO Market. Thus, there are two Urban FACO Markets, and two Regional FACO Markets, making four Relevant FACO Markets in total. As set out at Sections 7 and 8 above, conditions of competition are similar on the two Urban FACO Markets, and conditions of competition are also similar on the two Regional FACO Markets, arising from the presence of the same bottleneck on each market, that is, access to Eircom's FNA network in the comparative absence of NG Broadband networks capable of delivering Managed VoIP.

A 11.55 The list of EA codes that fall into the Urban FACO Markets and Regional FACO Markets are set out in Annex: 12 of this Decision.

Premises without 80% NG Broadband

A 11.56 In determining the Relevant FACO Geographic Market areas, ComReg has considered the distribution of wholesale NG Broadband coverage across all 1,202 EAs. Within the 407 EAs that form the Urban FACO Markets, some premises may not have wholesale NG Broadband coverage, as the criterion requires that at least 80% of premises in an EA have wholesale NG Broadband coverage. This implies that a maximum of 20% of premises of EAs in the Urban FACO Markets may not have wholesale NG Broadband coverage. In some cases, EAs in densely populated urban areas have close to 100% coverage, as these were areas to be first served with Eircom's VDSL network. As some EAs in the Urban FACO Markets do not have full (i.e. 100%) wholesale NG Broadband coverage, this means that premises served by FACO lines (SB-WLR/WLV) may not be contestable in the sense that, absent regulation, Access Seekers cannot readily serve these premises with Managed VoIP-based RFTS, pending wholesale NG Broadband network rollout (from the NBI or expansion by Eircom or SIRO). The extent of these non-contestable lines is shown in Table A11.8, and absent a unique identifier (such as an Eircode) for NG enabled premises and premises with FACO lines, ComReg estimates this to be a maximum of 15,130 FACO lines, based on applying the percentage of premises in each EA with between 80% and 100% NG Broadband availability to the total FACO lines in the EA. For example, if an EA had 85% NG Broadband availability (and hence falls into the Urban FACO Market), it follows the 15% of premises do not have NG Broadband availability and this percentage is applied to total FACO lines in that EA, assuming a one-to-one relationship between lines and premises. ComReg is in the process of gathering further granular data on FACO lines (which has a dependency on SPs to provide accurate geo-location data) which will facilitate a potentially more accurate measure of non-contestable FACO lines in these areas.

Table A11.8: Urban and Regional FACO Markets NG Broadband coverage, Q4 2020
 [PARTIALLY REDACTED]

FACO Market	EAs	Premises	SB-WLR lines ¹²⁴⁵	SB-WLR lines with no NG Broadband coverage (estimate)
Urban	407	1,573,582	672,364	
Regional	795	699,724	259,965	
Total	1,202	2,273,306	932,329	

¹²⁴⁵ Including both merchant market SB-WLR and Eircom self-supply readily convertible to SB-WLR. However, As set out at paragraphs 2.49 to 2.51 above, due to Eircom management information system difficulties, more recent data for WLV are currently unavailable so are not included in SB-WLR figures.

A 11.57 Table A11.9 shows the distribution of wholesale NG Broadband coverage for the EAs in the Urban FACO Markets, with a small number having exactly 80% coverage and a higher number of densely populated EAs having 100% coverage. For example, 83 EAs have between 81% and 85% wholesale NG Broadband coverage, with a total of 212,561 premises in these EAs, and accordingly, 24,959 without wholesale NG Broadband availability. If the EA had full NG Broadband coverage, then all of its 322,940 premises would have wholesale NG Broadband. It follows that in these EAs, 59 FACO lines do not have wholesale NG Broadband available such that it would permit Access Seeker SPs to provide Managed VoIP-based RFTS.

Table A11.9: Distribution of wholesale NG Broadband coverage in Urban FACO Markets, Q4 2020 [REDACTED]

Distribution of >80% coverage among Urban EAs	EAs	Premises	Premises without NG Broadband coverage	SB-WLR lines ¹²⁴⁶	SB-WLR lines without NG Broadband coverage (estimate)
80%	█	██████	██████	██████	██████
81% to 85%	█	██████	██████	██████	██████
86% to 90%	█	██████	██████	██████	██████
91% to 95%	█	██████	██████	██████	██████
96% to 99%	█	██████	██████	██████	██████
100%	█	██████	██	██████	█
Total	██████	██████	██████	██████	██████

A 11.58 The distribution of NG Broadband coverage for the Regional FACO market is given in Table A11.10 below. A low number of premises have up to 30% wholesale NG Broadband coverage, with higher numbers having 60% to 70% wholesale NG Broadband coverage.

Table A11.10: Distribution of wholesale NG Broadband coverage in Regional FACO Markets, Q4 2020 [REDACTED]

Distribution of <80% coverage among Regional EAs	EAs	Premises	Premises without NG Broadband coverage	SB-WLR lines
0-30%	█	██████	██████	██████
31-40%	█	██████	██████	██████
41-50%	█	██████	██████	██████
51-60%	█	██████	██████	██████
61-70%	█	██████	██████	██████
71-79%	█	██████	██████	██████
Total	██████	██████	██████	██████

¹²⁴⁶ Ibid.

Overall Conclusion on FACO Geographic Market Assessment

- A 11.59 Having regard to the analysis above, ComReg's overall conclusion is that there are likely to be four separate Relevant FACO Markets, encompassing two product markets and two geographic markets:
- (a) Urban LL-FACO Geographic Market;
 - (b) Urban HL-FACO Geographic Market;
 - (c) Regional LL-FACO Geographic Market; and
 - (d) Regional HL-FACO Geographic Market.
- A 11.60 The Urban LL-FACO Geographic Market and the Urban HL-FACO Geographic Market are collectively referred to as the '**Urban FACO Geographic Markets**.' Similarly, the Regional LL-FACO Geographic Market and the Regional HL-FACO Geographic Market are collectively referred to as the '**Regional FACO Geographic Markets**.'
- A 11.61 ComReg defines two separate Relevant FACO Geographic Markets, namely:
- (a) The **Urban FACO Geographic Markets**, being those 407 EAs where the coverage criterion has been met; and
 - (b) The **Regional FACO Geographic Markets**, being those 795 EAs where the coverage criterion has not been met.

Annex: 12 Boundaries of the Urban FACO Markets and Regional FACO Markets

A 12.1 In Annex: 11 ComReg set out its proposed approach to geographic market definition in the Relevant FACO Markets. Based on ComReg's assessment in Annex: 11, it is proposed to group EAs into two areas:

- The **Urban FACO Markets**: EAs where the 80% coverage criterion has been met; and
- The **Regional FACO Markets**: EAs where the 80% coverage criterion has not been met.

A 12.2 The following 407 EAs are contained within the Urban FACO Market:

ABE, ABX, ABY, ACY, ADR, ADW, AGN, AGY, AKW, ALW, ANR, ARD, ARL, ART, ARW, ASM, ATD, ATH, ATY, AUV, BAI, BAK, BAO, BAR, BAX, BBH, BBN, BBO, BCR, BDT, BDY, BFF, BFR, BGS, BGT, BGV, BHN, BIR, BIT, BKD, BLA, BLB, BLC, BLD, BLI, BLP, BLR, BMN, BNC, BND, BNN, BNZ, BOF, BOK, BOM, BON, BPO, BRE, BRF, BRI, BRN, BSE, BSN, BSZ, BTN, BTR, BTY, BUA, BVN, BYB, BYD, BYE, BYN, BYS, CAB, CAE, CAV, CBA, CBM, CBR, CCE, CCH, CCL, CCR, CCS, CDA, CDH, CDN, CDT, CDU, CEE, CEL, CFO, CGA, CGH, CGI, CGL, CGM, CGY, CHD, CHF, CHH, CHR, CHT, CHW, CID, CKA, CKC, CKH, CKN, CKY, CLA, CLD, CLG, CLK, CLM, CLR, CLT, CLX, CLY, CMS, CNA, CNE, CNN, CNP, CNY, COS, COV, CRD, CRE, CRI, CRL, CRO, CRT, CRV, CRW, CRY, CSA, CSL, CSR, CSW, CSY, CTB, CTH, CTW, CTY, CUR, CUS, CVW, CWD, CWJ, CWL, CYG, DAH, DBC, DBT, DDK, DDM, DEZ, DFY, DGE, DGL, DGS, DLA, DLK, DLO, DLR, DMO, DNR, DNU, DNV, DSN, DVA, DYX, EDY, EFD, EKK, EKY, ENS, ERL, ETY, FBK, FBO, FDR, FMY, FNG, FNT, FOX, FRB, GAL, GAR, GBY, GCE, GEY, GMR, GNK, GNO, GRS, GRT, GRY, HBN, HPL, HYD, INV, INY, JNN, JTN, KAP, KBK, KBN, KBS, KBY, KCW, KDN, KDO, KGD, KGN, KHN, KIA, KIC, KIK, KIL, KIM, KLC, KLE, KLK, KLM, KLN, KLO, KMC, KME, KMO, KMS, KMU, KMY, KNY, KOK, KRG, KRH, KSL, KTK, LBO, LED, LEG, LEX, LGA, LGB, LIF, LIS, LKD, LKY, LMK, LND, LOD, LPT, LTH, LWD, LYR, MAH, MBC, MBG, MBT, MBY, MCN, MDN, MDV, MEE, MER, MGN, MGR, MHZ, MLE, MLH, MLW, MMK, MMT, MNK, MNS, MOT, MRO, MRW, MRY, MSK, MSN, MTK, MUC, MUF, MUK, MVN, MVW, MYN, NAL, NAS, NCM, NHL, NMK, NMN, NNH, NOF, NRS, NRY, NTF, NUT, NWB, NWL, NWT, OGO, OGT, OLD, OLE, OME, OMH, PAL, PAN, PGS, PHB, PKW, PLL, PLT, PME, PMK, PRS, PRT, PUA, PWL, QKR, QUN, RAY, RBE, RBK, RBT, RCL, RCM, RCR, RIS, RLC, RLE, RLH, RMS, RNG, ROC, RSA, RSC, RSL, RSN, RTD, RTH,

RTN, RUS, RVD, RVN, RWH, SAN, SAP, SBE, SFN, SGO, SHL, SHN, SHP, SKB, SKL, SKS, SLA, SLS, SND, SPL, SRD, SRL, STM, STN, TCY, TFN, THS, TLH, TLM, TLN, TLT, TLW, TMD, TME, TMR, TOG, TPR, TPY, TRE, TRM, TRR, TSW, TUM, TWV, TYC, UGM, VGA, WAL, WGT, WHI, WIS, WLW, WPK, WRD, WST, WTB, WTD, WXA, WXD, YHL.

