



An Coimisiún um  
**Rialáil Cumarsáide**  
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

Consultation and Draft Decision

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# 1 Executive Summary

## 1.1 Introduction

- 1.1 In this Consultation, ComReg assesses the extent of competition on four wholesale markets for the provision of Fixed Access and Call Origination (hereafter, '**FACO**'), and three retail markets for the provision of Retail Fixed Telephony Services (hereafter, '**RFTS**'). The wholesale markets examined, and as further described below, are the:
- (a) Urban Low-Level Fixed Access and Call Origination market (hereafter, the '**Urban LL-FACO Market**');
  - (b) Urban High-Level Fixed Access and Call Origination market (hereafter, the '**Urban HL-FACO Market**');
  - (c) Regional Low-Level Fixed Access and Call Origination market (hereafter, the '**Regional LL-FACO Market**');
  - (d) Regional High-Level Fixed Access and Call Origination market (hereafter, the '**Regional HL-FACO Market**');
- 1.2 The three retail markets examined are the markets for:
- (a) Standalone Low-Level RFTS (hereafter, '**Standalone LL-RFTS**') in the State;
  - (b) Bundled Low-Level RFTS (hereafter, '**Bundled LL-RFTS**') in the State; and
  - (c) High-Level RFTS (hereafter, '**HL-RFTS**') in the State.
- 1.3 In general, FACO is a wholesale input purchased by Access Seekers which do not operate their own networks, and which ultimately permits the provision of RFTS to end users. Those service providers with their own networks can also self-supply FACO. FACO and RFTS both consist of an access component (line rental), and a calling component.
- 1.4 Fixed Voice Call Origination (hereafter, '**FVCO**') is the calling component for call conveyance and wholesale line rental (hereafter, '**WLR**') is the access component. FVCO and WLR allow an SP to sell a RFTS, with line rental and calls typically being sold together to the end user at the retail level.
- 1.5 Similarly, RFTS consists of both a Retail Fixed Voice Calling (hereafter, '**RFVC**') component and a Retail Fixed Voice Access (hereafter, '**RFVA**') component, or retail line rental (together, RFVC and RFVA are an RFTS). RFTS can be sold either on a standalone basis, or bundled with other services (such as broadband, mobile telephony or TV services).



- 1.6 Where ComReg identifies that any SP operating in the FACO or RFTS markets has Significant Market Power (hereafter, '**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 must impose at least one of a range of *ex ante* regulatory obligations on SPs designated with SMP. At the wholesale level, these obligations 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.
- 1.7 In this Consultation, ComReg defines the FACO and RFTS 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 proposes regulatory obligations that it intends to impose on the SMP SP to address competition problems that would be likely to 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.
- 1.8 ComReg's overall preliminary conclusion in this Consultation is that, based on the application of the Three Criteria Test (hereafter, the '**3CT**') detailed below,<sup>1</sup> 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 suggests that the three RFTS markets have moved towards a situation of effective competition over time. In this respect, there is evidence of existing competition within 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.

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<sup>1</sup> The 3CT set out in the 2014 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 2020) 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.



- 1.9 In respect of the four FACO markets (together, the '**Relevant FACO Markets**'), ComReg concludes on a preliminary basis, and 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 (hereafter, '**NG**') broadband which is capable of enabling the provision of wholesale and/or retail Managed Voice over Internet Protocol ('**VoIP**').<sup>2</sup> ComReg considers that NG broadband includes technologies which include a partial or full optical component, including Fibre to the Cabinet (hereafter, '**FTTC**'),<sup>3</sup> Fibre to the Premises (hereafter, '**FTTP**'), and DOCSIS 3.0 which is used to deliver broadband over cable.<sup>4</sup>
- 1.10 Accordingly, ComReg proposes 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 FACO or RFTS (including self-supply), should they so wish.
- 1.11 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 on a preliminary basis that it is appropriate to designate Eircom with SMP on the Regional FACO Markets. Accordingly, and to address identified competition concerns, ComReg proposes to impose a full suite of regulatory remedies on Eircom in the Regional FACO Markets.

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<sup>2</sup> 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 Consultation.

<sup>3</sup> Very high speed Digital Subscriber Line ('**VDSL**') is the underlying technology in FTTC. Accordingly, FTTC includes exchange-based VDSL ('**eVDSL**').

<sup>4</sup> Section 2.2 of open eir's NGA Technical Handbook (v22, dated 22 Jan 2020) 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.

- 1.12 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. This is because Access Seekers are only capable of providing Managed VoIP at a premises that is connected to or passed by wholesale NG broadband which provides a fixed access component of sufficient speed and bandwidth to deliver Managed VoIP. In order to generate a difference in conditions of competition, such network rollout should pass a non-trivial number of premises. Accordingly, given that the rollout of NG broadband networks by Eircom, SIRO, Virgin Media and, on a forward-looking basis, National Broadband Ireland ('**NBI**') (within the footprint of the National Broadband Plan Intervention Area) is ongoing and is expected to continue over the lifetime of this market review, ComReg proposes to carry out a mid-term assessment 24 months after the coming into effect of the decision which will be made on foot of this Consultation, which will reassess conditions of competition in areas falling within the footprint of the Regional FACO Markets only. Depending on the outcome of the mid-term assessment, ComReg may withdraw remedies in certain geographic areas.

## 1.2 Background to the Reviews

- 1.13 The European Commission's (hereafter, the '**EC**') 2014 Recommendation<sup>5</sup> does not identify the FACO market(s) or the RFTS market(s) as one of the recommended markets which are 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 meets 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:
- (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.
- 1.14 If any one of these criteria is not met, then *ex ante* regulation is not justified, and any SMP remedies on the market should be removed.

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<sup>5</sup> 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**'). The EC issued a public consultation on updating the list of recommended markets in February 2019, and intends to adopt an updated list of recommended markets by no later than 21 December 2020. However, this process does not impinge on the assessment of markets set out in this Consultation.

- 1.15 The FACO markets were previously reviewed by ComReg in 2015,<sup>6</sup> while the RFVA markets were previously reviewed in 2014.<sup>7</sup> In both cases, 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.
- 1.16 ComReg carries out its analyses of the RFTS markets and the FACO markets in this Consultation in accordance with the Modified Greenfield Approach (hereafter, '**MGA**') set out in the 2014 Explanatory Note.<sup>8</sup> 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.
- 1.17 ComReg is currently engaged in a separate analysis of its Access Network Model (hereafter, '**ANM**'), and expects to consult on its ANM proposals in Q3 2020 (the '**Separate ANM Pricing Consultation**'). The ANM proposals are likely to impact the price control obligations which ComReg proposes to impose on the Regional LL-FACO Market and the Regional HL-FACO Market, as set out in Section 10 below. It is ComReg's intention that the decisions to be made on foot of this Consultation and the Separate ANM Pricing Consultation will be adopted together. However, in the event that this is not the case, ComReg proposes that the existing price control obligation of cost orientation for PSTN WLR should be maintained for a short transitional period of between 4 to 6 months from the effective date of the Decision which will be made on foot of this Consultation.

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<sup>6</sup> 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> (hereafter, the '**2015 FACO Decision**').

<sup>7</sup> 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> (hereafter, the '**2014 RFVA Decision**'). As set out in greater detail at Section 4 below, ComReg proposes in this Consultation to define 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.

<sup>8</sup> Explanatory Note accompanying the Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation, dated 9.10.2014 (the '**2014 Explanatory Note**'), available at <https://ec.europa.eu/digital-single-market/en/news/explanatory-note-accompanying-commission-recommendation-relevant-product-and-service-markets>.

### 1.3 Retail Market Trends and Developments

- 1.18 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 are likely to have impacted the provision of RFTS. In line with the MGA,<sup>9</sup> these retail trends are discussed in Section 3 of the Consultation, to the extent that they inform the subsequent analysis of the RFTS and FACO markets.
- 1.19 The main SPs operating in the RFTS markets in Ireland are Eircom, Virgin Media, Vodafone, Sky and Pure Telecom and several other smaller SPs.
- 1.20 This Consultation 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 Eurobarometer data, 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 82% in Q4 2019;
  - (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 almost doubled since the last review, increasing from 11.7% of all RFTS traffic, to 20.3% as at Q4 2019. 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

- 1.21 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 consists 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.

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<sup>9</sup> See page 8 of the Explanatory Note to the 2014 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 assumes that no SMP derived regulations are in place in the market under consideration in order to avoid circularity in the analysis.

### 1.4.1 Market Definition

- 1.22 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.
- 1.23 In line with the EC Notice on Market Definition,<sup>10</sup> and the SMP Guidelines,<sup>11</sup> 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 is of preliminary view that the appropriate focal product is standalone narrowband 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.<sup>12</sup>
- 1.24 ComReg notes that Eircom FNA may be delivered over the Public Switched Telephone Network (hereafter, '**PSTN**', which delivers a single voice channel over a line), ISDN Basic Rate Access (hereafter, '**ISDN BRA**', which delivers two voice channels over a line), ISDN Fractional Rate Access (hereafter, '**ISDN FRA**', which delivers 16 voice channels over a line), or ISDN Primary Rate Access (hereafter, '**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.
- 1.25 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.
- 1.26 For that reason, ComReg's preliminary view is that there are two distinct focal products for FNA RFTS, pertaining to low-volume and high-volume RFTS end users:

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<sup>10</sup> 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.

<sup>11</sup> SMP Guidelines 2018 and Notice on Market Definition.

<sup>12</sup> FNA describes Current Generation technology delivered entirely over copper access paths, and includes both PSTN and ISDN access paths.

- (a) Low-Level RFTS (hereafter, '**LL-RFTS**') delivered over PSTN and ISDN BRA; and
  - (b) High-Level RFTS ('**HL-RFTS**') delivered over ISDN FRA and ISDN PRA.
- 1.27 ComReg also considers that RFTS delivered over NG broadband (as described at paragraph 1.9 above) as Managed VoIP is likely to be an effective demand-side substitute to the focal products.
- 1.28 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.
- 1.29 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, no evidence of differentiated pricing or marketing strategies on a sub-national basis and limited differences in demand characteristics across regions.
- 1.30 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 SPs (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.
- 1.31 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.
- 1.32 ComReg's overall preliminary view is that there are therefore three distinct Relevant RFTS Markets (hereafter, 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 NGA broadband,<sup>13</sup> on a standalone basis or on a bundled basis together with any of broadband, television or mobile services.

#### 1.4.2 3CT and Competition Assessment of Relevant RFTS Markets

- 1.33 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 cannot be subject to SMP regulation.
- 1.34 ComReg has assessed all three criteria and has concluded on a preliminary basis that Criteria 1 (the presence of high and non-transitory barriers to entry) and 2 (the market is not likely to tend towards effective competition) are both failed, 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.
- 1.35 *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.
- 1.36 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, ComReg notes that, in any event, given the first two criteria of the 3CT are not met this does not alter ComReg's overall conclusions on the Relevant RFTS Markets.

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<sup>13</sup> 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.

### 1.4.3 Withdrawal of Remedies in the Relevant RFTS Markets

- 1.37 Predicated on the competition analysis carried out in Section 6 concerning the Relevant FACO Markets, ComReg has formed the preliminary view 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 proposes that that existing SMP regulation should be withdrawn. ComReg does not consider that any sunset period in respect of deregulation of the Relevant RFTS Markets is appropriate and ComReg proposes that the SMP obligations should be withdrawn at the effective date of the decision to be adopted on foot of this Consultation.

## 1.5 Summary of FACO Market Assessment

- 1.38 The 2014 Recommendation established that the FVCO market is no longer susceptible to *ex ante* regulation. Given ComReg proposes to define a broader set of Relevant FACO Markets, it nonetheless 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.

### 1.5.1 Market Definition

- 1.39 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.
- 1.40 ComReg proposes to define two separate relevant product markets. These are the Relevant LL-FACO Market and the Relevant HL-FACO Market (the '**Relevant FACO Markets**').
- 1.41 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 (hereafter, '**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.



- 1.42 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 Bitstream<sup>14</sup> offered by Eircom, or VUA<sup>15</sup> offered by Eircom or SIRO).
- 1.43 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 provided on a self-supply basis, or by means of an Access Seeker procuring wholesale NGA broadband inputs.
- 1.44 Both the LL-FACO Market and HL-FACO Market include self-supply, and RFTS delivered as Managed VoIP over wholesale NGA broadband inputs (NG WLA and NG WCA).<sup>16</sup>
- 1.45 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**).
- 1.46 In paragraphs 5.330 to 5.427, ComReg moves on to consider the geographic scope of the Relevant FACO Markets. ComReg forms the preliminary view 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 enables the delivery of both White Label VoIP and Managed VoIP RFTS. On this basis, ComReg proposes to define two sub-national geographic markets, one characterised by comparatively greater levels of competition, and a separate sub-national geographic market characterised by a comparative lack of competition.

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<sup>14</sup> '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 (hereafter, 'PoP').

<sup>15</sup> 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 NGA 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.

<sup>16</sup> 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.

- 1.47 ComReg proposes an objective criterion that an Eircom Exchange Area (hereafter, 'EA') must meet for consideration as to which sub-national geographic market it falls into, based on its competitive conditions. This criterion is that, at an EA, 80% of premises must be passed by wholesale NGA broadband capable of delivering Managed VoIP.
- 1.48 ComReg's preliminary view is that there are four separate, distinct sub-national geographic markets in the provision of LL-FACO and HL-FACO.
- 1.49 ComReg therefore proposes to define a total of four Relevant FACO Markets:
- (a) the **Urban LL-FACO Market**, comprised of the 459 Exchange Areas where the 80% coverage criterion is met;
  - (b) the **Regional LL-FACO Market**, comprised of the 744 Exchange Areas where the 80% coverage criterion has not been met;
  - (c) the **Urban HL-FACO Market**, comprised of the 459 Exchange Areas where the 80% coverage criterion is met; and
  - (d) the **Regional HL-FACO Market**, comprised of the 744 Exchange Areas where the 80% coverage criterion has not been met.
- 1.50 The Urban LL-FACO Market and the Urban HL-FACO Market are collectively referred to as the **Urban FACO Markets**,<sup>17</sup> while the Regional LL-FACO Market and the Regional HL-FACO Market are collectively referred to as the **Regional FACO Markets**.<sup>18</sup>

### 1.5.2 Competition Analysis of Relevant FACO Markets

- 1.51 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.
- 1.52 ComReg has formed the preliminary view 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.

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<sup>17</sup> The Urban FACO Markets cover approximately 1,652,480, or 74%, of premises in the State.

<sup>18</sup> The Regional FACO Markets cover approximately 586,907, or 26%, of premises in the State.

- 1.53 In contrast, ComReg has formed the preliminary view 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).
- 1.54 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 (hereafter, '**CBP**').
- 1.55 In respect of **existing competition**, ComReg's preliminary view is that, 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.
- 1.56 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.
- 1.57 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.
- 1.58 Barriers to entry to the Relevant FACO Markets may, to some extent, be avoidable for SPs which currently operate NG broadband networks capable of delivering FACO, either on a wholesale-only basis (e.g. SIRO), 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 FACO Access Seekers, without incurring significant sunk costs. ComReg also considers that alternative RFTS providers such as Virgin Media would be unlikely to commence the provision of FACO over the period of this review.
- 1.59 Overall, ComReg's preliminary view is 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.

- 1.60 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's preliminary view 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.
- 1.61 For these reasons, ComReg concludes on a preliminary basis that Eircom should be designated with SMP on the Regional LL-FACO Market and the Regional HL-FACO Market.

### 1.5.3 Competition Problems and Impacts

- 1.62 In Section 9 of this Consultation, 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). In the absence of 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.