A 12.3 The following 795 EAs are contained within the Regional FACO Market:

ABK, ABP, ACE, ACF, ACL, ADA, ADE, ADG, ADH, ADI, ADM, ADN, ADP, ADT, ADY, AFD, AFE, AFN, AGA, AGH, AGL, AHA, AHC, AHH, AHM, AHO, AHS, ALD, ALE, ALS, AME, ANA, ANN, ANY, ARA, ARC, ARN, ASD, ASG, ASN, ASQ, ATE, ATL, ATN, ATS, AUG, AVA, AVO, AYL, BAA, BAD, BAE, BAH, BAL, BAM, BAN, BAS, BAY, BBA, BBE, BBS, BBT, BBY, BCA, BCE, BCG, BCH, BCK, BCL, BCN, BCS, BCY, BDA, BDB, BDN, BEE, BEG, BEN, BER, BES, BEY, BFD, BFN, BFO, BFT, BGA, BGE, BGH, BGL, BGN, BGR, BGW, BGY, BHE, BHG, BHH, BHL, BHM, BHR, BHS, BHT, BHY, BIB, BIG, BIN, BIY, BJD, BKA, BKG, BKN, BKR, BKS, BKT, BLE, BLF, BLG, BLH, BLL, BLN, BLO, BLS, BLT, BLV, BLX, BLY, BMA, BMD, BME, BMH, BML, BMO, BMT, BMY, BNA, BNE, BNG, BNR, BNS, BNY, BOH, BOL, BOY, BPC, BPN, BRA, BRD, BRH, BRM, BRS, BRT, BRU, BRY, BSA, BSB, BSH, BSO, BSP, BTA, BTB, BTE, BTH, BTM, BTS, BTT, BTW, BUB, BUD, BUN, BUO, BUT, BUY, BVR, BVT, BWG, BWM, BWN, BWR, BXG, BYA, BYC, BYF, BYG, BYH, BYM, BYO, BYR, BYV, BYW, BYX, CAA, CAG, CAH, CAL, CAM, CAN, CAR, CAS, CAT, CAW, CAY, CBE, CBN, CBO, CBT, CBY, CCG, CCI, CCM, CDF, CDW, CEA, CEN, CER, CFA, CFD, CFG, CFL, CFN, CFY, CGB, CGE, CGG, CGN, CGS, CHA, CHE, CHG, CHL, CHX, CIG, CIL, CIM, CIN, CIS, CJN, CKE, CKO, CKS, CKW, CLB, CLC, CLE, CLH, CLL, CLN, CLO, CLP, CLS, CLU, CLW, CMA, CMK, CML, CMN, CMO, CMP, CMR, CMY, CNB, CNG, CNR, CNS, CNV, CNW, CNX, COG, COL, CON, COO, COT, COU, COY, CPH, CPL, CPM, CPN, CPO, CPT, CPW, CRA, CRC, CRF, CRK, CRM, CRN, CRR, CRX, CSB, CSE, CSH, CSJ, CSK, CSO, CSP, CSS, CTD, CTE, CTL, CTN, CUA, CUB, CUE, CUX, CVN, CWN, CWT, CYA, CYE, CYW, DAP, DBG, DBN, DBR, DCE, DCK, DCL, DCN, DDA, DDT, DDY, DGH, DGN, DGY, DHA, DHL, DHR, DKE, DKN, DLE, DLG, DMD, DME, DMR, DMW, DNA, DND, DNM, DNN, DNX, DOM, DON, DRA, DRB, DRH, DRI, DRL, DRM, DRS, DRW, DUK, DUN, DUR, DUW, DVN, DWT, ECT, EFI, EFN, EMJ, EMN, EMV, EMY, EPT, ERS, ESK, ETN, ETW, FBD, FCA, FEH, FES, FET, FFD, FFO, FGE, FGH, FHD, FHN, FHX, FIN, FKE, FLH, FMH, FML, FMT, FMX, FNA, FNS, FPK, FRS, FVA, FWN, FXD, FXH, FYB, GBE, GBH, GCF, GCK, GCR, GDH, GDN, GGF, GHL, GIL, GLA, GLC, GLF, GLI, GLN, GLO, GLS, GME, GMH, GMI, GMY, GNA, GNE, GNG, GNH, GNY, GRD, GRE, GSL, GSN, GSX, GTA, GTN, GTS, GUE, GUN, GVE, GWH, GWN, HCS, HCX, HDD, HFD, HFT, HKN, HLP, HMT, HOB, HOD, HPD, HRD, HSQ, IBF, IBM, IGE, IGH, IHR, INC, INE, ING, INH, INL, INM, INR, ISK, ISL, ISN, JKN, JSN, JWJ, KAE, KAS, KBD, KBE, KCE, KCH, KCK, KCL, KCN, KCO, KCR, KCY, KDH,

KDK, KDT, KDY, KEH, KEK, KEL, KEN, KEY, KFA, KFE, KGL, KGT, KGV, KGX, KHA, KHE, KIH, KIN, KIR, KKE, KKL, KKY, KLA, KLB, KLG, KLH, KLL, KLR, KLS, KLU, KLY, KMA, KMD, KMG, KMK, KML, KMN, KMT, KMW, KNA, KNC, KND, KNE, KNF, KNG, KNK, KNL, KNM, KNT, KON, KOR, KQY, KRA, KRM, KRN, KRR, KRY, KSA, KSN, KSV, KTA, KTH, KTM, KTN, KTR, KTX, KUC, KVA, KVN, KWH, KYG, KYK, LAG, LAN, LAY, LBN, LBU, LCN, LCY, LDA, LDN, LEP, LET, LGN, LGW, LHA, LHY, LKR, LMB, LME, LMW, LNE, LNF, LNH, LNW, LNY, LOS, LPN, LRH, LRN, LSL, LSN, LSR, LTM, LTN, LTW, LVA, LVH, LVN, LWN, MAL, MAM, MAN, MBS, MBW, MCH, MCM, MEN, MEX, MFD, MFM, MFR, MGE, MGL, MHL, MHW, MIK, MIL, MLA, MLD, MLF, MLN, MNB, MNE, MNH, MNT, MNU, MON, MOY, MPT, MRM, MRN, MST, MTH, MTP, MUG, MUN, MUS, MVA, MVE, MVT, MWY, MYL, MYV, NAN, NAR, NBE, NBS, NCE, NCN, NCV, NEP, NGO, NIN, NMT, NOR, NPT, NRT, NSM, NTC, NTW, NWN, OBB, OLA, OLT, ORM, OWN, OYG, PGN, PGO, PKY, PML, PNE, PPR, PRE, PRK, PRP, PSG, PSX, PTN, PTW, PWC, PWN, QPT, QVE, RAN, RCH, RCN, RCS, RCY, RDE, RDM, RDS, RFN, RFO, RGN, RHS, RIP, RIV, RKE, RKY, RME, RMK, RMN, RMO, RMT, RNL, RNV, ROK, ROM, ROT, RPT, RPY, RRN, RRX, RSK, RSM, RSP, RST, RSY, RTO, RUN, RUY, RVK, RVY, RWD, RWN, RWR, RYN, RYX, SBH, SBK, SBR, SBY, SCF, SCK, SCL, SCN, SCT, SGH, SGN, SHE, SHR, SHY, SIL, SJR, SKN, SLE, SML, SNB, SNH, SNM, SNO, SON, STD, STH, STJ, STY, SWD, TAA, TAN, TBD, TBL, TBT, TCN, TDY, TEY, TFA, TGN, TGR, THY, TLA, TLE, TLP, TLR, TML, TMN, TMO, TMY, TNE, TNH, TOE, TOO, TOR, TOW, TPN, TSK, TST, TTH, TTN, TUR, TUX, TVN, URL, VIS, VMT, VTY, WAP, WFA, WFD, WGL, WKW, WLN, WMN, WOL, WTG, WVE.

Annex: 13 Respondents' Submissions

- A 13.1 Non-confidential versions of the Submissions made to ComReg by Respondents (Eircom (including a report prepared on its behalf by Copenhagen Economics), BT Ireland, Vodafone, ALTO, and Sky Ireland) are published alongside this Decision as ComReg Document 21/65b.

Non-confidential

Annex: 14 FACO Decision Instrument

1 STATUTORY POWERS GIVING RISE TO THIS DECISION INSTRUMENT

1.1 This Decision Instrument (“**Decision Instrument**”) is made by the Commission for Communications Regulation (“**ComReg**”):

- (i) Pursuant to and having had regard to Sections 10 and 12 of the Communications Regulation Act;
- (ii) Pursuant to and having regard to the EECC;
- (iii) Pursuant to and having had regard to Regulation 6(1) of the Access Regulations and Regulation 16 of the Framework Regulations;
- (iv) Having, pursuant to Section 13 of the Communications Regulation Act, where applicable, complied with Ministerial Policy Directions;
- (v) Having taken the utmost account of the 2020 Recommendation and the SMP Guidelines;
- (vi) Having had regard to the analysis and reasoning set out in ComReg Document 20/46;
- (vii) Having, in accordance with Regulation 12(3) of the Framework Regulations, published the text of the proposed measure and given reasons for it, including information as to which of ComReg’s statutory powers gives rise to the measure, in ComReg Document 20/46;
- (viii) Having, in accordance with Regulation 12(4) of the Framework Regulations, considered the representations received in response to ComReg Document 20/46;
- (ix) Having consulted with the Competition and Consumer Protection Commission pursuant to Regulation 27 of the Framework Regulations and Article 67 of the EECC;
- (x) Having notified the draft measure and the reasoning on which the measure is based to the European Commission, BEREC and the national regulatory authorities in other EU Member States in accordance with Regulation 13 of the Framework Regulations and Article 32 of the EECC and having taken the utmost account, pursuant to Regulation 13(6) of the Framework Regulations, of any comments made by the European Commission, BEREC and any national regulatory authority in another EU Member State;
- (xi) Pursuant to Regulations 25, 26 and 27 of the Framework Regulations;
- (xii) Pursuant to Regulation 8 of the Access Regulations;
- (xiii) Pursuant to Regulations 9, 10, 11, 12, and 13 of the Access Regulations; and
- (xiv) Having regard to the analysis and reasons set out in ComReg Decision **DXX/XX [Final Decision]**.

- 1.2 This Decision Instrument shall, as and where required, be construed consistently with and in light of the Response to Consultation and Final Decision, ComReg **Decision DXX/XX**.
- 1.3 To the extent that there is any conflict between a decision instrument dated prior to the Effective Date and this Decision Instrument, this Decision Instrument shall prevail.

PART I - GENERAL PROVISIONS

2 DEFINITIONS

- 2.1 In this Decision Instrument, unless the context otherwise suggests:

“Access” shall have the same meaning as under Regulation 2 of the Access Regulations;

“Access Network Model Consultation” means ComReg Document No. 20/101 entitled “Regulated Wholesale Fixed Access Charges Review of the Access Network Model and Specification of the Price Control for Public Switched Telephone Network Wholesale Line Rental, dated 22 October 2020;

“Access Path(s)” means the Physical Transmission Path(s) between the line-card or equivalent in the Exchange or RSU to the NTP or NTU;

“Access Regulations” means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011), as may be amended from time to time or replaced with equivalent effect;

“Address Reference Database” or **“ARD ID”** is a unique number used by Eircom to identify each address in Ireland.

“Aggregation Node” means a network concentration point for Access Paths;

“Ancillary Services on SB-WLR” means the ancillary services set out in section 4.2 of the document entitled “open eir Single Billing through Wholesale Line Rental Product Description” (version 3.0, dated 12 June 2017) as may be amended from time to time and published on Eircom’s wholesale website, insofar as they relate to the Relevant Regional FACO Markets in accordance with the obligations set out in this Decision Instrument and also include Connection Charges;

“Associated Facilities” shall have the same meaning as under Regulation 2 of the Framework Regulations;

“Authorisation Regulations” means the European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011 (S.I. No. 335 of 2011), as may be amended from time to time or replaced with equivalent effect;

“BEREC” means the Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EU) 2018/1971 of the European Parliament and of the Council of 11 December 2018 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Agency for Support for BEREC (BEREC Office), amending Regulation (EU) 2015/2120 and repealing Regulation (EC) No 1211/2009;

“Bitstream” means a wholesale product which consists of an Access Path to the End User premises and transmission of data at various bandwidths to a defined set of Points of Handover;

“CATV” refers to the provision of broadband by means of a cable access TV network which runs on the Data Over Cable Service Interface Specification (DOCSIS) 3.0 standard or higher;

“Combined SB-WLR and NGA Order” means a provisioning order for both SB- WLR and either Next Generation Bitstream or VUA;

“Communications Regulation Act” means the Communications Regulation Act 2002 (No. 20 of 2002), as amended;

“ComReg” means the Commission for Communications Regulation, established under Section 6 of the Communications Regulation Act;

“ComReg Decision D08/10” means ComReg Document No. 10/67 entitled “Response to Consultation Document and Final Direction and Decision, Response to Consultation Document No. 09/75 and Final Direction and Decision: Accounting Separation and Cost Accounting Review of Eircom Limited”, dated 31 August 2010;

“ComReg Decision D05/11” means ComReg Document No. 11/45 entitled “Response to Consultation and Decision on the Introduction of Key Performance Indicators for Regulated Markets”, dated 29 June 2011;

“ComReg Decision D12/14” means ComReg Document No. D14/89 entitled Market Review: Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non-Residential Customers, ComReg Document 14/89, dated 28 August 2014;

“ComReg Decision D05/15” means ComReg Document No. 15/82 entitled “Market Review, Wholesale Fixed Voice Call Origination and Transit Markets, Response to Consultation and Decision”, dated 24 July 2015;

“ComReg Decision D03/16” means ComReg Document No. D16/39, entitled Pricing of Eir’s Wholesale Fixed Access Services: Response to Consultation Document 15/67 and Final Decision”, dated 18 May 2016;

“ComReg Decision D10/18” means ComReg Document No. 18/94, entitled “Market Review, Wholesale Local Access (WLA) provided at a Fixed Location, Wholesale Central Access (WCA) provided at a Fixed Location for Mass Market Products. Response to Consultation and Decision”, dated 19 November 2018;

“ComReg Decision D11/18” means ComReg Document No. 18/95 entitled “Pricing of wholesale broadband services - Wholesale Local Access (WLA) market and the Wholesale Central Access (WCA) markets. Response to Consultation Document 17/26 and Final Decision”, dated 19 November 2018;

“ComReg Decision DXX/XX” means ComReg Document No. XX/XX entitled “Market Reviews: Wholesale Fixed Access and Call Origination; Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non-Residential Customers. Response to Consultation and Final Decision”, dated XX/XX/XXXX [Final Decision Document];

“ComReg Document 05/24” means ComReg Document No. 05/24 entitled “Response to Consultation, Guidelines on the treatment of confidential information, Final text of Guidelines”, dated 22 March 2005;

“ComReg Document 20/46” means ComReg Document No. 20/46 entitled “Market Reviews: Wholesale Fixed Access and Call Origination; Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non-Residential Customers. Consultation and Draft Decisions”, dated 17 June 2020;

“Co-Location” shall have the same meaning and description as under Part B “Co-location services” of the Schedule to the Access Regulations;

“Companies Act 2014” means the Companies Act 2014 (No. 38 of 2014), as amended from time to time;

“Competition and Consumer Protection Commission” means the body established under section 9 of the Competition and Consumer Protection Act 2014;

“Connection Charge(s)” means a charge associated with a connection to, disconnection from, upgrade, downgrade, migration or removal of an existing service or a similar one-off charge listed in Table 2 of Schedule 401 of Eircom’s RIO Price List (version 18.0 dated 27 January 2021) as may be amended from time to time);

“Current Generation” or **“CG”** refers to legacy equipment and infrastructure such as circuit switched network equipment;

“Customer-Sited Interconnection or Handover” or **“CSI/H”** means the physical connection from the Eircom network to the Undertaking’s equipment, within the Undertaking’s premises;

“Edge Node Handover” or **“ENH”** means the connection from Eircom’s network through a dedicated Aggregation Node (installed at the OAO’s MPoP) which interfaces with the OAO’s equipment;

“EECC” means the European Electronic Communications Code established by Directive 2018/1972 of 11 December 2018 which entered into force on 20 December 2020;

“Effective Date” means the date set out in Section 22.1 of this Decision Instrument;

“Eircom” means Eircom Limited, a company incorporated in Jersey (Number 116389), registered as a Branch in Ireland (Number 907674), with an Irish registered Branch Office at 2022 Bianconi Avenue, Citywest Business Campus, Dublin 24, D24 HX03;

“Electronic Communications Network(s)” or **“ECN(s)”** shall have the same meaning as under Regulation 2 of the Framework Regulations;

“Electronic Communications Service(s)” or **“ECS”** shall have the same meaning as under Regulation 2 of the Framework Regulations;

“End User” shall have the same meaning as under Regulation 2 of the Framework Regulations. For the avoidance of doubt, End User(s) shall be deemed to include any natural or legal person who facilitates or intends to facilitate the provision of public communications networks or publicly available electronic communications services to other End Users and who is not acting as an Undertaking;

“Equivalence of Inputs” means the provision of products, services, facilities, and information by the SMP Undertaking to OAOs such that such products, services, facilities, and information are provided to OAOs within the same timescales, at the same price, functionality, service and quality levels and on the same terms and conditions and by means of the same systems and processes as the SMP Undertaking provides to itself.

“Equivalence of Outputs” means the provision of products, services, facilities, and information by the SMP Undertaking to OAOs such that such products, services, facilities, and information are provided to OAOs in a manner which achieves the same standards in terms of functionality, price, terms and conditions, service and quality levels as the SMP Undertaking provides to itself, albeit potentially using different systems and processes;

“Exchange” means an Eircom premises or equivalent facility used to house network and associated equipment, and includes a Remote Subscriber Unit;

“Exchange Area(s)” means the geographic area(s) that is/are served by the relevant Exchange;

“Exchange Code” is a 3 character unique identification code used by Eircom to identify each Exchange in Ireland.

“Exchange launched VUA/Bitstream” means that the active VDSL equipment that is required to provide the VUA or Bitstream service is housed in an Eircom Exchange building or equivalent;

“Fixed Voice Call Origination” or **“FVCO”** means a service whereby voice calls originating at a fixed location of an End User are conveyed and routed through any switching stages (or equivalent, regardless of underlying technology) up to a Point of Handover nominated by an OAO seeking, and/or being provided with, access to this service. The nominated Point of Handover can be the primary, tandem, or double tandem Exchange associated with the Access Path on which the voice call was originated;

“FNA FVCO” means calls originated at a fixed location of an End User which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the Fixed Access at which the voice call was originated. FNA is provided by means of PSTN, ISDN BRA, ISDN FRA or ISDN PRA.

“Fibre to the Cabinet” or **“FTTC”** means fibre to the cabinet which is a variant of the FTTC access network architecture where the Node used to house active VDSL equipment is the street cabinet;

“Fibre to the Home” or **“FTTH”** means an access network architecture where fibre optic cable is used to connect the End User premises to the ODF in an Exchange;

“Fibre to the Node” or **“FTTN”** means an access network architecture where fibre optic cable is used to connect a Node in the local access network to the ODF in an Exchange;

“Fixed Narrowband Access FACO” or **“FNA FACO”** means Fixed Narrowband Access HL-FACO and Fixed Narrowband Access LL-FACO;

“Fixed Narrowband Access HL-FACO” means fixed access for the provision of voice telephony services by means of fixed narrowband access (provided by means of ISDN FRA or ISDN PRA) together with fixed voice call origination being calls originated at a fixed location of an End User which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the fixed access;

“Fixed Narrowband Access LL-FACO” means fixed access for the provision of voice telephony services by means of fixed narrowband access (provided by means of PSTN or ISDN BRA) together with fixed voice call origination being calls originated at a fixed location of an End User which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the fixed access;

“Framework Regulations” means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011), as may be amended from time to time or replaced with equivalent effect;

“FTTC-based VUA/Bitstream” means VUA or Bitstream that is based on FTTC, and includes Exchange launched VUA/Bitstream;

“FTTH-based VUA/Bitstream” means VUA or Bitstream that is based on FTTH;

“Hosted PBX” means a type of Managed VoIP which involves the provision of fixed voice calls over an IP access path on multiple channels and which is generally provided to the End User over CATV, Exchange launched Bitstream or FTTx networks. Hosted PBX requires suitable customer premises equipment (IP handsets or equivalent) in the End User premises while the PBX functionality is hosted in the network by the service provider;

“In-Building Interconnection or Handover” or **“IBI/H”** means the physical connection from the Eircom network to the Undertaking’s equipment within the Exchange;

“In-Span Interconnection/Handover” or **“ISI/H”** means the physical connection between an Eircom Exchange and the Point of Handover that has been agreed between the interconnecting parties;

“Interconnection” shall have the same meaning as under Regulation 2 of the Access Regulations;

“Interconnection Path(s)” means (Current Generation) Interconnection Path(s) and (Next Generation) Interconnection Path(s);

“(Current Generation) Interconnection Path(s)” means the physical and logical transmission path(s) between the ECNs of two Undertakings to facilitate Interconnection based on circuit switched technology;

“(Next Generation) Interconnection Path(s)” means the physical and logical transmission path(s) between the ECNs of two Undertakings to facilitate Interconnection based on packet switched technology;

“Interconnection Service(s)” includes CSI/H, IBI/H, ISI/H, ENH, and Interconnection Paths;

“(Current Generation) Interconnection Services” means circuit switched based interconnection used for the conveyance of FVCO and includes CSI/H, IBI/H ISI/H, and Current Generation Interconnection Paths;

“(Next Generation) Interconnection Services” means packet switched based interconnection used for the conveyance of FVCO and includes CSI/H, IBI/H ISI/H, ENH, and Next Generation Interconnection Paths;

“IP” means internet protocol;

“ISDN” means Integrated Services Digital Network;

“ISDN BRA” means ISDN basic rate access;

“ISDN BRA Regional Mid-term Sunset Period” means the Sunset Period in respect of ISDN BRA services on the Regional FACO; new orders for the relevant products, services and facilities to be processed for a period of 1 month from the Mid-term Assessment Decision Date; access to all lines to be maintained for at least a period of 6 months from the Mid-term Assessment Decision Date;

“ISDN BRA Urban Sunset Period” means the Sunset Period in respect of ISDN BRA; new orders for the relevant products, services and facilities to be processed for a period of 2 months from the Effective Date; access to all lines to be maintained for at least a period of 12 months from the Effective Date.