### 1.5.4 SMP obligations to be imposed on the Regional FACO Markets

- 1.63 To mitigate identified potential competition problems that could arise from the exercise of market power by Eircom, ComReg has proposed that a range of proportionate *ex ante* regulatory remedies should be imposed 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 proposes that Eircom should be subject to the following largely FNA-based SMP obligations on the Regional LL-FACO Market, and also on the Regional HL-FACO Market:
- (a) Access obligations;
  - (b) Transparency obligations;
  - (c) Non-discrimination obligations;
  - (d) Statement of Compliance obligations;
  - (e) Price Control and Cost Accounting obligations; and
  - (f) Accounting Separation obligations.

- 1.64 The price control obligations which ComReg proposes to impose 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 detailed nature of the price control which ComReg proposes to apply to PSTN WLR. As set out in greater detail at paragraph 1.17 above, it is important to note that ComReg also intends to publish the Separate ANM Pricing Consultation in Q3 2020, which may impact the proposed price control obligation in respect of PSTN WLR, as described at Section 10 below.
- 1.65 Consistent with its position in the 2015 FACO Decision, ComReg is not imposing obligations on Eircom with respect to access to NGA FACO (independent of 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 service providers to develop their own Managed VoIP-based capabilities over the longer term, thereby encouraging more effective and sustainable competition.

### 1.5.5 Withdrawal of Remedies in the Urban FACO Market

- 1.66 As set out in Section 7 of this Consultation, ComReg's preliminary view is 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.
- 1.67 From the effective date of the decision arising from this Consultation, ComReg proposes that an 18-month sunset period would apply, by means of which Eircom would be effectively 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 is proposed (which will run in parallel with the 18-month sunset period described above). 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).<sup>19</sup>
- 1.68 During the relevant sunset periods, Eircom is to be required to maintain access at existing prices, but will not be required to meet other obligations (for example, in relation to transparency, non-discrimination etc.).

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<sup>19</sup> ComReg would not expect Eircom to significantly alter its terms and conditions given the presence of competition.

- 1.69 In line with the removal of obligations from the Relevant RFTS Markets, ComReg also proposes to 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.

## 1.6 Next Steps

- 1.70 ComReg invites views from interested parties on the issues analysed in this Consultation, with the procedure and deadline for the submission of responses set out in paragraph 2.56 – with responses to the Consultation due by 17.30 on **Wednesday, August 12<sup>th</sup>, 2020**.

## 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 telephone network, whether the Public Switched Telephone Network (**'PSTN'**) or other network, for the purpose of making and/or receiving telephone calls. RFVA<sup>20</sup> provides the network access necessary for the provision by a Service Provider (**'SP'**) of a Retail Fixed Voice Calls (**'RFVC'**) service. While it is possible for end users to purchase RFVA and RFVC separately from different SPs, end users typically exhibit a strong preference for purchasing a bundle of RFVA and RFVC from a single SP. Throughout this Consultation, 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 (hereafter, **'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 services 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 either fixed narrowband or broadband access. **Fixed Narrowband RFTS** (that is, delivered over a traditional copper telephone line)<sup>21</sup> 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 fixed narrowband 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 fixed narrowband access (**'FNA'**) network (typically, Single Billing-Wholesale Line Rental (**'SB-WLR'**), White Label Voice (hereafter, **'WLV'**) or, on a very limited basis, Carrier Pre-Select (hereafter, **'CPS'**)).

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<sup>20</sup> Commonly referred to as '(retail) Line Rental'.

<sup>21</sup> Traditional copper lines are classified according to the number of voice channels available on a line. PSTN provides a single voice channel on a line, while the Integrated Services Digital Network (**'ISDN'**) delivers multiple voice channels over a single line: 2 channels in the case of ISDN Basic Rate Access (hereafter, **'BRA'**), 16 in the case of ISDN Fractional Rate Access (hereafter, **'FRA'**), and 30 in the case of ISDN Primary Rate Access (hereafter, **'PRA'**). Service delivered over PSTN is often described as 'Plain Old Telephony Service', or **'POTS'**.



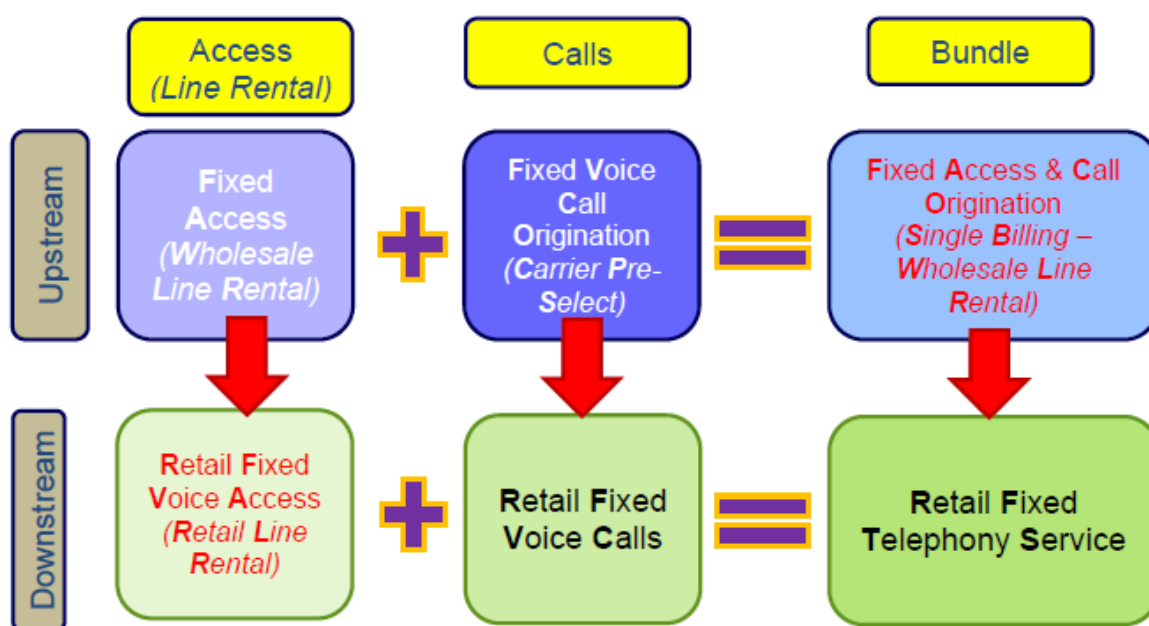
- 2.4 Broadband-based **RFTS** is provided to end users by SPs who offer dedicated 'Managed Voice over Internet Protocol' (hereafter, '**Managed VoIP**') over broadband, rather than over FNA (traditional copper) lines. In the case of **Direct** provision, RFTS is provided by the SP directly on its own 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 NGA broadband inputs from SPs including Eircom, SIRO, and BT Ireland (hereafter, '**BT**'). ComReg expects that, upon rollout, National Broadband Ireland will also facilitate the provision of broadband-based RFTS. Managed VoIP differs from Unmanaged VoIP (hereafter, '**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 (hereafter, '**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 Consultation as 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 FVCT enables Access Seekers who do not operate their own network to offer RFTS to end users.<sup>22</sup> FACO is therefore a key input which facilitates the ability of SPs 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.

<sup>22</sup> Residential and business retail customers.

- 2.11 Eircom also provides a WLV product. This means that 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 associated with 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. In the 2015 FACO Decision,<sup>23</sup> WLV was described as Wholesale Switchless Voice (hereafter, '**Wholesale SV**').
- 2.12 Finally, a very small number of SPs purchase CPS, where an end user wishes to purchase its retail line rental (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.<sup>24</sup>
- 2.14 In accordance with its statutory obligation to review certain electronic communications markets, this Consultation presents ComReg's preliminary views on its analysis of the wholesale markets for the provision of FACO (the candidate '**Relevant FACO Markets**') and, separately, its analysis of the retail markets for the provision of RFTS (the candidate '**Relevant RFTS 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 Relevant Markets 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 competition and the inability for end users to make calls across networks;
  - (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.

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<sup>23</sup> 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> (hereafter, the '**2015 FACO Decision**').

<sup>24</sup> [https://www.openeir.ie/uploadedFiles/Content/Products/MNS/White\\_Label\\_Voice\\_Services\\_Factsheet.pdf](https://www.openeir.ie/uploadedFiles/Content/Products/MNS/White_Label_Voice_Services_Factsheet.pdf)

- 2.16 Remedies imposed by ComReg to date – and also by National Regulatory Authorities (hereafter, ‘**NRAs**’) in other European Union (hereafter, ‘**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 Consultation, ComReg presents its preliminary findings on its analysis of the Relevant Markets. The analysis set out in this Consultation adopts the approach recommended by the European Commission (‘**EC**’) and, in doing so, takes the utmost account of:
- (a) 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**;
  - (b) The **SMP Guidelines**<sup>25</sup> and on market analysis and the assessment of SMP. The SMP Guidelines were accompanied by the SMP Explanatory Note;<sup>26</sup> and
  - (c) The 2005 Accounting Separation and Cost Accounting Recommendation.<sup>27</sup>
- 2.18 ComReg also takes account of:
- (a) The **Notice on Market Definition** for the purposes of Community competition law; and
  - (b) Any relevant common positions adopted by the Body of European Regulators for Electronic Communications (hereafter, ‘**BEREC**’), which is the coordinating and policy-making body for European telecommunications NRAs.<sup>28</sup>
- 2.19 ComReg also has regard to any relevant comments made by the EC, pursuant to Article 7 of the Framework Directive,<sup>29</sup> with respect to other EU NRAs’ market analyses.

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<sup>25</sup> 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**’).

<sup>26</sup> 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**’).

<sup>27</sup> 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**’).

<sup>28</sup> 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.

<sup>29</sup> 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**’).

- 2.20 This Consultation 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. ComReg seeks feedback from all interested parties on the preliminary views set out in this Consultation.
- 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 This market review is being undertaken by ComReg in accordance with the obligation under the Framework Directive<sup>30</sup> (transposed into Irish law by the Framework Regulations)<sup>31</sup> that NRAs should analyse relevant markets, taking utmost account of the 2014 Recommendation and the SMP Guidelines.
- 2.23 Regulation 26 of the Framework Regulations<sup>32</sup> requires that ComReg, taking the utmost account of the 2014 Recommendation and of the SMP Guidelines, defines relevant markets appropriate to national circumstances, in accordance with the principles of competition law.
- 2.24 The EC 2014 Recommendation defines neither the Relevant FACO Market (nor its constituent FVCO or FA components), nor the Relevant RFVA Market as being susceptible to *ex ante* regulation.
- 2.25 ComReg notes that the EC, in the earlier 2007 Recommendation<sup>33</sup> (which was replaced by the 2014 Recommendation), identified the markets for RFVA and FVCO as being susceptible to *ex ante* regulation.
- 2.26 The RFVA market was described in the following terms:<sup>34</sup>
- “Access to the public telephone network at a fixed location for residential and non-residential customers (hereafter, ‘Market 1’)”*
- 2.27 The FVCO market was described in the following terms:

<sup>30</sup> See, in particular, Article 16 of the Framework Directive.

<sup>31</sup> European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011) (the ‘**Framework Regulations**’).

<sup>32</sup> This provision is mirrored at Article 64 of the EECC.

<sup>33</sup> 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**’)

<sup>34</sup> Annex to the 2007 Recommendation.

*“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’)”*

- 2.28 Given that the 2007 Recommendation has been replaced by the 2014 Recommendation, 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 2014 Explanatory Note, and reiterated at Article 67(1) of the European Electronic Communications Code (hereafter, the ‘**EECC**’).<sup>35</sup>
- 2.29 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.
- 2.30 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.
- 2.31 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 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.

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<sup>35</sup> DIRECTIVE (EU) 2018/1972 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2018 establishing the European Electronic Communications Code (the ‘**EECC**’).

- 2.32 In particular, Regulation 25 of the Framework Regulations<sup>36</sup> requires that, where ComReg determines, as a result of a market analysis and in accordance with Regulation 27,<sup>37</sup> that a given market (defined in accordance with Regulation 26)<sup>38</sup> is not effectively competitive, ComReg is obliged under Regulation 27(4) thereof to designate an Undertaking<sup>39</sup> (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.
- 2.33 As set out at paragraph 1.16 above, ComReg applies the MGA 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**,<sup>40</sup> 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),<sup>41</sup> and Regulation 16 of the Framework Regulations;<sup>42</sup> and
  - (c) Only imposed following consultation in accordance with Regulations 12 and 13 of the Framework Regulations.
- 2.34 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.

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<sup>36</sup> This provision is mirrored at Article 63 of the EECC.

<sup>37</sup> This provision is mirrored at Article 67 of the EECC.

<sup>38</sup> This provision is mirrored at Article 64 of the EECC.

<sup>39</sup> 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".

<sup>40</sup> European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011) (the '**Access Regulations**'). This provision is mirrored at Article 68 of the EECC.

<sup>41</sup> Communications Regulation Act 2002 (No. 20 of 2002), as amended (the '**Communications Regulation Act 2002 (as amended)**').

<sup>42</sup> The general objectives of the EECC are laid out at Article 3 thereof.



- 2.35 In addition to conducting a public consultation in accordance with Regulation 12 of the Framework Regulations,<sup>43</sup> ComReg is required by Regulation 27(1) of the Framework Regulations<sup>44</sup> to carry out an analysis of the Relevant Markets, consulting, where appropriate, with the Competition and Consumer Protection Commission (hereafter, the '**CCPC**') under section 34 or 47G of the Competition Act 2002 (as amended).<sup>45</sup>
- 2.36 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.<sup>46</sup>
- 2.37 ComReg also notes that the EECC<sup>47</sup> entered into force on 20 December 2018. The EECC replaces the EU Common Regulatory Framework (which included the Framework Directive and the Access Directive)<sup>48</sup> which was adopted in 2002 and amended in 2009. With some limited exception, Member States are required to transpose the EECC into national law 21 December 2020.
- 2.38 As the EECC has not yet been transposed into Irish law, the legal basis for this market review is under the existing statutory regime. Whilst publication of this Consultation occurs before the EECC has been transposed into Irish law, ComReg is mindful of the EECC in developing its proposals in this Consultation. In particular, while there are significant continuities between the existing regulatory regime, and the regime envisaged under the EECC, the EECC has made a number of amendments to both the principles and substance of the regulatory regime, and it is appropriate that, on a forward-looking basis, any such changes are acknowledged in this Consultation, including any changes to the General Objective 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. ComReg also notes that legislation transposing the EECC into Irish law is not yet available. Insofar as the subject matter under this Consultation is concerned, the legislation under the EECC governing market analysis is not substantially different to existing legislation. Therefore, in its final decision on this Consultation, ComReg intends to replace references to existing national legislation used in this Consultation with references to the corresponding national legislation that will transpose the Code.

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<sup>43</sup> This provision is mirrored at Article 23 of the EECC.

<sup>44</sup> This provision is mirrored at Article 67(1) of the EECC.

<sup>45</sup> Competition Act 2002 (No. 14 of 2002), as amended, (hereafter, the '**Competition Act 2002 (as amended)**').

<sup>46</sup> This provision is mirrored at Article 32(3) of the EECC.

<sup>47</sup> Directive (EU) 2018/1972 of the European Parliament and the of the Council of 11 December 2018 establishing the European Electronic Communications Code.

<sup>48</sup> Directive 2002/21/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 (Access Directive) as amended by Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009 (hereafter, the '**Access Directive**').



- 2.39 Overall, in preparing this Consultation, 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.

## 2.4 Previous Reviews of the Relevant Markets

- 2.40 The Relevant RFVA Markets have, to date, been regulated in accordance with ComReg's 2014 RFVA Decision (the '**2014 RFVA Decision**').<sup>49</sup> The 2014 RFVA Decision designated Eircom as having SMP on each of the Standalone Low-Level Voce Access (hereafter, '**Standalone LLVA**'), Bundled Low-Level Voice Access (hereafter, '**Bundled LLVA**'), and High-Level Voice Access (hereafter, '**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.
- 2.41 The remedies applied to the Relevant RFVA Markets in the 2014 RFVA Decision have been amended over time, and specific remedies have been removed or altered by the 2015 FACO Decision and the 2018 Bundles Decision.<sup>50</sup>
- 2.42 The **Relevant FACO Markets** have, to date, been regulated in accordance with ComReg's 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, FACO 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.
- 2.43 The 2015 FACO Decision imposed regulatory obligations on Eircom in the form of access, transparency, non-discrimination, price control, accounting separation and cost accounting.

## 2.5 Current Review of the Relevant Markets

- 2.44 It is now appropriate to carry out a further review of both the Relevant FACO Markets and Relevant RFVA Markets (together, the '**Relevant Markets**'), having regard to market developments and the effluxion of time since previous analyses.

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<sup>49</sup> 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**').

<sup>50</sup> 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**').

## 2.6 Information Sources

- 2.45 As part of this market review, ComReg has 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, in detail, 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 its preliminary views, as set out in this Consultation.
- 2.46 In conducting its analysis, ComReg has drawn on data from several sources, including:
- (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 1 and Annex 2 of this Consultation;
  - (b) Information provided by SPs in response to detailed Informal Information Requests (hereafter, '**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) (hereafter, '**QKDR(s)**');<sup>51</sup> and
  - (e) Other information in the public domain.
- 2.47 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.

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<sup>51</sup> The most recent ComReg QKDR (Q4 2019) is available online at <https://www.comreg.ie/industry/electronic-communications/market-information/quarterly-key-data-report/>.

- 2.48 As part of the 2019 Market Research, 2,011 residential households were surveyed through face-to face interviews<sup>52</sup> and 501 SMEs<sup>53</sup> were surveyed via a computer aided telephone interview (hereafter, 'CATI'), with the person interviewed being the individual responsible for selecting the relevant household or business premises' telecommunications provider(s).
- 2.49 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.
- 2.50 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 Consultation.
- 2.51 It should be noted that, rather than being definitive, the 2019 Market Research informs the analysis throughout this Consultation, 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.

## 2.7 Consultation Process

- 2.52 As noted above, the purpose of this Consultation is to set out ComReg's preliminary views on its analysis of the Relevant Markets (including product and geographic definition, competition analysis and remedies, as appropriate).
- 2.53 ComReg invites all interested parties to respond to the questions set out in this Consultation, and to comment on any other aspect of the Consultation.
- 2.54 In so doing, respondents are requested to clearly explain the reasoning for their response, indicating the specific relevant paragraph numbers within the Consultation to which their response refers, along with all relevant factual or other evidence supporting views presented. Respondents should submit their views in accordance with the instructions set out in this Consultation.

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<sup>52</sup> See 2019 Residential Market Research in Annex 1.

<sup>53</sup> See 2019 SME Market Research in Annex 2.

- 2.55 Respondents should also be aware that all non-confidential responses to this Consultation will be published, subject to the provisions of ComReg's Guidelines on the treatment of confidential information.<sup>54</sup> **Respondents should ensure that a non-confidential version of their response is provided by the closing date set out below, which clearly sets out which specific text respondents consider to be confidential. Confidential elements of responses must be clearly marked as such, using the following format: [ ~~text deemed to be confidential~~ ], and be set out in a separate document which must also be provided to ComReg by the closing date set out below.**
- 2.56 All responses should be sent by post or email to the address below to arrive on or before 17.30 on Wednesday, August 12<sup>th</sup>, 2020. ComReg is providing an 8 week period within which interested parties may respond. Responses received after this date will not be considered. Responses should be marked for the attention of:
- Dave O'Connell  
Commission for Communications Regulation  
1 Dockland Central  
Guild Street  
Dublin 1  
D01 E4X0  
Ph: +353 1 804 9687  
Email: [wholesaleconsult@comreg.ie](mailto:wholesaleconsult@comreg.ie)
- 2.57 In submitting comments, respondents are requested to provide a copy of their submissions in an unprotected electronic format in order to facilitate their subsequent publication by ComReg.
- 2.58 This is a non-confidential version of the Consultation. Certain information within the Consultation has been redacted for reasons of confidentiality and commercial sensitivity, with such redactions indicated by the symbol ~~. Should an individual SP wish to review its own redacted information, it should make a request for such in writing to ComReg (to the person identified above) and indicate the specific paragraph numbers within which the redacted information being requested is contained. ComReg will consider requests for redacted information and will, subject to the protection of commercially sensitive and confidential information, respond accordingly.~~

## 2.8 Structure of the Consultation

- 2.59 The remainder of this Consultation 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;

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<sup>54</sup> See ComReg Document 05/24, 'Guidelines on the treatment of confidential information', March 2005. <https://www.comreg.ie/csv/downloads/ComReg0524.pdf>

- (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 proposal to withdraw 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 proposed 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 proposal whereby regulation may, as appropriate, be removed from the Urban FACO Markets;
- (j) **Section 12** sets out the Regulatory Impact Assessment (hereafter, 'RIA') of the proposed approach to regulation in the Relevant FACO Markets;
- (k) **Section 13** sets out the next steps following publication of this Consultation;
- (l) **Annex: 1** 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;
- (m) **Annex: 2** 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;
- (n) **Annex: 3** describes the variety of fixed and mobile voice telephony products currently offered to Irish consumers;
- (o) **Annex: 5** 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 Consultation (in the context of indirect constraints);
- (p) **Annex: 6** provides an overview of the economic approach used to assess whether different products fall within the same relevant product market;

- (q) **Annex: 7** 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;
- (r) **Annex: 8** provides an analysis of a range of criteria considered other than those set out in Section 7 when assessing whether an SP has SMP;
- (s) **Annex: 9** sets out in detail ComReg's approach to the FACO geographic market definition exercise;
- (t) **Annex: 10** lists the Exchange Areas falling into the Urban FACO Markets and falling into the Regional FACO Markets;
- (u) **Annex: 11** sets out the Draft Decision Instrument in respect of the Relevant RFTS Markets and the Relevant FACO Markets which specifies, in legal form, the proposed decisions arising from this Consultation;
- (v) **Annex: 12** contains a glossary of the most frequently used terms within this Consultation; and
- (w) **Annex: 13** lists each of the questions set out in this Consultation, and on which views from interested parties are now being sought.

# 3 Retail Market Trends and Developments

## 3.1 Introduction

- 3.1 Prior to defining the boundaries of the product and geographic components of the candidate 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 3.3 to 3.28 below);
  - (b) Evolution of access infrastructure and technologies (paragraphs 3.31 to 3.34 below);
  - (c) Changes in retail trends since the publication of the 2014 RFVA Decision and the 2015 FACO Decision (paragraphs 3.35 to 3.97 below); and
  - (d) Behavioural trends in the RFTS market (paragraphs 3.98 to 3.118 below).
- 3.2 ComReg notes that Access Seeker<sup>55</sup> demand for FACO is ultimately derived from end user demand for RFTS. Therefore, to assist in assessing:
- (a) Indirect competitive constraints arising from RFTS on FACO; and
  - (b) Direct competitive constraints on RFTS<sup>56</sup>
- this Consultation reviews trends in the supply of RFTS in the State since the 2014 RFVA Decision and 2015 FACO Decision.

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<sup>55</sup> Access Seekers are those SPs (or other authorised operators) that purchase, or could potentially purchase (having entered into a contract), FACO services.

<sup>56</sup> 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

- 3.3 RFTS, consisting of both RFVA and RFVC, is provided by Eircom, and several Other Authorised Operators ('**OAOs**'),<sup>57</sup> including re-sellers and Cable TV (hereafter, '**CATV**') providers. RFTS (a service) is provided over RFVA (a network connection). In the case of fixed narrowband access over a copper network, that is, access at a fixed location to either the PSTN or the Integrated Services Digital Network (hereafter, '**ISDN**'). RFVA enables end users to use voice services, often described as 'Plain Old Telephony Service' (hereafter, '**POTS**'). Thus, POTS is a form of RFTS provided over PSTN.
- 3.4 RFTS can also be provided over broadband (for instance, over FTTx or CATV based broadband) which enables end users to obtain voice services of an SP delivered over a broadband access path. Managed VoIP differs from POTS-based RFTS in that the access path is delivered over Next Generation (hereafter '**NG**') broadband, rather than over FNA.
- 3.5 RFTS may accordingly be supplied over:
- (a) Current Generation (hereafter, '**CG**') technology including PSTN or ISDN copper access paths (hereafter, '**fixed narrowband access**', or '**FNA**'); or
  - (b) Next Generation ('**NG**') technology including CATV or FTTx broadband access paths ('**Managed VoIP**').
- 3.6 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 ubiquitous supplier of RFTS. Virgin Media, 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. 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 in order to offer retail access services to end users.

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<sup>57</sup> In general, 'OAOs' refers to SPs other than Eircom.

- 3.7 Wholesale input products, such as Eircom SB-WLR or White Label Voice (hereafter, '**WLV**'), allow Access Seekers to offer RFTS to end users on both the LL-RFTS and HL-RFTS markets. 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.
- 3.8 At the time of the 2014 RFVA Decision, RFTS was predominantly provided over FNA (i.e. PSTN and ISDN). While FNA continues to be the predominant means of RFTS delivery, provision of Managed VoIP over NG broadband has increased in the intervening period.
- 3.9 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 data networks, 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 scope<sup>58</sup> by means of the provision of both voice and data over a single broadband network.
- 3.10 ComReg distinguishes three sub-categories of Managed VoIP,<sup>59</sup> which involves the provision of RFVC over an IP access path<sup>60</sup> on single or multiple channels:
- (a) Managed Voice over Broadband (hereafter, '**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 FTTx<sup>61</sup> 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).

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<sup>58</sup> '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.

<sup>59</sup> 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 Consultation.

<sup>60</sup> 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.

<sup>61</sup> VDSL is the underlying technology in FTTC. Accordingly, exchange-based VDSL (eVDSL) is included within FTTC.

- (b) Hosted private branch exchange (hereafter, '**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 (hereafter, '**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.

3.11 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)<sup>62</sup> and a Managed VoIP service (eir SIP Voice)<sup>63</sup> 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 (hereafter, '**WLA**') from Eircom or SIRO;
- (d) Sky Ireland (hereafter, '**Sky**') delivers home phone service by means of Managed VoB in areas where it purchases NGA broadband access from Eircom or SIRO (via BT);
- (e) Digiweb and Imagine offer Managed VoB services over FWA;
- (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.

3.12 Thus, SPs that were previously active in separate markets now deliver similar bundles of RFTS over broadband, and thus compete with one another.<sup>64</sup> As a result, two potential demand-side scenarios emerge in relation to end user choice of RFTS supplier:

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<sup>62</sup> For further details, please see <https://www.eir.ie/eirbroadbandtalk/>.

<sup>63</sup> For further details, please see <https://business.eir.ie/sipvoice/>.

<sup>64</sup> 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.

- (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.
- (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.

3.13 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:<sup>65</sup>

- (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.
- (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.

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<sup>65</sup> 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.

### 3.2.1 FACO and RFTS Providers

- 3.14 **Eircom**, an independent SP, is currently the sole provider of SB-WLR to Access Seekers who do not possess 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 3.5) and continues to deploy its FTTx broadband network. ComReg expects that, in time, but not within the lifetime of this market review, Eircom's FTTx network will likely replace its FNA network (in those parts of the State where it is commercially viable to build such FTTx networks). However, at present, RFTS delivered over FNA remains available to end users, regardless of whether the premises is also passed by FTTx. Eircom uses these networks to provide RFTS, along with various other services to its business and residential customers.
- 3.15 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. The WLV service allows SPs to purchase end-to-end wholesale voice services. Eircom originates these calls on behalf of SPs who purchase WLV on its network.<sup>66</sup>
- 3.16 Eircom is also active on the RFTS market. Eircom's RFTS market share, as measured by revenue, and subscriptions, has declined gradually over the period Q3 2014 to Q4 2019. As of Q4 2019 there were a total of 901,508 FNA RFTS subscriptions, a decline of 19% from 1,109,230 in Q3 2014. As of Q4 2019, Eircom's share of these subscriptions was 38.8%, having fallen from 42.6% in Q3 2014. Over the same time period, its RFTS market share, measured by revenues, declined from 46.5% to 39.7%.

### 3.2.2 Other RFTS Providers

- 3.17 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 standard, and is providing RFTS by means of Managed VoB to approximately 939,900<sup>67</sup> premises. As of Q4 2019, Virgin Media had 335,100 RFTS subscribers. Virgin Media accordingly 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 [X [REDACTED] X] of overall Virgin Media RFTS). ComReg Quarterly Key Data Report ('QKDR') data suggest that, as of Q4 2019, Virgin Media accounted for 23.9% of Total RFTS subscriptions in the State.

<sup>66</sup> Certain components of the underlying wholesale inputs to WLV are not regulated, notably Call Transit. The FACO component is the subject of this review.

<sup>67</sup> As of Q4 2019, Virgin Media reported 435,400 'Fixed-Line Customer Relationships' in Ireland. See Liberty Global Q4 2019 Fixed Income Release, at p.18. Available online at <https://www.libertyglobal.com/wp-content/uploads/2020/02/Virgin-Media-Fixed-Income-Q4-2019.pdf>. Approximately 378,200 premises had a (standalone or bundled) internet subscription. Similarly, 335,100 telephony subscriptions were recorded.

- 3.18 **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 both Eircom and SIRO (in the form of WLA) to provide RFTS by means of Managed VoB. ComReg QKDR data suggest that, as of Q4 2019, Vodafone accounted for 13.9% of Total RFTS subscriptions in the State.
- 3.19 **Sky** offers RFTS and retail broadband alongside its TV services. Sky purchases FACO products delivered over both FNA and NG<sup>68</sup> from BT (based on its purchases of wholesale inputs from Eircom).<sup>69</sup> As of Q4 2019, Sky had a 13.9% market share in the RFTS market, as measured by retail subscriptions. Sky is classified as a resale-based SP (see paragraph 3.13).
- 3.20 **Pure Telecom** is similarly classified as a resale-based SP. Pure Telecom provides RFTS, broadband and cloud telecoms services. Pure Telecom mainly uses third parties to originate, transit, and terminate voice calls to and from end users at a fixed location on its behalf. It accesses these third-party networks by purchasing White Label VoIP from Eircom and BT, as well as WLV from Eircom. As of Q4 2019 Pure Telecom had a 3.9% RFTS market share, as measured by number of retail subscriptions.
- 3.21 Together, Eircom, Virgin Media, Vodafone, Sky and Pure Telecom account for 94.4% of Total RFTS subscriptions, as of Q4 2019.

### Fixed Wireless Access Providers

- 3.22 Voice services at a fixed location may also be provided by means of Fixed Wireless Access (hereafter, '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's QKDR data record 51,668 FWA broadband subscriptions in Q4 2019, a decline of circa 1% from the 52,121 FWA subscriptions reported in Q3 2014. As of Q4 2019, data provided to ComReg indicate that [X █████ X]<sup>70</sup> Managed VoB subscriptions were delivered over FWA.
- 3.23 For context, FWA subscriptions peaked at 123,000 in Q1 2008, and current FWA subscription numbers are approximately equal to levels recorded in Q1 2006.

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<sup>68</sup> White Label VoIP is a wholesale end-to-end voice call service delivered over IP by BT. Given that it is an end-to-end product, it is analogous to White Label Voice delivered over FNA.

<sup>69</sup> "Landmark Partnership between SIRO and Sky to Deliver Gigabit Broadband to Irish Market", <https://siro.ie/siro-sky-partnership/>.

<sup>70</sup> In the range of 30,000 to 35,000.