“ISDN FRA” means ISDN fractional primary rate access;

“ISDN PRA” means ISDN primary rate access;

“Key Performance Indicator(s)” or **“KPI(s)”** means a measure(s) of the standard(s) of product, service or facility provided by Eircom to Undertakings and by Eircom to itself;

“Managed VoB” means a type of Managed VoIP which involves the provision of fixed voice calls over an IP access path on single or multiple channels and which is generally provided to the End User, directly or indirectly, over NG Broadband. A Managed VoB service includes quality of service parameters which enable prioritization of voice in congestion situations, thereby delivering an equivalent quality to circuit switched voice;

“Managed VoIP” means a voice service provided to an End User over an IP access path either directly on its own network, or indirectly, by renting the IP Access Path from a third party. A Managed VoIP service includes quality of service parameters which enable prioritization of voice in congestion situations, thereby delivering an equivalent quality to circuit switched voice;

“Metropolitan Point of Presence” or **“MPoP”** means the point of interconnection between the access and core networks of an Undertaking;

“Mid-term Assessment Decision Date” means the date of ComReg’s decision made on the basis of ComReg reapplying certain criteria in this Decision to the Regional FACO Markets and consultation on that assessment;

“Ministerial Policy Directions” for the purposes of this Decision Instrument means the policy directions made by Dermot Ahern TD, then Minister for Communications, Marine and Natural Resources, dated 21 February 2003 and 26 March 2004;

“MSAN” means Multi Service Access Node;

“Network Modernisation Project” means Eircom’s proposed network modernisation project whereby it will replace all Remote Subscriber Units in its network with MSANs which will emulate existing SB-WLR functionality (with the exception of ISDN BRA) towards the End User;

“Network Termination Point” or **“Network Termination Unit”** or **“NTP”** or **“NTU”** means the physical interface which provides the service demarcation point or Point of Handover of a wholesale service(s) within the End User’s premises;

“Next Generation” or **“NG”** refers to modern equipment and infrastructure such as IP based packet switched networks;

“Next Generation Access” or **“NGA”** means wired access networks which consist wholly or in part of optical elements and which are capable of delivering broadband and other access services with enhanced characteristics (such as higher throughput) as compared to those provided over exclusively copper access networks such as FTTC-based VUA/Bitstream, and FTTH-based VUA/Bitstream;

“Next Generation Bitstream” means Wholesale Central Access provided over NGA and its Associated Facilities;

“Next Generation VUA” means Wholesale Local Access provided over NGA and its Associated Facilities;

“NG Broadband” means broadband provided by means of NGA or CATV;

“NGA Broadband” means broadband provided by means of NGA;

“Node” means any location or concentration point in the access network (excluding termination points at End Users’ premises) which houses equipment for the purpose of providing services to End Users;

“ODF” means optical distribution frame;

“Order Handling Charge” means the wholesale charge payable by an Undertaking to the service provider for the cost associated with processing an order for Access and shall include the services listed in Table 3 of Schedule 401 of Eircom’s RIO Price List (version 18.0 dated 27 January 2021 2020 as may be amended from time to time);

“OSS” means operational support systems;

“Other Authorised Operator(s)” or **“OAO(s)”** means an Undertaking that is not Eircom, providing or intending to provide an ECN or an ECS pursuant to Regulation 4 of the Authorisation Regulations;

“Performance Metric(s)” means the aggregate performance levels achieved by Eircom within a specified period, as calculated in accordance with the methodology and service parameter definitions set out in its SLAs;

“Physical Transmission Path(s)” means a form of copper or fibre physical infrastructure (including and any combination of these) or its nearest equivalent which may be used to transmit Electronic Communications Services;

“Point of Handover” means the physical point at which two networks are interconnected to allow traffic between these networks;

“POTS” means the plain old telephone service.

“PSTN” means Public Switched Telephone Network;

“PSTN and ISDN FRA/PRA Regional Mid-term Sunset Period” means the Sunset Period in respect of PSTN and FRA/PRA services on the Regional FACO Markets; new orders for the relevant products, services and facilities to be processed for a period of 3 months from the Mid-term Assessment Decision Date; access to all lines to be maintained for at least 9 months from the Mid-Term Assessment Decision Date.

“PSTN and ISDN FRA/PRA Urban Sunset Period” means the Sunset Period in respect of PSTN and ISDN FRA/PRA services; new orders for the relevant products, services and facilities to be processed for a period of at least 9 months from the Effective Date; access to all lines to be maintained for at least 18 months from the Effective Date.

“PSTN WLR” means WLR provided by means of PSTN;

“Reference Interconnect Offer” or **“RIO”** is the offer of contract by Eircom to Undertakings in respect of the provision of Access setting out the products, services and facilities and including, without limitation, service descriptions, associated terms and conditions, and standards;

“Regional High Level FACO Market” or **“Regional HL-FACO Market”** means the market as defined in Section 5.2.2 of this Decision Instrument;

“Regional Low Level FACO Market” or **“Regional LL-FACO Market”** means the market as defined in Section 5.2.1 of this Decision Instrument;

“Related company” or **“related companies”** shall have the same meaning as under Companies Act 2014;

“(the) Relevant FACO Markets” means the markets described in Section 5 of this Decision Instrument;

“(the) Relevant Regional FACO Markets” means the markets described in Sections 5.2.1 and 5.2.2 of this Decision Instrument;

“(the) Relevant RFTS Markets” means the markets described in Section 4 of this Decision Instrument;

“(the) Relevant Urban FACO Markets” means the markets described in Sections 5.2.3 and 5.2.4 of this Decision Instrument;

“Remote Subscriber Unit” or **“RSU”** means a subordinate type of Exchange that is attached to an upstream primary Exchange;

“Revision History” means a documented list of changes to the Statement of Compliance as required under Section 15 of this Decision Instrument. The list, which contains the changes from the previous version of the Statement of Compliance, should be maintained and printed in a dedicated and indexed Section of each Statement of Compliance;

“RIO Change Matrix” means the table of information collated by Eircom which specifies the non-price related amendments made to its RIO, including the date(s) on which such amendments come into effect;

“RIO Price List Change Matrix” means the table of information collated by Eircom which specifies the amendments made to the RIO Price List(s) which are contained in its RIO, including the date(s) on which such amendments come into effect;

“RIO Price List(s)” means the list of charges applicable in respect of the products, services and facilities set out in the RIO in accordance with the requirements of this Decision Instrument;

“Service Credit(s)” means a financial credit which is provided by Eircom to an OAO where Eircom has failed to meet a Performance Metric in an SLA;

“Service Level Agreement(s)” or **“SLA(s)”** means legally binding contracts between Eircom and OAOs in relation to the service levels to be provided by Eircom;

“SLA Negotiation Period” means the number of working days, as determined by Eircom, required to conclude negotiations between it and an Undertaking in respect of a request from the Undertaking for a new SLA or an amendment to an existing SLA. For the avoidance of doubt, the SLA Negotiation Period relates only to the conclusion of negotiations in respect of the SLA;

“(the) SMP Guidelines” means the European Commission guidelines of 7 May 2018 on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services (2018/C 159/01) (OJ C159, 7.5.2018, p.1);

“SMP Undertaking” means the Undertaking designated in Section 7 of this Decision Instrument as having Significant Market Power;

“Single Billing - Wholesale Line Rental” or **“SB-WLR”** means a wholesale service comprised of both FNA FVCO and WLR;

“SIP Trunking” means a type of Managed VoIP which involves the provision of fixed voice calls over an IP Access Path on multiple channels and which is generally provided to the End User over CATV, Exchange launched Bitstream or FTTx networks. SIP Trunking requires a suitable customer premises equipment (IP PBX or equivalent) in the End User premises;

“Statement of Compliance” means the written statement prepared by Eircom in accordance with Section 15 of this Decision Instrument;

“Subsidiary” or **“subsidiaries”** shall have the same meaning as under Companies Act 2014;

“Sunset Period(s)” means a period of time after the Effective Date prior to the withdrawal of obligations becoming effective, by way of notice to affected parties.

“Structured Information” means information that is documented and managed through an established business process in a formal manner, which in practice means data which is based on a defined data model or recognised system;

“(the) Three Criteria Test” means the test set out in the 2020 Recommendation used to identify markets other than those set out in the Annex to the 2020 Recommendation as being susceptible to *ex ante* regulation;

“Undertaking(s)” shall have the same meaning as under Regulation 2 of the Framework Regulations;

“Unstructured Information” means all information other than Structured Information. Unstructured Information is typically documented and managed in a less formal manner than Structured Information and includes information passed between individuals or business units through informal communications without a pre-defined data model or a recognised structure;

“Urban High Level FACO Market” or **“Urban HL-FACO Market”** means the market as defined in Section 5.2.4 of this Decision Instrument;

“Urban Low Level FACO Market” or **“Urban LL-FACO Market”** means the market as defined in Section 5.2.3 of this Decision Instrument;

“VDSL” means a very-high-bit-rate digital subscriber line;

“Version Control” means a standardised regime, including but not limited to Revision History, for the management of changes to documents as it relates to Section 15 of this Decision Instrument;

“Virtual Unbundled Access” or **“VUA”** shall have the same meaning as under Section 2 of the Decision Instrument at Appendix 20 of ComReg Decision D10/18, as may be amended from time to time;

“Wholesale Central Access” or **“WCA”** shall have the same meaning as under Section 2 of the Decision Instrument at Appendix 21 of ComReg Decision D10/18, as may be amended from time to time;

“Wholesale Local Access” or **“WLA”** shall have the same meaning as under Section 2 of the Decision Instrument at Appendix 20 of ComReg Decision D10/18, as may be amended from time to time;

“Wholesale Line Rental” or **“WLR”** means the wholesale service that allows an OAO to rent an Access Path(s) from Eircom which in turn enables that OAO to offer or provide services over such an Access Path(s) to either an End User or another OAO, described in the document entitled “Single Billing through Wholesale Line Rental Product Description” (version 3, dated 12 June 2017) as may be amended from time to time and published on Eircom’s wholesale website;

“(the) 2020 Recommendation” means the European Commission Recommendation of 18 December 2020 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code

3 SCOPE AND APPLICATION

- 3.1 This Decision Instrument applies to Eircom in respect of activities falling within the scope of the Relevant RFTS Markets defined in Section 4 of this Decision Instrument and the Relevant FACO Markets defined in Section 5 of this Decision Instrument.
- 3.2 This Decision Instrument is binding upon Eircom and its subsidiaries and any related companies, and any Undertaking which owns or controls Eircom, and its successors, affiliates and assigns and, all shall comply with it in all respects.

4 RELEVANT RFTS MARKETS

- 4.1 For the purposes of this Decision Instrument, ComReg identifies three separate RFTS markets as more particularly defined in Section 4.2 of this Decision Instrument (referred to in this Decision Instrument singularly as the Relevant RFTS Market and together as the Relevant RFTS Markets).
- 4.2 The Relevant RFTS Markets are the markets in the State for:
- (i) Standalone Low-Level RFTS including RFTS over PSTN and ISDN BRA and any Managed VoB delivered over NG Broadband on a standalone basis ("**Market 1a**");
 - (ii) Bundled Low-Level RFTS including RFTS over PSTN and ISDN BRA and Managed VoB delivered over (and with) NG Broadband on a bundled basis together with any of broadband, television or mobile services ("**Market 1b**"); and
 - (iii) High-Level RFTS including RFTS over ISDN FRA and PRA and any Hosted PBX or SIP Trunking forms of Managed VoIP delivered over NG Broadband, on a standalone basis or on a bundled together with any of broadband, television or mobile services ("**Market 1c**").