- 3.24 **Imagine** is a partially independent SP operating a FWA network that provides broadband coverage in predominantly rural areas via microwave links and Fixed LTE.<sup>71</sup> Imagine bundles RFTS with its broadband products. As set out below at paragraph 3.96, in February 2019, Imagine announced plans to cover 1.1 million premises in regional and rural areas with 150Mbps connectivity using 3.6GHz spectrum fixed infrastructure. Aside from FWA self-supply, Imagine purchases a small amount of SB-WLR lines [redacted] [redacted], as well as FTTP VUA,<sup>72</sup> from Eircom.
- 3.25 **Digiweb** is also a partially independent SP. Founded in 1997, it merged with Viatel in 2013, having acquired Smart Telecom in 2010. Digiweb operates a national wireless network and satellite services. Digiweb also purchases VUA from SIRO, and a small volume of SB-WLR lines [redacted] [redacted] from Eircom. It provides broadband access and RFTS to residential, business and public sector customers.
- 3.26 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.
- 3.27 Imagine's Managed VoB subscriptions have increased by [redacted] since Q3 2014, growing from [redacted] in Q4 2019. Digiweb subscriptions also grew substantially in that period [redacted], increasing from [redacted] in Q4 2019.
- 3.28 Having described, in general terms, the main RFTS SPs, the remainder of this section describes relevant headline 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

- 3.29 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.
- 3.30 Changing end user preferences and usage 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.

<sup>71</sup> Fixed LTE is a wireless data connectivity standard providing high-speed bandwidth between the Service Provider and a fixed location.

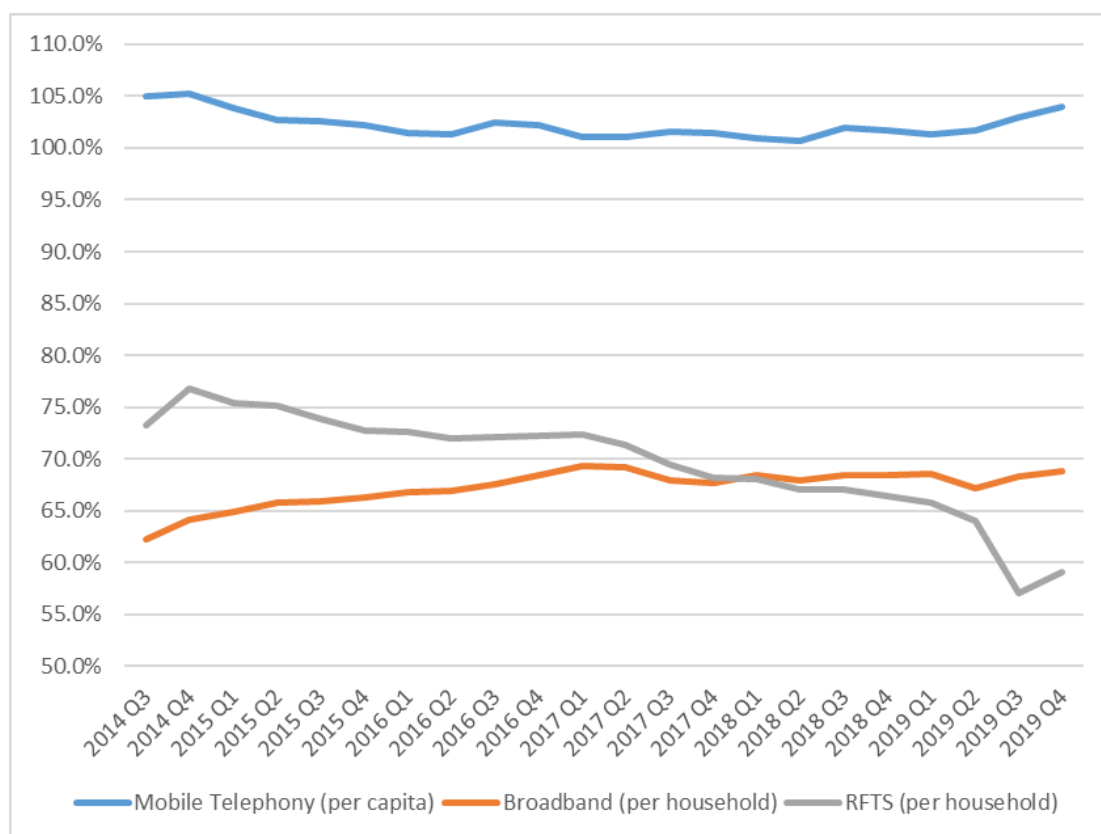
<sup>72</sup> Virtual Unbundled Access, or VUA, is Eircom's description of its Virtual Unbundled Local Access, or VULA, product. VUA is therefore a virtual access product delivered over Eircom's NGA broadband network, which allows Access Seekers to purchase Wholesale Local Access, or WLA, to deliver retail services over that NG broadband including broadband, RFTS and TV.



### 3.3.1 Evolution of access infrastructure and technologies

3.31 Consumer usage patterns indicate a general and ongoing decline in the use of RFTS, as well as increased usage of broadband, of mobile telephony, and of bundled products. ComReg data indicate that, since the publication of the 2014 RFVA Decision, while household broadband penetration has increased by 10.3%, household RFTS penetration has declined by 19.3%.<sup>73</sup> Over the same period, per capita mobile phone penetration has declined marginally, but continues to exceed 100%, as set out below:

**Figure 2: Broadband, RFTS & mobile telephony penetration rates, Q3 2014-Q4 2019<sup>74</sup>**



<sup>73</sup> 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 [redacted]. Additionally, a [redacted].

<sup>74</sup> Data taken from ComReg QKDR, Q3 2014 to Q4 2019.

3.32 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 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:

**Table 1: Lines, Access Paths and Subscriptions**

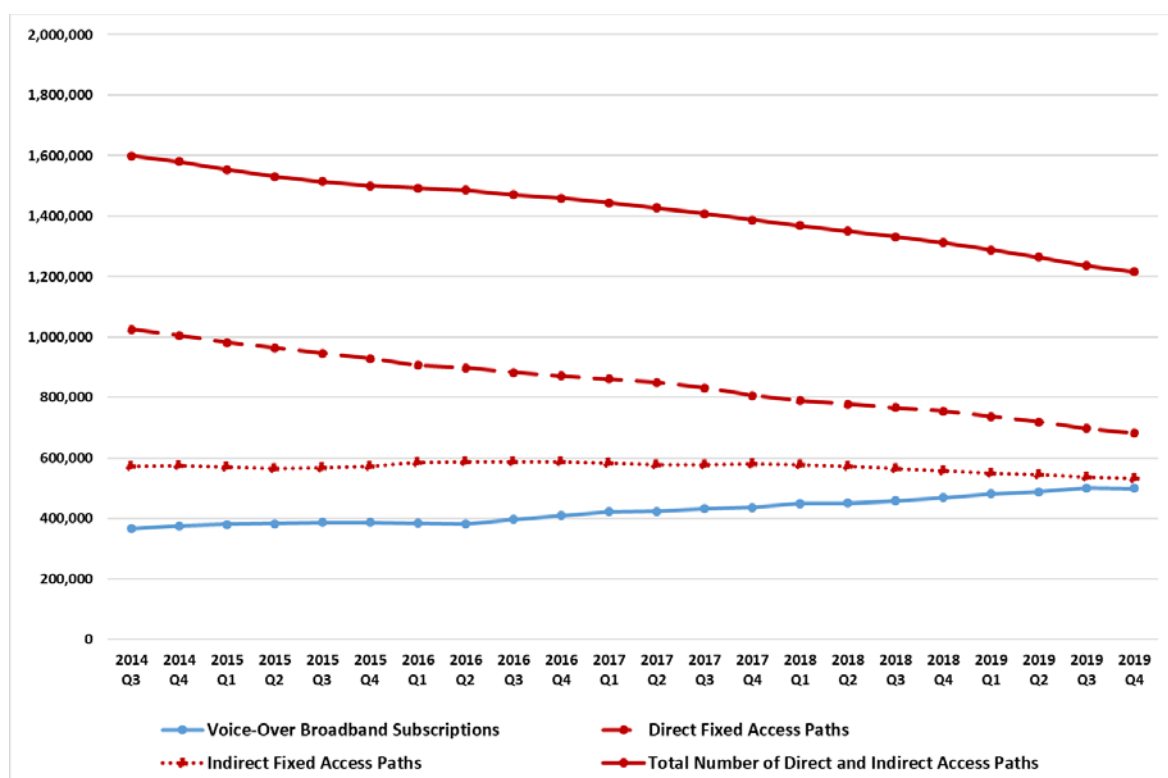
Product	Lines	Access paths (voice channels)	Minimum Subscription Required
PSTN	1	1	1
ISDN Basic	1	2	1
ISDN Fractional	1	15	1
ISDN Primary	1	30/31 <sup>75</sup>	1
Managed VoIP	1	Dependent on VoIP product design	1
SIP Trunking	1 <sup>76</sup>	Dependent on VoIP product design	1
Hosted PBX	1	Dependent on VoIP product design	1

3.33 ComReg's QKDRs indicate that the total number of FNA paths (i.e. PSTN and ISDN) has declined from just under 1.6 million in Q3 2014 to 1.22 million in Q4 2019. Over the same period, alternative technologies have experienced growth. Managed VoB has been the fastest growing platform, with subscription numbers increasing by approximately 36% to 499,813. This growth which, in part, has offset the decline in FNA, appears due to 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 by less than 1%, from 336,000 to 335,100, as set out at paragraph 3.17 above. As illustrated in Figure 3 below, FNA paths have declined by 24% since 2014, while Managed VoB subscriptions have increased by 36% over the same period:

<sup>75</sup> 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.

<sup>76</sup> Any of leased line, NG broadband line, ADSL broadband line.

Figure 3: FNA Paths and Managed VoIP Subscriptions



- 3.34 Table 2 disaggregates FNA paths as at Q4 2019, 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 22% since Q3 2014, while ISDN paths have declined by 30%. Of the 246,574 ISDN access paths, approximately 38% were BRA, 16% 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 2019	Q3 2019 – Q4 2019	Q3 2014 – Q4 2019
PSTN	1,247,416	968,839	-2.2%	-22%
ISDN Basic	132,936	94,818	-1.8%	-29%
ISDN Fractional	57,888	37,216	-3.2%	-36%
ISDN Primary	160,410	114,540	+2.9%	-29%
<b>Total ISDN</b>	<b>351,234</b>	<b>246,574</b>	<b>+0.1%</b>	<b>-30%</b>
<b>Total PSTN &amp; ISDN Access Paths</b>	<b>1,598,650</b>	<b>1,215,413</b>	<b>-1.7%</b>	<b>-24%</b>
<b>FNA RFTS Subscriptions</b>	<b>1,109,230</b>	<b>901,508</b>	<b>-2.1%</b>	<b>-19%</b>
<b>VoIP Subscriptions</b>	<b>367,010</b>	<b>499,813</b>	<b>-0.3%</b>	<b>36%</b>
<b>Total RFTS Subscriptions</b>	<b>1,476,240</b>	<b>1,401,321</b>	<b>-1.5%</b>	<b>-5%</b>

### 3.3.2 Retail trends since 2014 RFVA Decision & 2015 FACO Decision

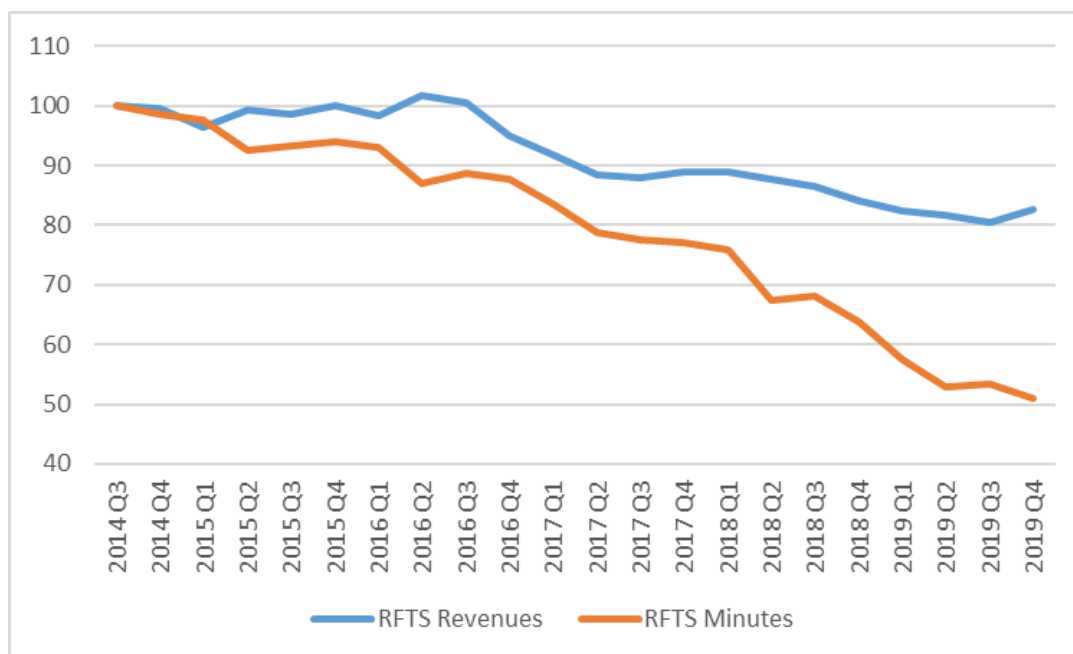
3.35 Since the 2014 RFVA Decision and 2015 FACO Decision, significant shifts have occurred in voice traffic levels and other retail trends, as discussed below. This section sets out these key changes which, in summary, are:

- (a) Persistent decline in RFTS traffic (paragraphs 3.36 to 3.41);
- (b) Mobile phone usage relative to RFTS usage (paragraphs 3.42 to 3.48);
- (c) Decline in FNA lines and subscriptions (paragraphs 3.49 to 3.53);
- (d) Stability in CATV subscription numbers (paragraph 3.54);
- (e) Increasing importance of broadband (paragraphs 3.55 to 3.57);
- (f) Increased take-up of bundled retail services (paragraphs 3.58 to 3.78);
- (g) Convergence and Fixed-Mobile Substitution (paragraphs 3.79 to 3.84); and
- (h) Rollout of broadband networks (paragraphs 3.85 to 3.97).

#### Persistent decline in RFTS traffic

3.36 Overall RFTS traffic and revenues over both FNA and broadband have declined steadily since 2014. Based on data taken from ComReg's QKDR, Figure 4 shows that, from Q3 2014 to Q4 2019, revenues attributable to RFTS traffic<sup>77</sup> (blue line) have fallen by 17%, while traffic minutes (red line) have fallen by 49%:

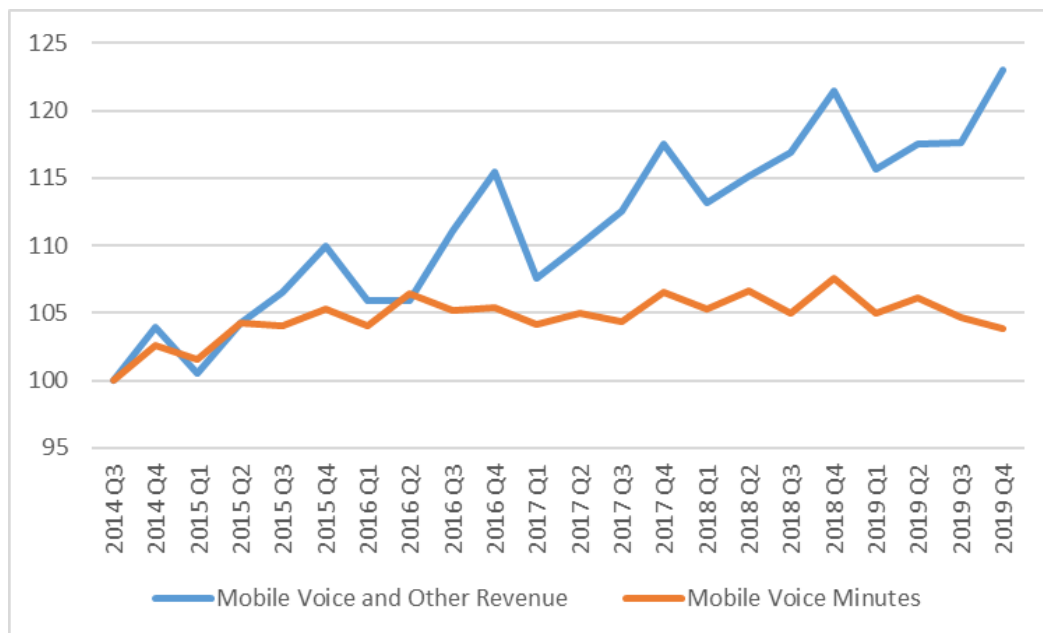
**Figure 4: RFTS Traffic and Revenues, Q3 2014 – Q4 2019 (Base Q3 2014 = 100)**



<sup>77</sup> 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.

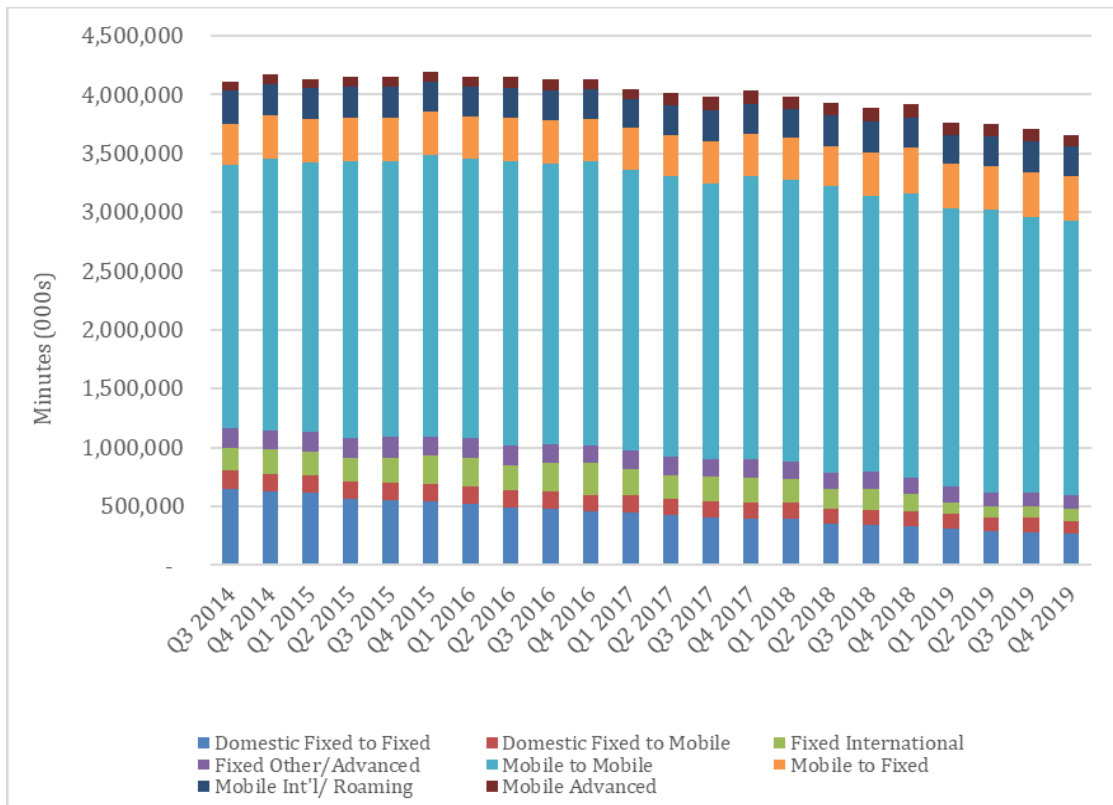
3.37 Based on data taken from ComReg’s QKDR, over the same period, mobile voice traffic and revenue have continued to increase, by 23% in the case of revenue, and 4% in the case of traffic, as illustrated in Figure 5:

**Figure 5: Mobile Voice Traffic and Revenues, Q3 2014 – Q4 2019 (Base Q3 2014 = 100)**



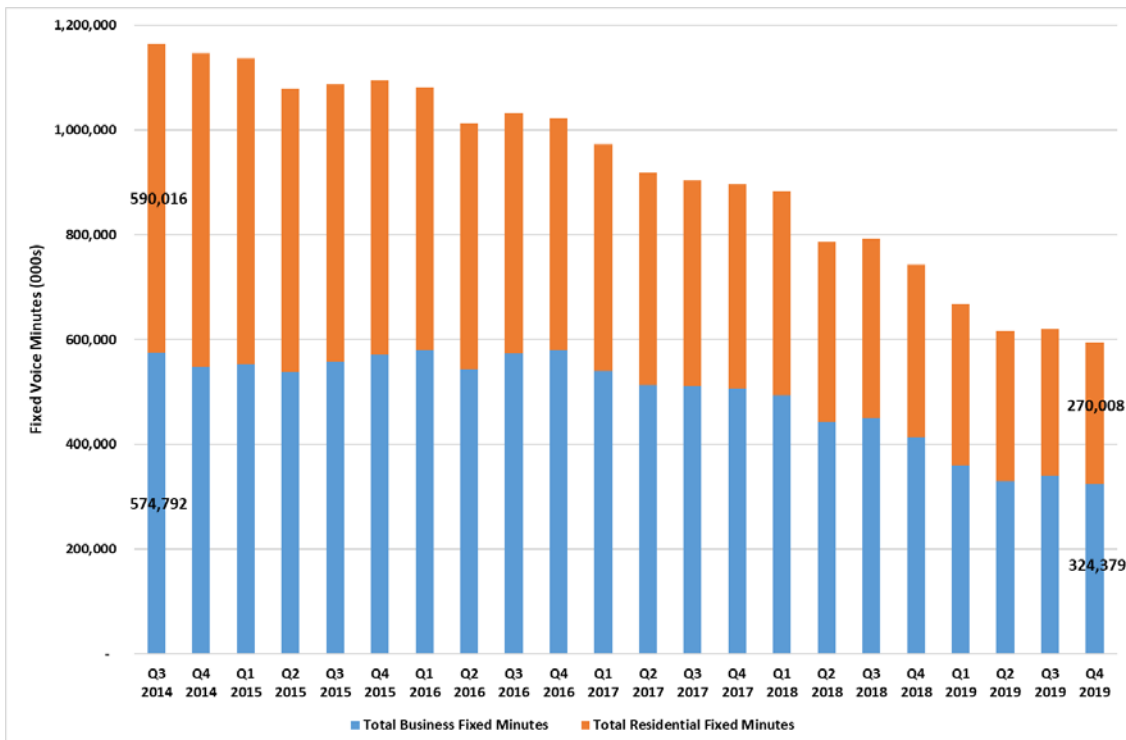
3.38 Figure 6 shows changes in categories of fixed and mobile voice call volumes from 2014 to 2019. Over the period Q3 2014 to Q4 2019, total fixed and mobile call volumes decreased by 11%. The main changes are decreased domestic fixed-to-fixed minutes (down 59%) and decreased fixed international minutes (down 48% over the same period):

**Figure 6: Fixed and Mobile Voice Call Minute Volumes, Q3 2014 – Q4 2019**



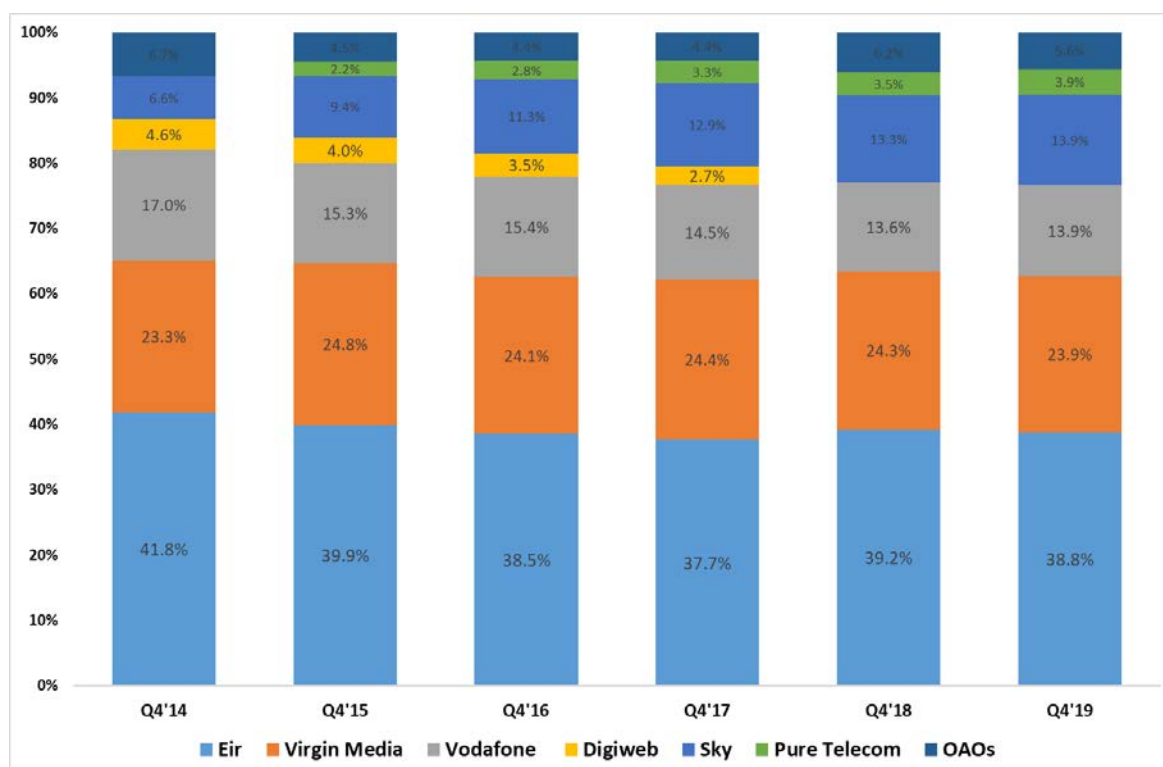
3.39 Figure 7 below illustrates the breakdown of RFTS by residential and business end users. The trend since Q3 2014 suggests that residential fixed voice minutes have dropped significantly (54%) while business fixed voice minutes have fallen less, albeit still significantly, by 44%.

**Figure 7: Residential and Business RFTS Minute Volumes, Q3 2014 – Q4 2019**



- 3.40 Market shares by subscription are presented in Figure 8 below. Over this period Eircom's share has fallen from 41.8% to 38.8% while Virgin Media has moved from 23.3% to 23.9%. Vodafone shares have decreased from 17% to 13.9%, while Sky has increased quarter on quarter to hold a 13.9% share as of Q4 2019. Other changes over this period include a decrease in market shares for Digiweb and an increase for Pure Telecom. The share for OAOs<sup>78</sup> overall has increased:

**Figure 8: RFTS Market Shares by Subscription, 2014 – 2019<sup>79</sup>**



- 3.41 Overall, the trends described above are illustrative of an RFTS market which continues to reduce in size, 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 broadband services and broader retail bundles, with RFTS as an add-on, rather than by demand for standalone RFTS (see paragraphs 3.49 to 3.53 below).

### Mobile phone usage increase relative to fixed phone usage

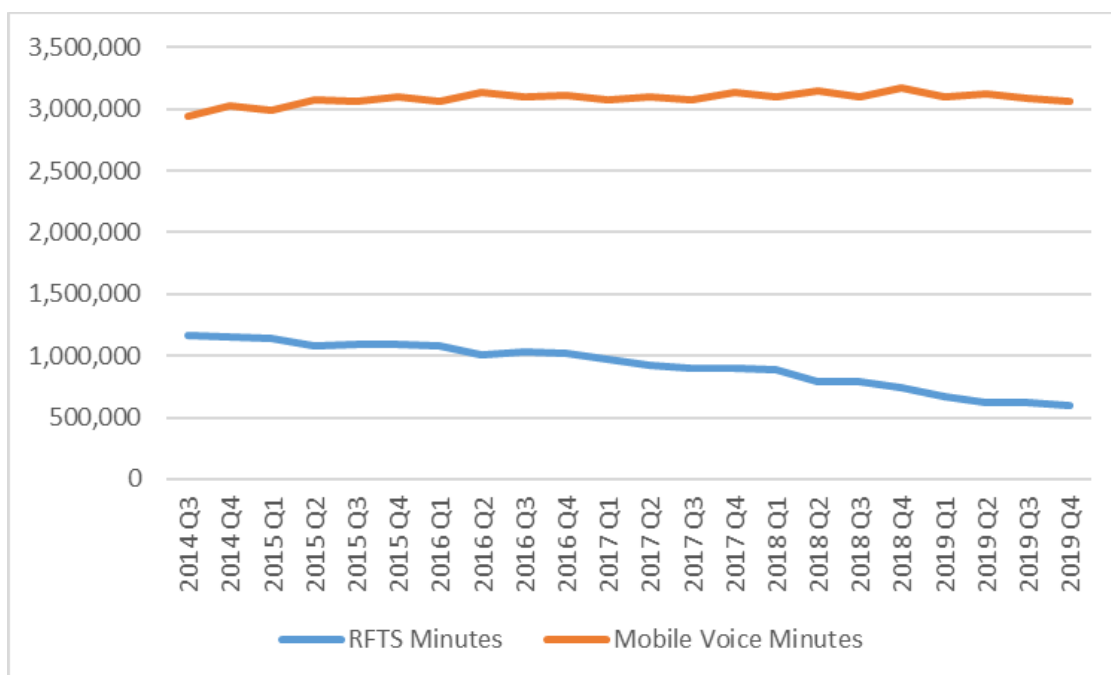
- 3.42 Over the period since the 2014 RFVA Decision, there has been significant growth in mobile voice traffic volumes, although the rate of increase has levelled off in recent years. Figure 9 below shows the trends in the volume of mobile and fixed originated voice minutes since Q3 2014:

<sup>78</sup> 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.

<sup>79</sup> These data are only collected by ComReg from Q1 2015 onwards.



Figure 9: Fixed and Mobile Voice Traffic Trends, 2014-2019



- 3.43 Mobile voice traffic increased by 4% between Q3 2014 and Q4 2019 while, over the same time period, RFTS traffic declined by 49%. The number of fixed voice minutes as a percentage of all voice minutes each quarter has declined from 28% in Q3 2014 to 16% in Q4 2019.
- 3.44 The 2019 Residential Market Research also showed that 49% of residential respondents had a fixed landline telephone, suggesting that up to 51% were mobile only households. ComReg notes that, of those 49% of respondents with a fixed landline, 77% purchased the service as part of a bundle.<sup>80</sup> The primary reason given by residential respondents for having a landline is to use it in cases of emergency, followed by keeping with the status quo of always having had one. 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).<sup>81</sup>
- 3.45 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%).<sup>82</sup>
- 3.46 In contrast, the 2019 SME Market Research showed that only 4% of businesses do not purchase RFTS,<sup>83</sup> which indicates that RFTS remains important for the significant majority of businesses. The 2019 SME Market Research also indicated that businesses primarily use a fixed voice service for all types of calls (e.g. calls to national numbers, international numbers and mobile phones etc.).

<sup>80</sup> 2019 Residential Market Research, slide 8.

<sup>81</sup> 2019 Residential Market Research, slide 66.

<sup>82</sup> 2019 Residential Market Research, slide 67.

<sup>83</sup> 2019 SME Market Research, slide 13.