5 RELEVANT FACO MARKETS

- 5.1 For the purposes of this Decision Instrument, ComReg identifies four separate markets as more particularly defined in Section 5.2 of this Decision Instrument (referred to in this Decision Instrument singularly as the Relevant FACO Market and together as the Relevant FACO Markets).
- 5.2 The Relevant FACO Markets are the wholesale markets for:
- 5.2.1 (a) fixed access for the provision of voice telephony services by means of:
- (i) fixed narrowband access provided by means of PSTN or ISDN BRA; or
 - (ii) NG Broadband,

together with

(b) fixed voice call origination, being calls originated

- (i) in the case of fixed narrowband access, at a fixed location of an End User which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the fixed access; or
- (ii) in the case of NG Broadband, at a fixed location of an End User which are conveyed and routed on an end-to-end basis over an IP network to a Managed VoB VoIP platform,

as more particularly defined in accordance with the criteria set out in Section 5 of ComReg Decision **DXX/XX** and includes those Exchange Areas as listed in Annex 12 of ComReg Decision **DXX/XX** which market is referred to in this Decision Instrument as the “**Regional Low-Level Fixed Access and Call Origination Market**” or the “**Regional LL-FACO Market**”.

5.2.2 (a) fixed access for the provision of voice telephony services by means of:

- (i) fixed narrowband access provided by means of ISDN FRA or ISDN PRA; or
- (ii) NGA Broadband,

together with

(b) fixed voice call origination, being calls originated

- (i) in the case of fixed narrowband access, at a fixed location of an End User which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the fixed access; or
- (ii) in the case of NGA Broadband, at a fixed location of an End User which are conveyed and routed on an end-to-end basis over an IP network to a Hosted PBX or SIP Trunking VoIP platform,

as more particularly defined in accordance with the criteria set out in Section 5 of ComReg Decision **DXX/XX** and includes those Exchange Areas as listed in Annex 12 of ComReg Decision **DXX/XX** which market is referred to in this Decision Instrument as the “**Regional High-Level Fixed Access and Call Origination Market**” or the “**Regional HL-FACO Market**”.

5.2.3 (a) fixed access for the provision of voice telephony services by means of:

- (i) fixed narrowband access provided by means of PSTN or ISDN BRA; or
- (ii) NG Broadband,

together with

(b) fixed voice call origination, being calls originated

- (i) in the case of fixed narrowband access, at a fixed location of an End User which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the fixed access; or
- (ii) in the case of NG Broadband, at a fixed location of an End User which are conveyed and routed on an end-to-end basis over an IP network to a Managed VoB VoIP platform,

as more particularly defined in accordance with the criteria set out in Section 5 of ComReg Decision **DXX/XX** and includes those Exchange Areas as listed in Annex 12 of ComReg Decision **DXX/XX** which market is referred to in this Decision Instrument as the “**Urban Low-Level Fixed Access and Call Origination Market**” or the “**Urban LL-FACO Market**”.

5.2.4 (a) fixed access for the provision of voice telephony services by means of:

- (i) fixed narrowband access provided by means of ISDN FRA or ISDN PRA; or
- (ii) NGA Broadband,

together with

(b) fixed voice call origination, being calls originated

- (i) in the case of fixed narrowband access, at a fixed location of an End User which are conveyed and routed through any switching stages (or equivalent) up to a point of interconnection taking place at the primary, tandem, or double-tandem exchange (or equivalent) associated with the fixed access; or
- (ii) in the case of NGA Broadband, at a fixed location of an End User which are conveyed and routed on an end-to-end basis over an IP network to a Hosted PBX or SIP Trunking VoIP platform,

as more particularly defined in accordance with the criteria set out in Section [5] of ComReg Decision DXX/XX and includes those Exchange Areas as listed in Annex 12 of ComReg Decision DXX/XX which market is referred to in this Decision Instrument as the “**Urban High-Level Fixed Access and Call Origination Market**” or the “**Urban HL-FACO Market**”.

6 THREE CRITERIA TEST ASSESSMENT

- 6.1 ComReg hereby finds that the Three Criteria Test is not met in respect of Market 1a, and accordingly that the Market 1a is not a market that is susceptible to *ex ante* regulation.
- 6.2 ComReg hereby finds that the Three Criteria Test is not met in respect of Market 1b, and accordingly that the Market 1b is not a market that is susceptible to *ex ante* regulation.
- 6.3 ComReg hereby finds that the Three Criteria Test is not met in respect of Market 1c, and accordingly that the Market 1c is not a market that is susceptible to *ex ante* regulation.
- 6.4 ComReg hereby finds that the Three Criteria Test is met in respect of the Regional LL-FACO Market, and accordingly that the Regional LL-FACO Market is a market that is susceptible to *ex ante* regulation.
- 6.5 ComReg hereby finds that the Three Criteria Test is not met in respect of the Urban LL-FACO Market, and accordingly that the Urban LL-FACO Market is not a market that is susceptible to *ex ante* regulation.
- 6.6 ComReg hereby finds that the Three Criteria Test is met in respect of the Regional HL-FACO Market, and accordingly that the Regional HL-FACO Market is a market that is susceptible to *ex ante* regulation.
- 6.7 ComReg hereby finds that the Three Criteria Test is not met in respect of the Urban HL-FACO Market, and accordingly that the Urban HL-FACO Market is not a market that is susceptible to *ex ante* regulation.

7 DESIGNATION OF UNDERTAKING WITH SIGNIFICANT MARKET POWER (“SMP”)

- 7.1 ComReg hereby determines that the Regional LL-FACO Market is not effectively competitive and hereby designates Eircom as having SMP in the Regional LL-FACO Market.
- 7.2 ComReg hereby determines that the Regional HL-FACO Market is not effectively competitive and hereby designates Eircom as having SMP in the Regional HL-FACO Market.

PART II - SMP OBLIGATIONS IN RELATION TO THE REGIONAL FACO MARKETS

8 SMP OBLIGATIONS IN RELATION TO FNA FACO PRODUCTS, SERVICES AND FACILITIES

- 8.1 Further to, and in accordance with, the requirements set out in Regulation 8 of the Access Regulations, in accordance with Regulations 9, 10, 11, 12 and 13 of the Access Regulations, ComReg hereby imposes certain SMP obligations on Eircom in accordance with and pursuant to Regulation 8 of the Access Regulations, obligations of access, non-discrimination, transparency, accounting separation, cost accounting and price control on Eircom as detailed further in Sections 9 to 15 of this Decision Instrument in respect of FNA FACO in the Relevant Regional FACO Markets.

9 OBLIGATIONS TO PROVIDE ACCESS

- 9.1 Eircom shall meet all reasonable requests from Undertakings for the provision of Access to FNA FACO products, services or facilities in the Relevant Regional FACO Markets including Associated Facilities, where the request for the provision of Access is:
- (i) in respect of the products, services and Associated Facilities set out in Section 9.2; or
 - (ii) in respect of new products, services and Associated Facilities or amendments to existing products, services and Associated Facilities requested on or before the Effective Date; or
 - (iii) in connection with a product, service or facility which Eircom provides to itself; or
 - (iv) in connection with the implementation of the Network Modernisation Project.
- 9.2 Eircom shall provide and grant Access to Undertakings for the following particular products, services and Associated Facilities:-

- (i) SB-WLR;
- (ii) Ancillary Services on SB-WLR;
- (iii) Current Generation Interconnection Services;
- (iv) Next Generation Interconnection Services which shall include Session Initiation Protocol which is a technical standard defined by the Internet Engineering Task Force and specified in Request for Comment 3261; and
- (v) Co-Location.

9.3 Eircom shall offer and continue to offer and provide Access to the products, services and facilities referred to in Sections 9 and 10 of this Decision Instrument in accordance with the product descriptions and terms and conditions of supply or use, as specified in the current version of the RIO (i.e. RIO version 7.0 dated 1 October 2020 as published on Eircom's wholesale website) as may be amended from time to time, and, in addition, in accordance with Eircom's obligations under this Decision Instrument.

9.4 For the purposes of the obligations set out in Sections 9.1 to 9.3 Eircom shall:

- (i) negotiate in good faith with Undertakings requesting Access;
- (ii) not withdraw Access to facilities already granted without the prior approval of ComReg and in accordance with terms and conditions as may be determined by ComReg;
- (iii) grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of products, services or facilities;
- (iv) provide Access to services needed to ensure interoperability of end-to-end services to End Users, including facilities for intelligent network services;
- (v) provide Access to OSS or similar software systems necessary to ensure fair competition in the provision of services (including those products, services and facilities described in this Section 9);
- (vi) make available and publish on its wholesale website, within 1 month of the Effective Date, a file containing a list of end user addresses in the Regional FACO Markets. Each entry on the list shall contain the ARD ID, address, Eircode (where available) and Exchange Code. This file shall be updated and published by Eircom on a quarterly basis to align with inventory updates. An updated file shall be made available and published by Eircom on its wholesale website within 1 month of the Mid-term Assessment Decision Date and updated on a quarterly basis thereafter to align with inventory updates. and
- (vii) interconnect networks or network facilities.

10 CONDITIONS ATTACHED TO THE ACCESS OBLIGATION

10.1 Eircom shall, in relation to the obligations set out in Section 9 of this Decision Instrument, grant Undertakings Access in a fair, reasonable and timely manner.

- 10.2 Without prejudice to the generality of Section 10.1, where Eircom receives a request for Access (including Access to those products, services and facilities referred to in Sections 9 and 10 of this Decision Instrument) in accordance with the requirements of this Decision Instrument at the same point in time as a request for another wholesale access product, service or facility, on foot of another Decision Instrument issued by ComReg, Eircom shall ensure that both access requests are met concurrently.
- 10.3 Without prejudice to the generality of Section 10.1 above, Eircom shall:
- (i) conclude, maintain or update, as appropriate, legally binding SLAs with Undertakings, which shall include provisions for Performance Metrics;
 - (ii) negotiate in good faith with Undertakings in relation to the conclusion of legally binding and fit-for-purpose SLAs (either in the case of a new SLA or an amendment to an existing SLA). Following a request from an Undertaking for a new SLA or an amendment to an existing SLA Eircom shall within one (1) month of the receipt of such a request provide the Undertaking with details of the SLA Negotiation Period. Negotiations in respect of a new SLA or an amendment to an existing SLA shall be concluded, unless otherwise agreed by ComReg, within six (6) months of the date the Undertaking makes such a request. Within one (1) month of the date the Undertaking makes such a request Eircom may seek an extension to the six (6) month period from ComReg;
 - (iii) ensure that all SLAs include provision for Service Credits arising from any breach of an SLA;
 - (iv) ensure that the level of the Service Credits are fair and reasonable;
 - (v) ensure that SLAs detail how Service Credits are calculated and shall include the provision of an example calculation; and
 - (vi) ensure that application of Service Credits, where they occur, shall be applied automatically, and in a timely and efficient manner.
- 10.4 To the extent that there is any conflict between the SLAs concluded under Section 10.3 above and Eircom's obligations set out in this Decision Instrument, it is the latter which shall prevail.
- 10.5 Where a request by an Undertaking for provision of Access (including Access to those products, services and facilities described in Sections 9 and 10 of this Decision Instrument), or a request by an Undertaking for provision of information is refused or met only in part, Eircom shall, at the time of the refusal or partial grant, provide in detail to the Undertaking and, subject to Section 10.6 of this Decision Instrument ComReg, each of the objective reasons for such refusal or partial grant. Eircom's response shall be provided in a fair, reasonable and timely manner.

10.6 Eircom may satisfy its obligation at Section 10.5 in respect of ComReg, by providing ComReg, on a monthly basis, with a report which covers all requests by Undertakings for provision of Access (including Access to those products, services and facilities described in Sections 9 and 10 of this Decision Instrument) and requests by Undertakings for provision of information which are refused or met only in part (the “**Monthly Report**”). The Monthly Report shall detail each request, including the name of the Undertaking who made the request, and provide in detail each of the objective reasons for each refusal or partial grant. Where the reasons provided to ComReg are different to those provided to the Undertaking as required under Section 10.5, Eircom must explain why. The Monthly Report shall be provided in the format and detail specified by ComReg and, for each month, shall be provided to ComReg no later than 5.30pm on the last Friday of the subsequent month.