- 3.47 However, the continued trend for households, and especially businesses, to retain a fixed telephone line (as well as a mobile telephone 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).<sup>84</sup>
- 3.48 Demand from most end users for both RFTS and mobile telephony indicates that these services are used in different ways. For example, 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

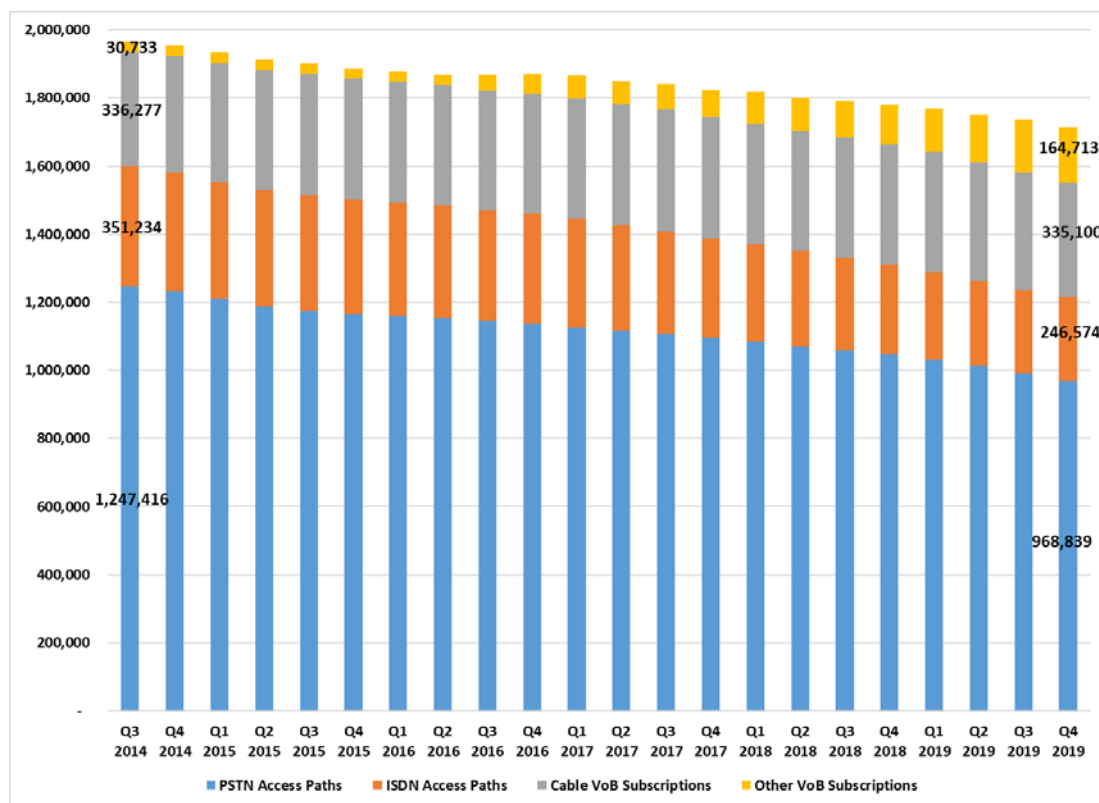
- 3.49 As set out at paragraph 3.34 above, total FNA paths (direct and indirect PSTN and ISDN) have declined by 24% since Q3 2014 and stood at 1.22m in Q4 2019. While the total number of RFTS subscriptions has decreased (by 5%), as set out in Figure 10 below, this has largely been driven by the decline in FNA (PSTN and ISDN) RFTS subscriptions, being offset by the increase in Managed VoB subscriptions:<sup>85</sup>

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<sup>84</sup> 2019 Residential Market Research, slide 44.

<sup>85</sup> RFTS traffic has also fallen, from 1.16 million minutes in Q3 2014 to 594 million minutes in Q4 2019, as illustrated in Figure 9.

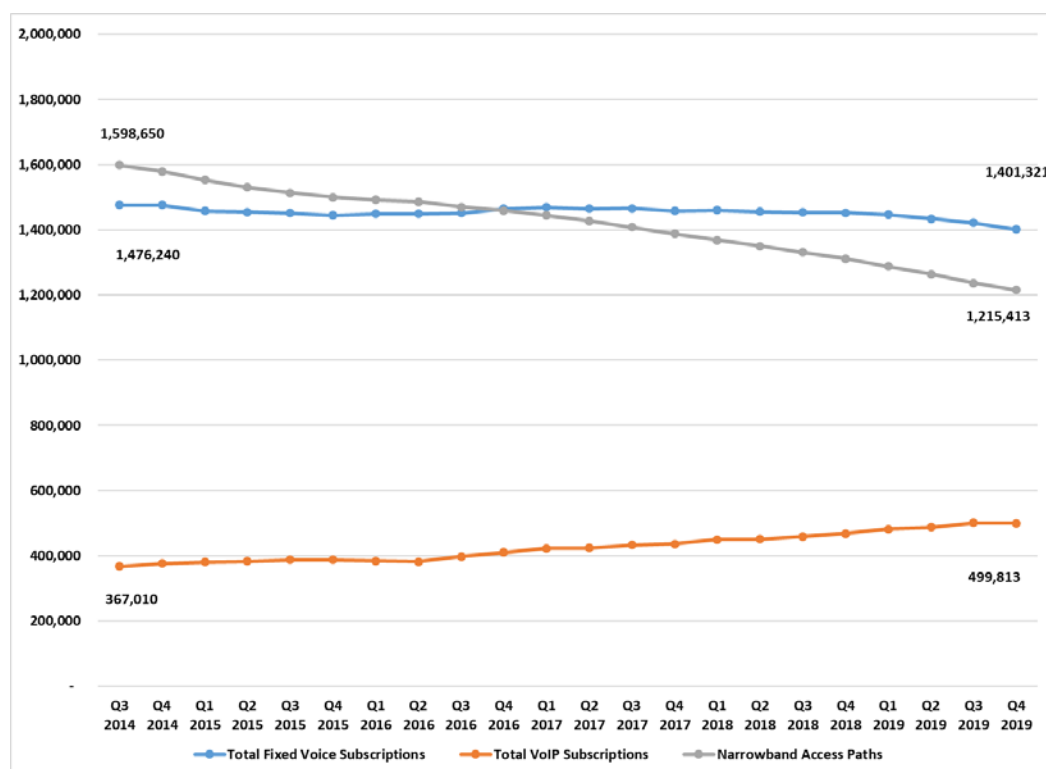
**Figure 10: PSTN and ISDN Access Paths, Managed VoB subscriptions over CATV and Other Managed VoB subscriptions, Q3 2014 – Q4 2019**



3.50 The number of PSTN access paths has fallen 22% from 1.25 million access paths in Q3 2014 to 968,839 in Q4 2019. Overall demand for ISDN access lines has also decreased. BRA, FRA, and PRA ISDN access paths have declined by 30%, from 351,234 access paths in Q3 2014, to 246,574 access paths in Q4 2019, as set out at Table 2 above. This is, in part, a reflection of end users migrating away from FNA to broadband (see Figure 10).

3.51 Figure 11 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, decreasing by 5% since Q3 2014:

Figure 11: Total Retail Fixed Voice Subscriptions, Q3 2014 – Q4 2019



3.52 Measured by FNA and Managed VoB RFTS subscriptions, the overall size of the RFTS market decreased by **5%** between the publication of the 2014 RFVA Decision in Q3 2014, and Q4 2019. This figure masks two sharply divergent trends, however. Managed VoIP RFTS subscriptions increased by **36%** over this time period, while FNA RFTS subscriptions declined by **19%**. In light of its announced fixed network investment programme,<sup>86</sup> which will 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 migrate end users to infrastructures capable of delivering Managed VoIP. Similarly, SPs will 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.

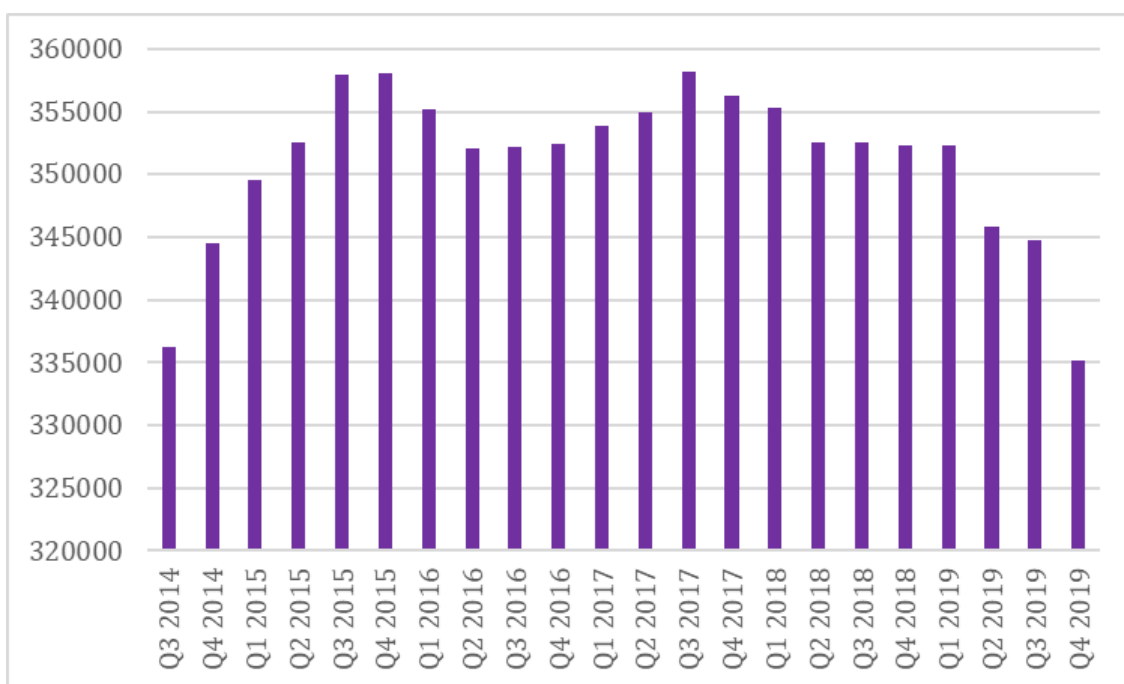
3.53 ComReg expects the decline in the provision of RFTS over FNA to continue, due, in part, to changing consumer preferences away from the provision of standalone RFTS, and towards the provision of RFTS bundled with other services (in particular NG broadband), and also to the ongoing rollout and upgrade of FTTx and CATV networks. Nevertheless, FNA remains the predominant form of RFTS for households and businesses, accounting for 64% of Total RFTS subscriptions, with Managed VoIP accounting for the remaining 36%. The continued importance of FNA as a means of providing RFTS is reflected in Figure 11.

<sup>86</sup> <https://www.eir.ie/pressroom/eir-launches-0.5-billion-fixed-network-investment-programme/>

### Stability in CATV subscription numbers

- 3.54 According to Virgin Media, as of December 2019, its CATV network had a reach of 939,900 homes passed,<sup>87</sup> 39% of the approximately 2.4 million premises in the State (measured by delivery points), primarily in urban areas. As of Q4 2019, Virgin Media had approximately 378,200 broadband customers, and 335,100 Managed VoIP based RFTS customers.<sup>88</sup> Figure 12 shows the evolution of Virgin Media RFTS subscriptions. As of Q4 2019, Virgin Media had a 23.9% market share of Total RFTS subscriptions, and this market share has been stable (variation of <1%) since at least Q1 2015:

Figure 12: Virgin Media RFTS Subscriptions Q3 2014 – Q4 2019<sup>89</sup>



### Increasing importance of broadband connections

- 3.55 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 1.46 million in Q4 2019, an 18% increase since Q3 2014. The estimated fixed broadband household penetration rate was 68.9% in Q4 2019.<sup>90</sup> The fixed broadband per capita penetration rate was 35.6%:<sup>91</sup>

<sup>87</sup> Liberty Global Q4 2019 Fixed Income Release, at p.18. Available online at <https://www.libertyglobal.com/wp-content/uploads/2020/02/Virgin-Media-Fixed-Income-Q4-2019.pdf>.

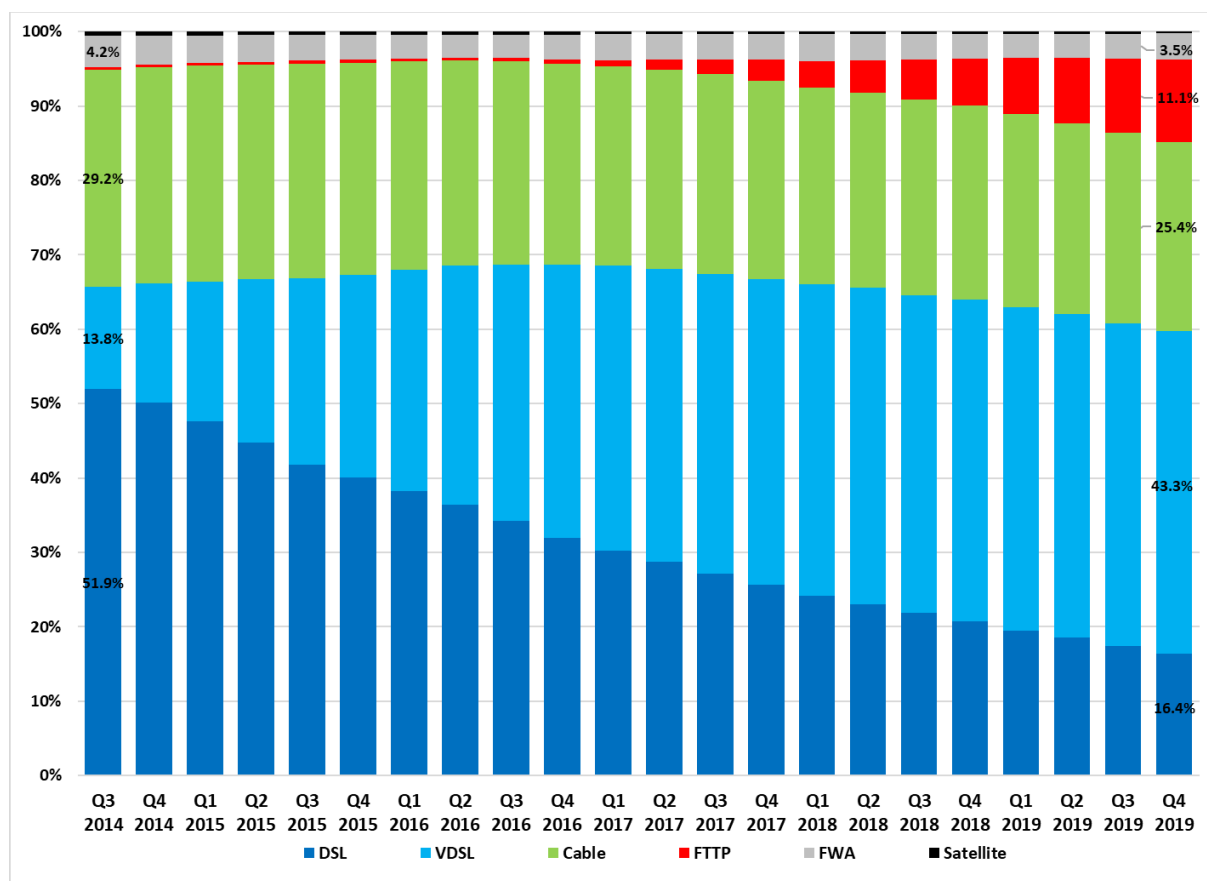
<sup>88</sup> *Ibid.*

<sup>89</sup> *Ibid.*

<sup>90</sup> ComReg QKDR, Q4 2019, p.41.

<sup>91</sup> ComReg QKDR, Q4 2019, p.42.