11 OBLIGATION OF NON-DISCRIMINATION

11.1 Eircom shall ensure there is no discrimination in its treatment of other Undertakings in respect of the provision of Access, including Access as regards those services, products and facilities described in Sections 9 and 10 of this Decision Instrument. Without prejudice to the generality of the foregoing, Eircom shall:

- (i) Apply equivalent conditions in equivalent circumstances to other Undertakings requesting, or being provided with Access (including Access to those products, services and facilities described in Sections 9 and 10 of this Decision Instrument) or requesting or being provided with information in relation to such Access; and
- (ii) Provide Access (including Access to those products, services and facilities described in Sections 9 and 10 of this Decision Instrument) and information in relation to such Access to all other Undertakings under the same conditions and of the same quality as Eircom provides to itself or to its subsidiaries, affiliates or partners.

11.2 Without prejudice to the generality of Section 11.1 above, Eircom shall (unless otherwise specified in this Decision Instrument) provide Access, including Associated Facilities, to those products, services and facilities required in accordance with Sections 9 and 10 of this Decision Instrument on, at least, an Equivalence of Outputs basis.

11.3 Without prejudice to the generality of Section 11.1, Eircom shall provide ordering and provisioning for SB-WLR on an Equivalence of Inputs basis, when SB-WLR is ordered using a Combined SB-WLR and NGA Order. For the avoidance of doubt, if SB-WLR is ordered and provisioned separately to Next Generation Bitstream or Next Generation VUA, Eircom shall provide ordering and provisioning for SB-WLR on an Equivalence of Outputs basis.

- 11.4 Without prejudice to the generality of Section 11.1, Eircom shall provide fault reporting and fault repair for SB-WLR on an Equivalence of Inputs basis in all cases where SB-WLR, in conjunction with either Next Generation Bitstream or Next Generation VUA, is used by an Undertaking to provide services to an End User. For the avoidance of doubt, this obligation shall apply irrespective of whether SB-WLR was ordered using a Combined SB-WLR and NGA Order or ordered separately to Next Generation Bitstream or Next Generation VUA.
- 11.5 For the purposes of Sections 11.3 and 11.4, where Eircom is required to provide ordering and provisioning for SB-WLR and / or fault reporting and fault repair on an Equivalence of Inputs basis, Eircom shall ensure that for the purposes of Equivalence of Inputs, the systems and processes shall operate in the same way and with the same degree of reliability and performance as between OAOs and the Eircom's provision to itself.
- 11.6 For the avoidance of doubt, the obligations set out in this Section 11 apply irrespective of whether or not a specific request for products, services, facilities or information has been made by an Undertaking to Eircom.

12 OBLIGATION OF TRANSPARENCY

- 12.1 Eircom shall ensure transparency in its provision of Access (including Access to those products, services and facilities described in Sections 9 and 10 of this Decision Instrument).
- 12.2 Without prejudice to the generality of Section 12.1 of this Decision Instrument, Eircom shall make publicly available and keep updated on its website, a RIO.
- 12.3 The RIO shall be sufficiently unbundled so as to ensure that Undertakings availing of Access (including Access to those products, services and facilities described in Sections 9 and 10 of this Decision Instrument) are not required to pay for products, services or facilities which are not necessary for the Access requested.
- 12.4 Eircom shall ensure that its RIO includes at least the following:
- (i) a description of the offer of contract for Access (including Access to those products, services and facilities described in Sections 9 and 10 of this Decision Instrument) broken down into components according to market needs;
 - (ii) a description of any associated contractual or other terms and conditions for supply of Access (including Access to those products, services and facilities described in Sections 9 and 10 of this Decision Instrument) and use, including prices;
 - (iii) a description of the technical specifications and network characteristics of the Access (including Access to those products, services and facilities described in Sections 9 and 10 of this Decision Instrument) being offered;

- (iv) the terms, conditions, SLAs, guarantees and other product related assurances associated with the FNA FVCO component part of any WLV Services that it provides;
- (v) all general terms and conditions of the RIO, including:
 - (a) dispute resolution procedures procedure to be used between Eircom and the Access Seeker;
 - (b) definition and limitation of liability and indemnity;
 - (c) glossary of terms relevant to the wholesale inputs and other items concerned; and
 - (d) details of duration, renegotiation and causes of termination of agreements as well as other associated contractual terms.
- (vi) details of operational processes, including:
 - (a) pre-ordering, ordering and provisioning;
 - (b) migration from legacy products and infrastructure, incl. moves and ceases;
 - (c) rules of allocation of space between the parties when supply facilities or co-location space is limited;
 - (d) repair and maintenance;
 - (e) changes to IT systems to the extent that it impacts Access Seekers;
 - (f) details of the necessary interoperability tests; and
 - (g) specifications of equipment to be used on the network; and
- (vii) procedures in the event of amendments being proposed to the service offerings, which may include a requirement for notification to ComReg for such amendments, for example, launch of new products, services or facilities, changes to existing services or change to prices.

12.5 In the event of any conflict between the RIO and associated documentation such as the RIO Price List (including where represented as updated for the purposes of this Decision Instrument), and Eircom's obligations as set out under this Decision Instrument, it is the latter which shall prevail.

12.6 Without prejudice to the generality of Sections 12.1 and 12.2, Eircom shall:

- (i) continue to publish and keep updated on its publicly available wholesale website, its RIO in the same form and format as version 7 (dated 1 October 2020), as may be amended from time to time, insofar as those products, services or facilities contained therein relate to the obligations set out in this Decision Instrument;

- (ii) publish and keep updated on its publicly available wholesale website both clean (or unmarked) and tracked changed (or marked) versions of its RIO (insofar as it relates to the products, services and facilities to be provided in accordance with the requirements of this Decision Instrument). The tracked change version of the RIO shall be sufficiently clear to allow Undertakings to clearly identify all actual and proposed amendments from the preceding version of its RIO;
 - (iii) publish and keep updated on its publicly available wholesale website an accompanying RIO Change Matrix which lists all of the amendments incorporated or to be incorporated in any amended RIO;
 - (iv) publish and keep updated on its publicly available wholesale website both clean (unmarked) and tracked changed (marked) versions of the RIO Price List(s) (insofar as it relates to the products, services and facilities to be provided in accordance with the requirements of this Decision Instrument). The tracked change version of the RIO Price List shall be sufficiently clear to allow Undertakings to clearly identify all actual and proposed amendments from the preceding version of its RIO Price List;
 - (v) publish and keep updated on its publicly available wholesale website a RIO Price List Change Matrix; and
 - (vi) maintain on its publicly available wholesale website a copy of historic versions of its RIO, RIO Price List, RIO Change Matrix and RIO Price List Change Matrix.
- 12.7 Eircom shall ensure that its wholesale invoices are sufficiently disaggregated, detailed and clearly presented such that an Undertaking can reconcile invoices to Eircom's RIO and RIO Price Lists.
- 12.8 In respect of both pricing and non-pricing amendments or changes to the RIO and/or the RIO Price List resulting from the offer of a new product, service or facility which falls within the scope of the Relevant Regional FACO Markets, the following obligations will apply:
- (i) Eircom shall, unless otherwise agreed by ComReg, make publicly available and publish on Eircom's publicly available wholesale website at least six (6) months in advance of coming into effect, any proposed amendments or changes to the RIO and/or the RIO Price List, or the making available of any product, service or facility, pertaining to information in respect of product specification, services, facilities and processes resulting from the offer of a new product, service or facility, together with a Statement of Compliance which meets the requirements detailed in Section 15 of this Decision Instrument.
 - (ii) Eircom shall notify ComReg in writing with the information to be published at least one (1) month in advance of any such publication taking place, that is, seven (7) months prior to any amendments or changes coming into effect. The periods referred to in this Section may be varied with the agreement of ComReg or at ComReg's discretion.

- 12.9 In respect of both pricing and non-pricing amendments or changes to the RIO and/or the RIO Price List resulting from an amendment or change to an existing product, service or facility which falls within the scope of the Relevant Regional FACO Markets, the following obligations will apply:
- (i) Eircom shall, unless otherwise agreed by ComReg, make publicly available and publish on Eircom's publicly available wholesale website at least two (2) months in advance of coming into effect, any proposed amendments or changes to the RIO and/or the RIO Price List in respect of product specification, services, facilities and processes resulting from an amendment or change to an existing product, service or facility (including details of any amendment or change in the functional characteristics of an existing product, service or facility), together with a Statement of Compliance which meets the requirements detailed in Section 15 of this Decision Instrument.
 - (ii) Eircom shall notify ComReg in writing with the information to be published at least one (1) month in advance of any such publication taking place, that is, three (3) months prior to any amendments or changes coming into effect. The periods referred to in this Section may be varied with the agreement of ComReg or at ComReg's discretion. Notwithstanding this Section 12.9, material changes or material amendments shall, however, be notified and published in accordance with Section 12.8 above or as otherwise agreed with ComReg or at ComReg's discretion.
- 12.10 ComReg may, in accordance with Regulation 18 of the Access Regulations, issue directions to Eircom from time to time requiring it to publish and make available on its publicly available wholesale website, information such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices, in respect of the products, services and facilities referred to in Sections 9 and 10 of this Decision Instrument.
- 12.11 ComReg may, pursuant to Regulation 9(3) of the Access Regulations, issue directions requiring Eircom to make changes or amendments to its SLAs, the RIO (and its associated documents), RIO Price List, RIO Change Matrix or RIO Price List Change Matrix to give effect to obligations imposed by this Decision Instrument and to publish such documents with such changes.
- 12.12 Eircom shall publish Key Performance Indicators ("**KPIs**") on its publicly available wholesale website. The specification of the content of the KPIs shall be in accordance with the obligations set out in ComReg Decision D05/11 (as may be amended from time to time).
- 12.13 Eircom shall publish Performance Metrics for the products, services and facilities referred to in Sections 9 and 10 of this Decision Instrument on its publicly available wholesale website.

- 12.14 Eircom shall make available on its publicly available wholesale website all SLAs (and any updates thereto) relating to the provision of the products, services and facilities that are to be provided in accordance with Sections 9 and 10 of this Decision Instrument.
- 12.15 Where Eircom considers certain aspects of information to be provided under the obligations set out in this Section 12 to be of a confidential and/or commercially sensitive nature, Eircom shall, without delay, provide ComReg with complete details of such information along with objective reasons justifying why it considers it is confidential and/or commercially sensitive. ComReg will consider the information in accordance with ComReg Document 05/24, so far as relevant or otherwise. If ComReg considers that the information is not confidential and/or commercially sensitive, it shall be published by Eircom in accordance with its obligations under this Section.
- 12.16 If ComReg concludes that the information is confidential and/or commercially sensitive, Eircom shall publish general details as to the nature of such information and shall make such information or, as agreed with ComReg, extracts of such information, available to an OAO that has signed a Non-Disclosure Agreement (“**NDA**”), the terms and conditions of which shall be fair, reasonable and non-discriminatory. The NDA shall also be published on Eircom’s publicly available website. Any confidential and/or commercially sensitive information referred to in Section 12.15 above shall not be made available by Eircom to its downstream operations until such time as it is made available to an OAO, or as otherwise agreed with ComReg.
- 12.17 If and when the commercially sensitive and/or confidential information referred to in Section 12.15 above ceases to be commercially sensitive and/or confidential, it shall be made available by Eircom on its publicly available wholesale website without undue delay and without the need for an NDA to be signed.