Figure 13: Fixed Broadband Subscriptions by Platform, Q3 2014 – Q4 2019



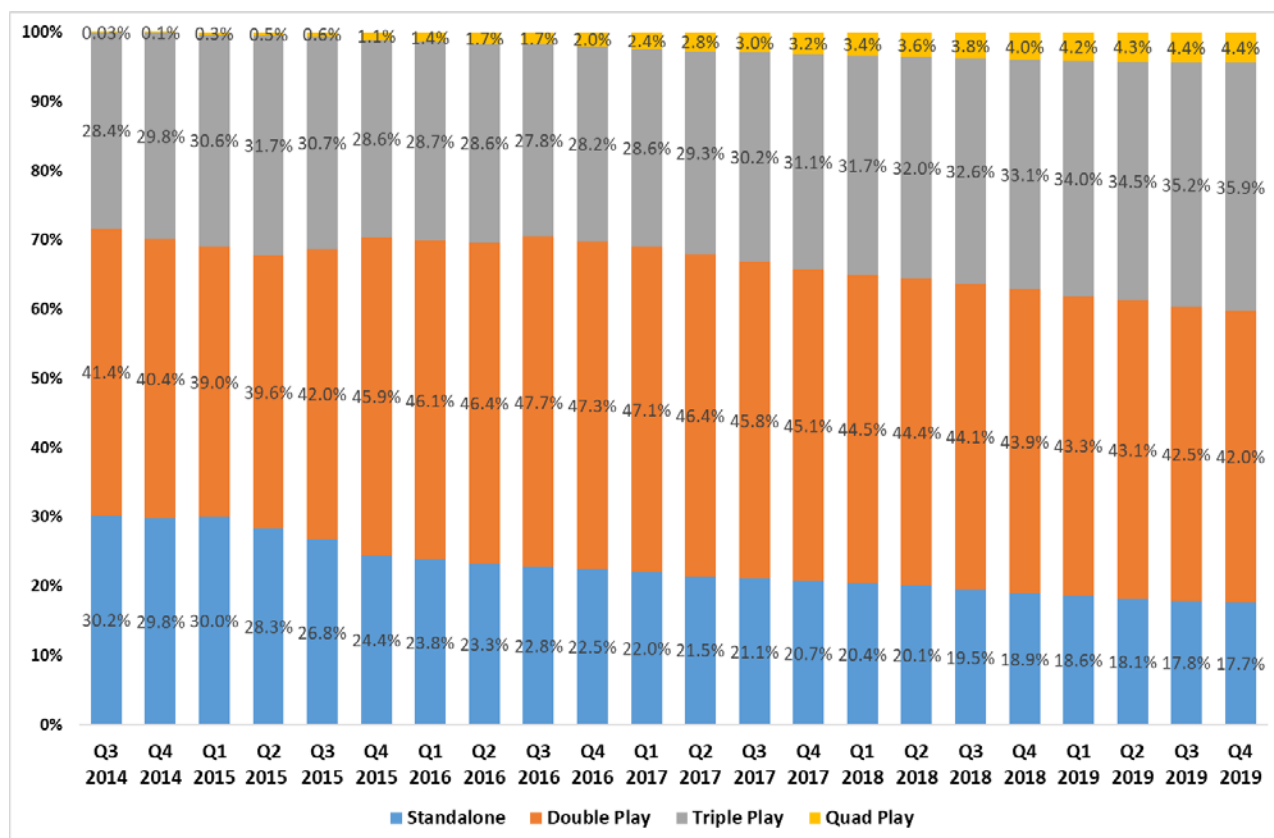
3.56 Figure 13 shows broadband subscriptions by technology since Q3 2014. Comparing access patterns at the time of the 2014 RFVA Decision with Q4 2019, over both time periods, CATV, DSL and FTTC (VDSL) account for over 85% of fixed broadband connections, with the major change being the reversal of positions of DSL and FTTC, as Eircom replaces DSL with FTTC (VDSL) across its network.

3.57 VDSL over FTTC has superseded DSL over FNA as the most common means of accessing broadband, driven by advances in the functionality and quality arising from NG broadband network rollout. The percentage of end users availing of FTTC and DSL respectively has changed from 52% (DSL) and 14% (FTTC) at Q3 2014, to 16% (DSL) and 43% (FTTC) in Q4 2019. FTTP rollout has resulted in a 10% share of fixed broadband subscriptions as of Q4 2019, starting from 0.47% when FTTP connections first began to be recorded at Q2 2016. The increase in broadband subscriptions delivered over VDSL 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 RFTS delivered over Managed VoB, rather than over FNA. This trend also suggests a consistent move away from RFTS delivered on a standalone basis, towards RFTS delivered over broadband as part of a bundle.

### Increased take-up of bundled retail services

- 3.58 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 2019, 82% of Total RFTS subscriptions were sold as part of a bundle, with the remaining 18% of subscriptions sold on a standalone basis.
- 3.59 As illustrated by Figure 14 below, the most common types of fixed subscriptions provided by SPs in Ireland are:
- (a) Dual play, consisting of RFTS bundled with broadband, mobile voice or TV; and
  - (b) Triple play, consisting of RFTS with two of the other listed services in point (a).
- 3.60 The data presented in Figure 14 record the total number of RFTS subscriptions delivered on a standalone basis, and as part of a dual, triple, or quad-play package:

Figure 14: RFTS Subscription Types Q3 2014 – Q4 2019





- 3.61 49% of all standalone and bundled retail subscriptions purchased in Ireland include an RFTS component.<sup>92</sup> Table 3 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:

**Table 3: Standalone and bundled subscription types including RFTS, Q4 2019**

Component	%
RFTS	63.2
Broadband	64.3
TV	47.6
Mobile telephony	7.8

- 3.62 As shown in Table 4 below, subscribers purchase RFTS either on a standalone basis, or as part of a bundle (which may also include TV, broadband, or mobile telephony):

**Table 4: Percentage of Total RFTS subscriptions purchased on a standalone and bundled basis, Q3 2014 and Q4 2019<sup>93</sup>**

Subscription type	% of all RFTS subscriptions	
	Q3 2014	Q4 2019
Standalone	30.2%	17.7%
Double play	41.4%	42.0%
Triple play	28.4%	35.9%
Quad play	0.0%	4.4%
Total	100%	100%

- 3.63 Thus, 18% 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 of the 82.3% of RFTS subscriptions purchased in a bundle in 2019, with 70% of RFTS subscriptions being the equivalent figure in 2014. These data therefore suggest a preference for consumers to purchase RFTS on a bundled basis, with 82.3% of consumers preferring to purchase RFTS as part of a bundle, rather than on a standalone basis.
- 3.64 ComReg data further suggest that RFTS is a ubiquitous component of bundles. While only 24.5% of standalone subscriptions are RFTS subscriptions, over 95% of bundled subscriptions include an RFTS component, as Table 5 shows:

<sup>92</sup> 2019 Residential Market Research, slide 8.

<sup>93</sup> Data based on SP submissions to ComReg.

**Table 5: RFTS frequency purchased on a standalone basis and in a bundle, Q4 2019**

Type of subscription	% of subscription types which include RFTS component
Standalone	24.5%
Double play	91.7%
Triple play	99.6%
Quad play	100.0%
All bundled subscriptions	95.4%
All subscriptions	63.2%

- 3.65 The 2019 SME Market Research also indicated a high prevalence of businesses purchasing RFTS bundled with other products. Of the 96% of businesses who report that they purchase RFTS, 69% of respondents reported purchasing RFTS as part of a bundle,<sup>94</sup> with approximately 90% of those bundles being comprised of RFTS and broadband.<sup>95</sup>
- 3.66 Data set out above indicate that RFTS traffic has declined significantly since the 2014 RFVA Decision (Figure 9). 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%<sup>96</sup> of retail bundles include an RFTS component, this suggests that, for many households and businesses, the cost of RFTS is likely to make up only a small portion of the overall cost of the product bundle.
- 3.67 This general trend of RFTS being increasingly sold as part of a bundle is supported by the 2019 Residential Market Research – in Q4 2019, 77% of residential RFTS consumers interviewed purchased this product as part of a bundle.<sup>97</sup> The most commonly purchased bundle among these respondents was RFTS and broadband (46% of RFTS respondents purchased this bundle). Similar figures are seen in Figure 15. According to Q4 2019 QKDR data, dual play bundles, consisting of both RFTS and broadband are the most common bundle amongst consumers who purchase RFTS (41%):

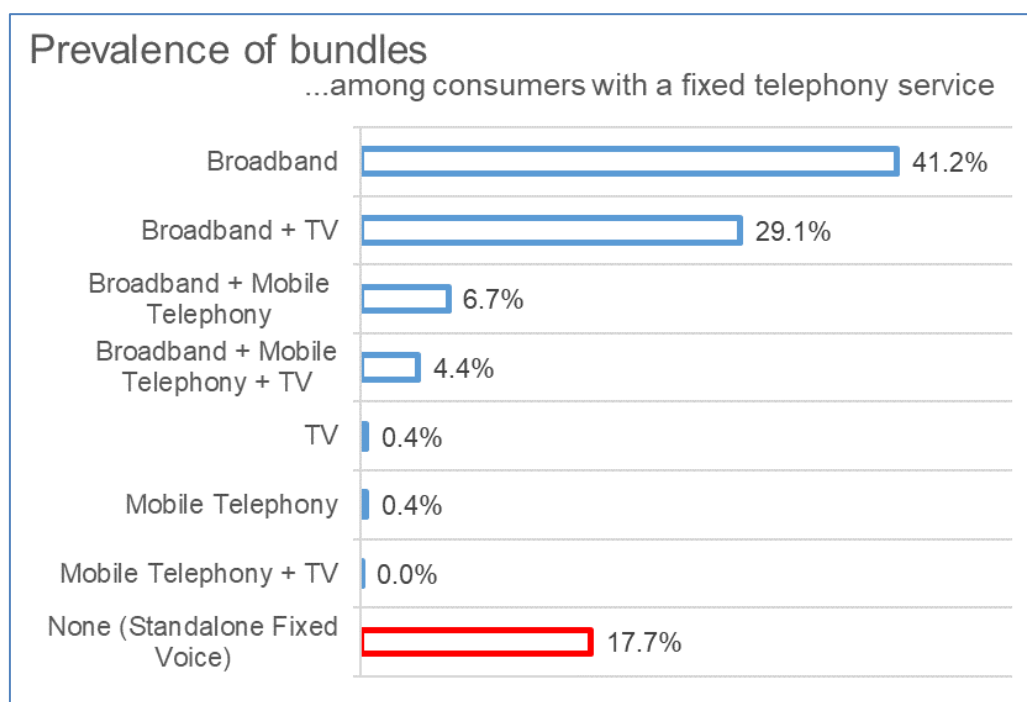
<sup>94</sup> 2019 SME Market Research, slide 14.

<sup>95</sup> 2019 SME Market Research, slide 13.

<sup>96</sup> 2019 Residential Market Research, slide 23.

<sup>97</sup> 2019 Residential Market Research, slide 8.

**Figure 15: Prevalence of bundles among consumers, Q4 2019**



- 3.68 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%).
- 3.69 Table 6 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 2019 QKDR data, account for 94.4% of Total RFTS subscriptions (Eircom, Virgin Media, Vodafone, Sky and Pure Telecom).<sup>98</sup> The table suggests two key findings.

<sup>98</sup> Table 6 presents data and calculations which are based on publicly available information on the relevant SPs' websites, as at 22 April 2020. Not all offerings are listed as the full suite of products may not be available online.

- 3.70 The **first** key finding is that, as of April 2020, of these five SPs, only Eircom and Pure Telecom actively offer standalone RFTS for sale (while noting that SPs may continue to offer RFTS on a legacy basis to existing customers). None of Vodafone, Virgin Media, or Sky offer a standalone RFTS product. Between them, the five SPs offer just five standalone RFTS products, but 16 bundled broadband and RFTS products. Accordingly, end users with a preference for bundled purchases face greater switching opportunities (between five SPs and 16 packages) than end users with a preference for standalone RFTS (between two SPs and five packages).
- 3.71 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 by location:

Table 6: Broadband and RFTS bundles, April 2020

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
<b>eir<sup>99</sup></b>					
Off-peak Landline	Phone only	€39.99/pm	€39.99		
Anytime Landline	Phone only	€49.98/pm	€49.98		
150 Mb Broadband + (Off-peak) Landline	BB + phone	€29.99 p/m for 12 months, then €65.99p/m	€47.99	€39.99	83%
1GB Broadband + (Off-peak) Landline	BB + phone	€54.99/pm, then €85.99 per month	€70.49	€39.99	57%
<b>Virgin Media<sup>100</sup></b>					
500MB Broadband	Broadband only	€55 p/m for 12 months, then €69 p/m	€62.00		
360MB Broadband	Broadband Only	€50 p/m for 12 months, then €64 p/m	€57.00		
250MB Broadband	Broadband Only	€40 p/m for 12 months, then €59	€49.50		
500 MB + Home Phone	BB + phone	€58 p/m for 12 months, then €72 p/m	€65.00	€3.00	4.6%
360B + Home Phone	BB + phone	€53 p/m for 12 months, then €67 p/m	€60	€3.00	5%
250MB + Home Phone	BB + phone	€48 p/m for 12 months, then €62 p/m	€55	€3.00	5.5%

<sup>99</sup> Phone only: <https://www.eir.ie/phone/> Broadband and phone: <https://www.eir.ie/broadband/>

<sup>100</sup> Broadband only: <https://www.virginmedia.ie/broadband/buy-a-broadband-package/> Broadband and phone: <https://www.virginmedia.ie/bundles/broadband-and-homephone/>

Vodafone <sup>101</sup>					
Vodafone Broadband	Broadband Only	€20 p/m for 6 months, then €35 p/m	€31.25		
Vodafone Fibre Broadband 150 and Landline	BB + Phone	€65 for 6 months, then €70	€68.75	€5	7%
Vodafone Fibre Broadband 300 and Landline	BB + phone	€70/pm for 6 months, then €75/pm	€73.75	€5	7%
Vodafone Fibre Broadband 1000 and Landline	BB + phone	€95 p/m for 6 months, then €100 p/m	€98.75	€5	5%
Sky <sup>102</sup>					
Ultrafast Max 1Gb/s	Broadband Only	€65 for 12 months, then €95	€80.00		
Ultrafast Plus 350 Mb/s	Broadband Only	€50 for 12 months, then €85	€67.50		
Ultrafast 150 Mb/s	Broadband Only	€40 for 12 months, then €75	€57.50		
Ultrafast Max 1Gb/s + Talk Freetime	BB + Phone	€70 for 12 months, then €100	€85.00	€5.00	6%
Ultrafast Plus 350 Mb/s+Talk Freetime	BB + Phone	€55 for 12 months, then €90	€72.50	€5.00	7%
Ultrafast 150 Mb/s + Talk Freetime	BB + Phone	€45 for 12 months, then €80	€62.50	€5.00	8%
Ultrafast Max 1Gb/s + Talk Anytime	BB + Phone	€77.50 for 12 months, then €107.50	€92.50	€12.50	14%
Ultrafast Plus 350 Mb/s+Talk Anytime	BB + Phone	€62.50 for 12 months, then €97.50	€80.00	€12.50	16%
Ultrafast 150 Mb/s + Talk Anytime	BB + Phone	€52.50 for 12 months, then €87.50	€70.00	€12.50	18%

<sup>101</sup> 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](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.