13 OBLIGATION OF ACCOUNTING SEPARATION

- 13.1 Eircom shall maintain separated accounts in respect of the products, services and facilities referred to in Sections 9 and 10 of this Decision Instrument. All of the obligations in relation to accounting separation, set out in the Decision Instrument contained in Appendix II of ComReg Decision D08/10, applying to Eircom and in force immediately prior to the Effective Date of this Decision Instrument, and relating to products, services and facilities falling within the scope of sections 9 and 10 of this Decision Instrument shall be maintained in their entirety as specified in the ComReg Decision D08/10 (as may be amended from time to time), save for the following qualifications:

- (i) that where the term “Relevant Markets” is used in the Decision Instrument of ComReg Decision D08/10, for the purpose of the accounting separation obligation in this Decision, it shall be presumed to mean the Relevant FACO Markets rather than requiring Eircom to provide accounts disaggregated to the level of the Regional FACO Markets. In the alternative, where Eircom prefers to interpret the term “Relevant Markets” according to the definition in the Decision Instrument of ComReg Decision D08/10, this will be acceptable; and
- (ii) section 5.2.2(b) of the Decision Instrument of ComReg Decision D08/10 shall be disapplied for the purpose of this Decision only.

14 OBLIGATIONS RELATING TO PRICE CONTROL AND COST ACCOUNTING

- 14.1 Eircom shall maintain appropriate cost accounting systems in respect of products, services or facilities in the Relevant FACO Markets.
- 14.2 The prices offered or charged by Eircom to any Undertaking for Access to, or use of, the products, services or facilities referred to in Section 9 of this Decision Instrument (except in the case of the PSTN WLR element of SB-WLR or as otherwise set out in this Decision Instrument) shall be cost orientated.
- 14.3 The prices offered or charged by Eircom to any Undertaking for the FNA FVCO element of SB-WLR shall be no more than those prevailing for FNA FVCO on the Effective Date.
- 14.4 Notwithstanding Section 14.3, where Eircom can demonstrate, to the satisfaction of ComReg, that it is necessary in order for Eircom to be compliant with its cost orientation obligation, the prices offered or charged by Eircom to any Undertaking for the FNA FVCO element of SB-WLR may be higher than those prices prevailing for FNA FVCO on the Effective Date.
- 14.5 Eircom shall ensure that it recovers no more than its actual incurred costs adjusted for efficiencies (plus a reasonable rate of return) for the following:-
 - (i) Ancillary Services on SB-WLR;
 - (ii) Current Generation Interconnection Services;
 - (iii) Next Generation Interconnection Services;
 - (iv) Co-Location; and
 - (v) Order Handling Charge associated with the provision of FVCO and SB- WLR.
- 14.6 Subject to Section 18 of this Decision Instrument, the price offered or charged by Eircom to any other Undertaking in relation to the PSTN WLR element of SB-WLR shall be subject to a price control which shall be specified in ComReg’s Response to Consultation and Final Decision on the Access Network Model Consultation.

- 14.7 Eircom shall ensure that the monthly rental price offered or charged by Eircom to any other Undertaking in relation to the ISDN WLR element of SB-WLR services shall be no more than the ISDN BRA, ISDN PRA and ISDN FRA SB-WLR rental prices prevailing on the Effective Date.
- 14.8 In relation to ISDN BRA, ISDN PRA and ISDN FRA, notwithstanding the provisions of Section 14.7 above, where Eircom can demonstrate, to the satisfaction of ComReg, in order for Eircom to be compliant with its cost orientation obligation, it is allowable that the monthly rental price offered or charged by Eircom to any other Undertaking in relation to the ISDN WLR element of SB-WLR services could be higher than the current ISDN BRA, ISDN PRA and ISDN FRA SB-WLR rental prices prevailing on the Effective Date.

15 STATEMENT OF COMPLIANCE

- 15.1 Within six (6) months of the Effective Date, or as otherwise agreed with ComReg, Eircom shall submit to ComReg a written statement of compliance ("**Statement of Compliance**") signed by a Director or Directors of Eircom authorised to provide such statements on behalf of the Board of Directors of Eircom and which includes the following:
- (i) A statement:
 - (a) that the Directors acknowledge that they are responsible for Eircom securing compliance with its regulatory obligations;
 - (b) confirming that, in their opinion, arrangements, structures and internal controls are in place that provide reasonable assurance that Eircom is compliant with its obligations as set out in this Decision Instrument; and
 - (c) explaining the basis upon which the confirmation in sub-paragraph b above is made, including a description of the information relied upon, and the process followed, by the Directors, in order to be satisfied that to the best of their knowledge that the arrangements, structures and internal controls in place provide reasonable assurance that Eircom is in compliance with the obligations set out in this Decision Instrument.
 - (ii) A description and explanation of the governance measures implemented by Eircom to ensure that it is, and remains, in compliance with the obligations set out in this Decision Instrument,
 - (iii) A description of the methodology followed to identify risks of non-compliance with the obligations imposed in Sections 9 to 14 of this Decision Instrument (the "**regulatory risks**") and to develop the controls required to manage the regulatory risks including in particular by reference to identifying, employing and relying on adequate expertise, material and information.

- (iv) A detailed description of the regulatory risks identified utilising the methodology described in Section 15.1(iii) above for all FNA FACO products, services and facilities in the Relevant Regional FACO Markets, including without limitation, in respect of the following activities:
 - (a) Pre-provisioning, provisioning and service assurance;
 - (b) Product development including product enhancements, and pre product development screening of Access requests;
 - (c) Product prioritisation and investment decisions;
 - (d) Access to shared resources including IT and network development resources; and
 - (e) The management of information, both Structured Information and Unstructured Information, in conformance with regulatory requirements.
- (v) A detailed description of the controls developed to manage the regulatory risks identified utilising the control development process described in Section 15.1(iii) above, including:
 - (a) a description of the relationship of each control to the underlying risk described in Section 15.1(iv) above;
 - (b) a description of the process used to assess the adequacy and effectiveness of the controls.
 - (c) a description of the operation of controls including the method employed by Eircom to record and store the data produced when controls are operated;
 - (d) a description of and the identification of the repository in which the data from the operation of each control is recorded and stored.
- (vi) For each of the product, service and facility reviewed for the purpose of 15.1(iv) and 15.1(v), a description of the risk analysis and control development process carried out pursuant to Section 15.1(iii) (the "**Process**"), to include the following:
 - (a) The scope of the Process, including in particular;
 - (a) a description of the expertise relied on to identify the regulatory risks and develop the controls required to manage the regulatory risks, by reference to the description of the expertise of the Eircom personnel engaged in the Process; and
 - (b) a list of all the material used to identify the regulatory risks and develop the controls required to manage the regulatory risks including without limitation relevant product documentation, internal process information, risk analysis documentation.

- (b) The outcome of the Process in respect of the identification of regulatory risks, and the justification for the outcome, to include:
 - (a) where the standard of Equivalence of Inputs applies, a description of any and all differences as between systems and processes used to supply OAOs and Eircom's downstream arm and full objective justification for any such differences;
 - (b) Where the standard of Equivalence of Outputs applies, a description of any and all differences as between systems and processes used to supply OAOs and Eircom's downstream arm, and how Equivalence of Outputs is achieved notwithstanding the differences in systems and processes used.
 - (c) The outcome of the Process in respect of the development of the controls required to address the regulatory risks identified, and the justification for the outcome, to include:
 - (a) description of the operation of the control, including the frequency of its operation;
 - (b) description of directory/path details for repository for control evidence.
- 15.2 The documentation referred to in this Section 15 shall be of sufficient clarity and detail to enable ComReg to assess whether Eircom's risk assessment and control and governance measures provide reasonable assurance as to Eircom's compliance with the obligations set out in this Decision Instrument.
- 15.3 Eircom shall keep the Statement of Compliance up to date. In particular and without prejudice to the generality of this obligation Eircom shall update, and submit to ComReg, an updated Statement of Compliance, duly dated and signed and meeting the requirements set out in Section 15.1(i) above, in the following circumstances:
- (i) Where a material change or material changes are made to any of the documentation and information detailed in this Section 15, within one (1) month of such change or changes being made;
 - (ii) Where a new FNA FACO product, service or facility, or an amendment or change to an existing FNA FACO product, service or facility which falls within the scope of the Relevant Regional FACO Markets is introduced, having regard in particular to the requirements in Sections 15.1(iv), 15.1(v) and 15.1(vi), in accordance with the timeline set out in, and as part of the documentation required for the purpose of, Sections 12.8(ii) and 12.9(ii) or as otherwise may be required or agreed by ComReg.

- 15.4 Eircom shall ensure that updates or changes to the Statement of Compliance are easily identifiable. For that purpose Eircom shall highlight all changes made and operate a Version Control and Revision History process which shall extend to any of the documents referenced thereto, duly named and dated that are attached as appendices to the Statement of Compliance.
- 15.5 Eircom shall publish the Statement of Compliance, and updates to the Statement of Compliance, on its publicly available wholesale website within one (1) month of providing it to ComReg, unless otherwise agreed with ComReg.

PART III – FURTHER GENERAL PROVISIONS AND EFFECTIVE DATE

16 STATUTORY POWERS NOT AFFECTED

- 16.1 Nothing in this Decision Instrument shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation (in force prior to or after the Effective Date of this Decision Instrument) from time to time as the occasion requires

17 “SUNSET” PROVISIONS IN RESPECT OF THE RELEVANT URBAN FACO MARKETS

- 17.1 There shall be two Sunset Periods of differing length for the Relevant Urban FACO Markets, dependent on the product as follows:
- (i) the PSTN and ISDN FRA/PRA Urban Sunset Period; and
 - (ii) the ISDN BRA Urban Sunset Period.
- 17.2 Eircom shall not withdraw access to any products, services, facilities or Associated Facilities in the Relevant Urban FACO Markets to which access was previously granted on or before the Effective Date, pursuant to or consistent with an obligation imposed by the Decision Instrument contained in Appendix H to ComReg Decision D05/15 (as amended by the Decision Instruments contained in Annex 3 of ComReg Decision D03/16 and Annexes 1 and 2 of ComReg Decision D11/18), or in respect of which access has been sought on or prior to the Effective Date of this Decision, or in respect of access sought pursuant to Section 17.2. In respect of the PSTN and ISDN FRA/PRA Urban Sunset Period, this obligation is withdrawn with effect from eighteen (18) months from the Effective Date. In respect of the ISDN BRA Urban Sunset Period, this obligation is withdrawn with effect from twelve (12) months from the Effective Date.

- 17.3 In respect of the PSTN and ISDN FRA/PRA Urban Sunset Period, the obligations imposed by Section 7 of the Decision Instrument contained in Appendix H to ComReg Decision D05/15 shall apply to, and continue in force for a period of nine (9) months from the Effective Date of this Decision Instrument in respect of requests for the provision of Access to any existing products, services, facilities or Associated Facilities in respect of FNA FACO in the Relevant Urban FACO Markets including Associated Facilities.
- 17.4 In respect of the ISDN BRA Urban Sunset Period, the obligations imposed by Section 7 of the Decision Instrument contained in Appendix H to ComReg Decision D05/15 shall apply to, and continue in force for a period of two (2) months from the Effective Date of this Decision Instrument in respect of requests for the provision of Access to any existing products, services, facilities or Associated Facilities in respect of FNA FACO in the Relevant Urban FACO Markets including Associated Facilities.
- 17.5 Access to any products, services, facilities or Associated Facilities in the Relevant Urban FACO Markets provided by Eircom to any Undertaking pursuant to the obligations contained in Sections 17.2 and/or 17.3 above, shall be provided at prices no higher than those prevailing for such products, services, facilities or Associated Facilities on the Effective Date, in respect of the PSTN and ISDN FRA/PRA Urban Sunset Period, for the duration of the eighteen (18) month period and the nine (9) month period respectively and in respect of the ISDN BRA Urban Sunset Period, for the duration of the twelve (12) month period and the two (2) month period respectively.
- 17.6 During the PSTN and ISDN FRA/PRA Urban Sunset Period, in respect of any line migrated from SB-WLR or POTS-based NGA (VUA or Bitstream), Eircom shall provide an escalation process (either manual or automatic) for the rollback of the line to the original SB-WLR or POTS-based NGA service, at the request of the Access Seeker concerned, where the un-jumpering task remains outstanding. The escalation process must not require un-jumpering of the original line to take place followed by subsequent re-jumpering prior to restoring SB-WLR. While the jumper is in place, Eircom shall provide the ability to electronically restore the original SB-WLR or POTS-based NGA service. This obligation applies within 5 months of the Effective Date of this Decision for the period of the PSTN and ISDN FRA/PRA Urban Sunset Period.
- 17.7 In respect of amendments or changes to the RIO and/or the RIO Price List resulting from the offer of a new product, service or facility under section 17.6 above, the following obligations will apply:

- (i) Eircom shall, unless otherwise agreed by ComReg, make publicly available and publish on Eircom's publicly available wholesale website at least 1 month in advance of coming into effect, any proposed amendments or changes to the RIO and/or the RIO Price List, or the making available of any product, service or facility, pertaining to information in respect of product specification, services, facilities and processes resulting from the offer of a new product, service or facility under section 17.6, together with a Statement of Compliance which meets the requirements detailed in Section 15 of this Decision Instrument.
 - (ii) Eircom shall notify ComReg in writing with the information to be published at least 1 month in advance of any such publication taking place, that is, 2 months prior to any amendments or changes coming into effect. The periods referred to in this Section may be varied with the agreement of ComReg or at ComReg's discretion.
- 17.8 From the Mid-Term Assessment Decision Date, where ComReg determines that regulation is no longer necessary in certain EAs in the Regional FACO Markets, two separate sunset periods shall apply:
 - (i) The PSTN and ISDN FRA/PRA Regional Mid-term Sunset Period; and
 - (ii) The ISDN BRA Regional Mid-term Sunset Period.
- 17.9 For PSTN and ISDN FRA/PRA services, Eircom shall not withdraw access to these products, or related services, or facilities on the Regional FACO Markets for a period of 9 months from the Mid-term Assessment Decision Date and during the first 3 months of that period, Eircom will be required to provide access to new orders for the relevant products, services and facilities.
- 17.10 For ISDN BRA services, Eircom shall not withdraw access to these products, or related services, or facilities on the Regional FACO Markets for a period of 6 months from the Mid-term Assessment Decision Date and during the first 1 month of that period, Eircom will be required to provide access to new orders for the relevant products, services and facilities.
- 17.11 In EAs within the Regional FACO Markets found to be competitive in the Mid-Term Assessment, Access to any products, services, facilities or Associated Facilities provided by Eircom shall be provided at prices no higher than those prevailing for such products, services, facilities or Associated Facilities on the Mid-term Assessment Decision Date.

18 TRANSITIONAL PROVISION IN RESPECT OF THE PSTN WLR ELEMENT OF THE SB-WLR PRICE CONTROL

- 18.1 Save as provided for in Section 17 of this Decision Instrument, the following obligations continue to apply and are only withdrawn with effect from the date on which the Decision Instrument contained in the Response to Consultation and Final Decision on the Access Network Model Consultation takes effect:
- (i) the obligations at Sections 12.6 to 12.7A of the Decision Instrument contained in Appendix H of ComReg Decision D05/15, which were inserted by Section 4.1 of the Decision Instrument contained in Annex 3 of ComReg Decision D03/16.

19 MAINTENANCE OF OBLIGATIONS

- 19.1 Save as provided for at Section 19.2 of this Decision Instrument, unless expressly stated otherwise in this Decision Instrument, all obligations and requirements contained in Decision Notices and Directions made by ComReg, applying to Eircom, and in force immediately prior to the Effective Date of this Decision Instrument, continue in force and Eircom shall comply with the same.
- 19.2 For the avoidance of doubt, to the extent that there is any conflict between a Decision Instrument dated prior to the Effective Date and Eircom's obligations set out herein, it is the latter which shall prevail.
- 19.3 If any Section(s), clause(s), or provision(s), or portion(s) thereof, contained in this Decision Instrument is(are) found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that(those) Section(s), clause(s), or provision(s), or portion(s) thereof shall, to the extent required, be severed from this Decision Instrument and rendered ineffective as far as possible without modifying the remaining Section(s), clause(s), or provision(s), or portion(s) thereof, of this Decision Instrument, and shall not in any way affect the validity or enforcement of this Decision Instrument or other Decision Instruments.

20 WITHDRAWAL

- 20.1 The following Decision Instruments are (to the extent still extant) hereby withdrawn at the Effective Date:
- (i) the Decision Instruments contained in Appendices 6, 7 and 8 of ComReg Decision D12/14;
 - (ii) save as provided for in Section 17 and Section 18 of this Decision Instrument, the Decision Instrument contained in Appendix H of ComReg D05/15;
 - (iii) save as provided for in Section 17 and Section 18 of this Decision Instrument, the Decision Instrument contained in Annex 3 of ComReg Decision D03/16;

- (iv) section 4.4 of the Decision Instrument contained in Annex 1 of ComReg Decision D11/18 for the Urban FACO Markets; and
- (v) section 4.5 of the Decision Instrument contained in Annex 2 of ComReg Decision D11/18 for the Urban FACO Markets.

21 PUBLICATION AND NOTIFICATION

21.1 This Decision Instrument shall be published on ComReg's website, www.comreg.ie and notified to Eircom.

22 EFFECTIVE DATE

22.1 The Effective Date of this Decision Instrument shall be the date of its notification to Eircom and it shall remain in force until further notice by ComReg.

ROBERT MOURIK

COMMISSIONER

THE COMMISSION FOR COMMUNICATIONS REGULATION

THE XX DAY OF XXXX 2021

Non-confidential

Annex: 15 Glossary of Terms

Acronym	Full Title
3CT	Three Criteria Test
ADSL	Asymmetric Digital Subscriber Line
BEREC	Body of European Regulators for Electronic Communications
CA	Carrier Access
CATI	Computer Aided Telephone Interview
CATV	Cable Television Network
CBP	Countervailing Buyer Power
CDR	Customer Data Records
CGA FACO	Current Generation Access Fixed Access and Call Origination
CLT	Critical Loss Test
CPE	Customer Premises Equipment
CPS	Carrier Pre-Select
CS	Carrier Select
CSH	Customer-Sited Handover
DOCSIS	Data Over Cable Service Interface Specification
EC	European Commission
EEO	Equally Efficient Operator
EoI	Equivalence of Inputs
EoO	Equivalence of Outputs
EU	European Union
FA	Fixed Access

FACO	Fixed Access and Call Origination
FL LRAIC+	Forward-Looking Long Run Average Incremental Cost plus
FNA	Fixed Narrowband Access
FTS	Fixed Telephony Services
FTTC	Fibre to the Cabinet
FTTP	Fibre to the Premises
FVCO	Fixed Voice Call Origination
FVCT	Fixed Voice Call Termination
FWA	Fixed Wireless Access
GAP	Geographically Averaged Pricing
HCA	Historical Cost Accounts
HL-FA	Higher Level Fixed Access
HL-FACO	High-Level Fixed Access and Call Origination
HL-RFVA	High-Level Retail Fixed Voice Access
HL-RFTS	High-Level Retail Fixed Telephony Service
HM	Hypothetical Monopolist
HMT	Hypothetical Monopolist Test
IBH	In Building Handover
IN	Intelligent Network
IP	Internet Protocol
ISDN	Integrated Services Digital Network
ISDN BRA	ISDN Basic Rate Access
ISDN FRA	ISDN Fractional Rate Access

ISDN PRA	ISDN Primary Rate Access
ISH	In-Span Handover
KPI	Key Performance Indicator(s)
LL-FA	Lower Level Fixed Access
LL-FACO	Low-Level Fixed Access and Call Origination
LL-RFVA	Low-Level Retail Fixed Voice Access
LL-RFTS	Low-Level Retail Fixed Telephony Service
LLU	Local Loop Unbundling
LS	Line Share
LV-CPER	Low-Value Customer Premises Equipment Rental
MTS	Mobile Telephony Service(s)
MVCT	Mobile Voice Call Termination
NBP	National Broadband Programme
NBI	National Broadband Ireland
NDA	Non-Disclosure Agreement
NEH	Near-End Handover
NGA	Next Generation Access
NGA FACO	Next Generation Access Fixed Access and Call Origination
NRA	National Regulatory Authority
NRT	Net Revenue Test
NTC	Number Translation Code(s)
OAO	Other Authorised Operator
OSS	Operational Support Systems

OTT	Over the Top
PABX	Private Automated Branch Exchange
PAC	Payphone Access Charge
POI	Point of Interconnection
PRA	Primary Rate Access
PRS	Premium Rate Service(s)
PSTN	Public Switched Telephone Network
RFTS	Retail Fixed Telephony Service(s)
RFVA	Retail Fixed Voice Access
RFVC	Retail Fixed Voice Call(s)
RIA	Regulatory Impact Assessment
RIO	Reference Interconnect Offer
RSU	Remote Subscriber Unit
SAB	Standalone Broadband
SB-WLR	Single Billing-Wholesale Line Rental
SDSL	Symmetric Digital Subscriber Line
SEO	Similarly Efficient Operator
SIP	Session Initiation Protocol
SLA	Service Level Agreement
SLU	Sub-Loop Unbundling
SME	Small to Medium Enterprise
SMP	Significant Market Power
SoC	Statement of Compliance

SP	Service Provider
SSNIP	Small but Significant and Non-transitory Increase in Price
STRPL	Switched Transit and Routing Price List
SV	Switchless Voice
TD LRAIC+	Top-Down Long Run Average Incremental Cost plus
TDM	Time-Division Multiplexing
TFEU	Treaty on the Functioning of the European Union
UG	Unified Gateway
ULMP	Unbundled Local Metallic Path
USO	Universal Service Obligations
VDSL	Very-high-bit-rate Digital Subscriber Line
VoB	Voice over Broadband
VoIP	Voice over Internet Protocol
VUA	Virtual Unbundled Access
VULA	Virtual Unbundled Local Access
WACC	Weighted Average Cost of Capital
WCA	Wholesale Central Access
WEIL	Wholesale Ethernet Interconnection Links
WLA	Wholesale Local Access
WLV	White Label Voice
WLR	Wholesale Line Rental
xDSL	Digital Subscriber Line broadband technology