<sup>102</sup> <https://www.sky.com/ie/shop/choose/broadband-and-talk-selector/product-selection?irct=ShopBroadband-ROI-Prospect-BBUL-swcb-roi>

Pure Telecom <sup>103</sup>					
Unlimited Broadband	Broadband only	€44 p/m	€44		
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 6 months, then €75.00	€65.00	€29.99	46%
Premium Speed	Fibre BB + Irish landlines	€30.00 p/m for 6 months, then €55.00	€48.75	€29.99	62%
Online Special	BB + Irish landlines	€35/pm for 12 months, then €50/pm	€42.50	€29.99	71%

- 3.72 In the case of **Eircom**, one of its two dual play bundles is 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 76% more expensive than standalone RFTS, respectively.
- 3.73 In the case of **Pure Telecom**, one of its three dual play bundles is cheaper than the standalone broadband product, averaged over 24 months, while standalone broadband is only 11% more expensive than the 'Premium Speed' bundle.
- 3.74 A further comparison can be made in the case of Pure Telecom against its standalone RFTS products. On a like-for-like basis, bundling broadband to the standalone RFTS products (Irish Landlines) adds between 46% and 101% to the price of standalone RFTS, depending on the bundle in question.
- 3.75 For **Virgin Media**, standalone broadband is offered at speeds of 250MB, 360MB and 500MB. A like-for-like comparison with the dual play bundles is carried out. Averaged over 24 months, the addition of RFTS adds 4.8% or 11% to the price of standalone broadband.
- 3.76 For **Vodafone**, the RFTS component of a bundle is between 5% and 7% of the overall price.
- 3.77 **Sky** only offers both Standalone Broadband and a bundled product consisting of both Broadband and RFTS. In the case of each bundle, RFTS is sold as an add-on to standalone broadband, meaning the price of RFTS remains constant across all packages. As a proportion of Sky Broadband and RFTS bundles, the RFTS component is between 6% and 18% of the overall price.

<sup>103</sup> Standalone phone: <https://www.puretelecom.ie/landline-service>, Fibre broadband and phone: <https://www.puretelecom.ie/fibre-broadband>



- 3.78 Accordingly, the incremental cost of adding RFTS to standalone broadband ranges from a net saving when purchasing a bundle, to 83%, while, conversely, the incremental cost of adding broadband to standalone RFTS ranges from 17% to 54%. These figures vary greatly across SPs. For example, with Eircom, ‘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 Pure Telecom, ‘broadband-centric’ customers face a much lower incremental cost to do so, and may even pay less for a bundle than standalone broadband under certain scenarios (when one-off setup costs, which may vary, are excluded).

### Convergence and Fixed Mobile Substitution (‘FMS’) <sup>104</sup>

- 3.79 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 (hereafter, ‘FMS’), or integration of fixed and mobile services in the same relevant market. The following technological and commercial developments may drive FMS: <sup>105</sup>
- (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 (hereafter, ‘MTRs’).

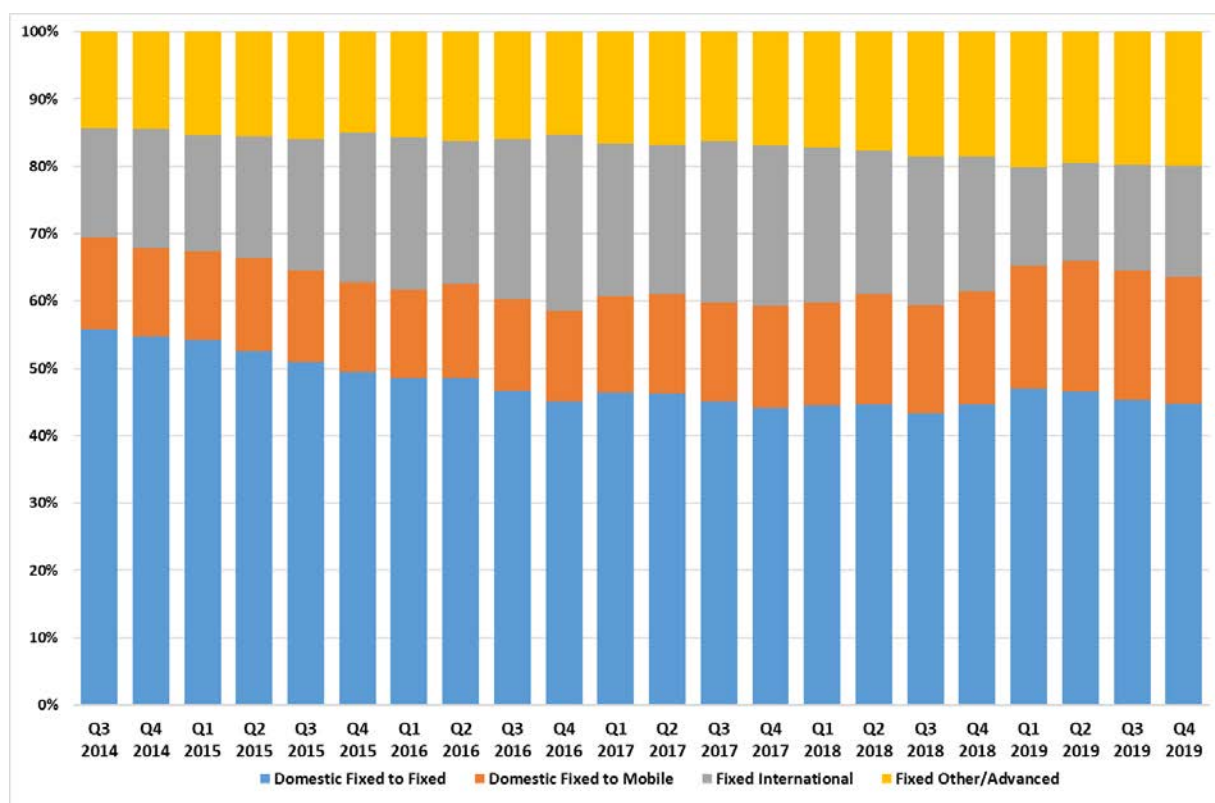
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<sup>104</sup> FMS refers to switching from FNA or broadband services to mobile broadband services.

<sup>105</sup> 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](https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/7311-berec-report-on-the-convergence-of-fixed-and-mobile-networks).

3.80 Figure 16 below profiles recent volumes of originating RFTS calls by call type on a quarterly basis. There are some signs of FMS generally increasing – particularly for voice services. 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 2019, mobile originating voice minutes accounted for 84% of all voice minutes (compared to 71% in Q3 2014<sup>106</sup>) while traffic originating on RFTS accounted for the remaining 16% of all voice minutes (compared to 30% in Q3 2014),<sup>107</sup> pointing towards increasing substitution away from fixed to mobile call origination, in the context of a marked decline in RFTS originated traffic, and a slight increase in voice traffic originating on mobile networks:

Figure 16: Share of originating RFTS calls Q3 2014 to Q4 2019<sup>108</sup>



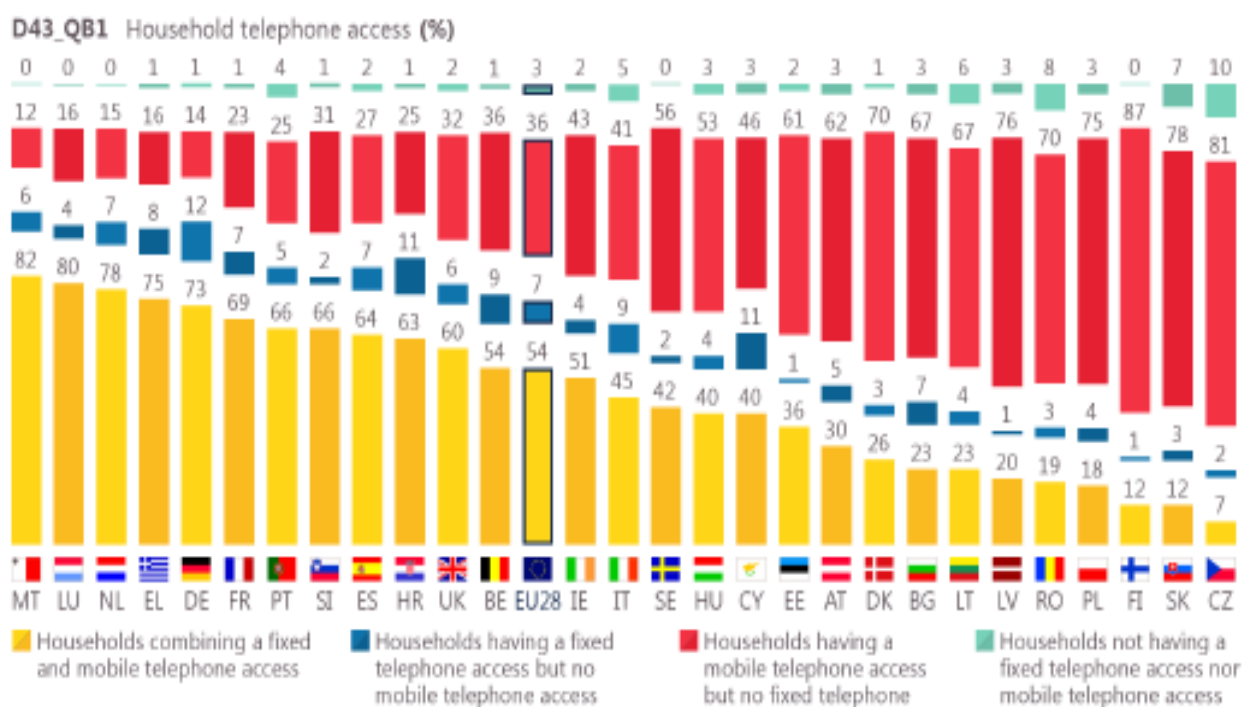
3.81 As with voice traffic across Europe, it is evident that fixed line penetration is also extremely heterogeneous across Europe with, at one extreme, 88% of Maltese households having fixed telephone access, compared to just 9% of Czech households, at the other extreme. Ireland sits in the middle, beside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

<sup>106</sup> ComReg QKDR Q3 2014.

<sup>107</sup> ComReg QKDR, 2014 to 2019.

<sup>108</sup> Data taken from ComReg QKDR, Q3 2014 to Q4 2019.

Figure 17: Eurobarometer No. 462 (2018) - Overall Telephone Access



- 3.82 Figure 17 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 have mobile only access while fewer than one in twenty (4%) have fixed access only.<sup>109</sup>
- 3.83 As illustrated in Figure 2, ComReg observes a trend towards more mobile phones and fewer fixed lines in Ireland. In Q4 2019, the mobile penetration rate was 134.4%, including mobile broadband and M2M, and 103.9%, excluding mobile broadband and M2M.<sup>110</sup> 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 3.81 above.

<sup>109</sup> 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.

<sup>110</sup> ComReg QKDR, Q4 2019, p. 54.

- 3.84 According to the 2018 Eurobarometer, 43% of EU households and 36% of Irish households are mobile-only. In contrast, the 2019 SME Market Research indicates that only 23%<sup>111</sup> 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 7). 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 surveyed<sup>112</sup> indicated a continued use of the fixed line phone, 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.

### Rollout of broadband networks

- 3.85 A number of SPs are engaged in the rollout of NG broadband networks.

#### Eircom

- 3.86 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 networks, with 1.9 million premises passed by Eircom FTTx, as of March 2020. Based on Eircom data, in excess of 80% of the 2.4 million premises in the State are passed by Eircom FTTx capable of delivering Managed VoIP.<sup>113</sup> Eircom's initial FTTx network rollout plans included 300,000 rural premises which were originally part of the National Broadband Plan (hereafter, 'NBP') Intervention Area (hereafter, '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 broadband.<sup>114</sup>
- 3.87 Subsequently, Eircom added another 40,000 premises to these initial 300,000 premises (the 'Rural 340k').<sup>115</sup> As of Q3 2019, 339,711<sup>116</sup> of these premises were passed as part of the 'rural 340k' which Eircom agreed to roll FTTP out to, outside of the scope of the NBP.

<sup>111</sup> 2019 SME Market Research, slide 8.

<sup>112</sup> 2019 Residential Market Research, slide 74.

<sup>113</sup> As reported at [https://www.eir.ie/opencms/export/sites/default/.content/pdf/IR/news/eir\\_Q3\\_FY20\\_Results\\_Press\\_Release.pdf](https://www.eir.ie/opencms/export/sites/default/.content/pdf/IR/news/eir_Q3_FY20_Results_Press_Release.pdf)

<sup>114</sup> <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>.

<sup>115</sup> <https://www.independent.ie/business/farming/rural-life/eir-says-plan-to-provide-30000-farms-with-highspeed-fibre-broadband-will-be-complete-in-june-37824246.html>.

<sup>116</sup> As of May 2020, 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>

- 3.88 Eircom is currently engaged in a network upgrade, which involves deploying fibre deeper into its local access network, closer to the end user premises. This is intended to allow Eircom to offer enhanced broadband with higher download/upload speeds and advanced Quality of Service (**‘QoS’**).
- 3.89 Eircom’s existing broadband network is predominantly based on Fibre to the Cabinet (hereafter, **‘FTTC’**) technology. This means that the existing local copper line (the **‘local loop’**) located between the nearest local telephone exchange (or equivalent) and the customer’s premises is partially replaced with fibre, typically up to a local distribution point/cabinet located in closer proximity to the customer’s premises. Eircom is also deploying a Fibre to the Premises (hereafter, **‘FTTP’**) network, whereby the entire local copper loop is replaced with a fibre connection. These FTTx networks are capable of supporting high speed broadband, multimedia, and RFTS.
- 3.90 Although Eircom is currently expanding its FTTx network, it nevertheless continues to utilise its existing FNA network in parallel (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 regulation at the wholesale level, SB-WLR and WLV) 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 Eircom’s FNA network. In this regard, ComReg notes that Eircom self-supply of Managed VoB RFTS has increased from [REDACTED] [REDACTED]

### Virgin Media

- 3.91 Virgin Media offers TV, broadband, fixed and mobile telephony products, with speeds of up to 250, 360 and 500Mbps.<sup>117</sup> As of December 2019, Virgin Media announced that its fibre broadband network had passed 939,900 premises.<sup>118</sup> This followed the addition of 100,000 premises to its network map, and was on target to pass 1 million premises over the 2 years from 2018.<sup>119</sup> Virgin Media’s network rollout plans have led to its expansion outside of Dublin and the regional cities to regional towns.

<sup>117</sup> See <https://www.virginmedia.ie/broadband/buy-a-broadband-package/>.

<sup>118</sup> Liberty Global Full Year 2019 Results, page 18. <https://www.libertyglobal.com/wp-content/uploads/2020/02/Virgin-Media-Fixed-Income-Q4-2019.pdf>.

<sup>119</sup> See <https://www.virginmedia.ie/about-us/press/2018/virgin-media-announces-landmark-figure-of-900-000-premises-now-passed/>

## SIRO

- 3.92 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 April 2020, SIRO has passed 320,000 premises in 37 towns.<sup>120</sup> SIRO has 12 customers (Vodafone, Digiweb, Sky, BT, Carnsore Broadband, Rocket Broadband, Kerry Broadband, enet, Airwire, Pure Telecom, Westnet, Magnet, as well as Nova Telecom, added in October 2019),<sup>121</sup> 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')

- 3.93 In May 2019, Granahan McCourt was designated as the Preferred Bidder for the NBP.<sup>122</sup> Granahan McCourt has incorporated a new Irish registered company, National Broadband Ireland (hereafter, 'NBI'), to build, operate and maintain the NBP in the IA. The NBP contract was awarded by the Department of Communications, Climate Action, and Environment (hereafter, 'DCCA'), 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 State IA over a 25-year period. Following confirmation of State Aid Approval by the EC and contract closing requirements, DCCA awarded NBI the contract for the NBP. NBI will maximise the use of existing Eircom pole and duct infrastructure.<sup>123</sup>
- 3.94 The NBP defines high speed broadband as a minimum speed of 30Mbps download and 6Mbps upload. However, the basic product that NBI will offer is 150Mbps, with 1Gbps available to businesses as requested.<sup>124</sup> The IA focuses on areas where there is no existing or planned commercial network, and includes 537,595 postal addresses, as of Q4 2019. This amounts to 23% of the population.<sup>125</sup> Although predominantly rural, the IA covers areas in all 26 counties, and all but four metropolitan Dublin constituencies.

<sup>120</sup> <https://siro.ie/news-and-insights/siro-broadband-fibre-connectivity-essential-services-covid-19/>. Data in ComReg's position suggest that the number of premises passed by SIRO as of Q4 2019 was [redacted].

<sup>121</sup> <https://siro.ie/siro-drives-competition-in-the-broadband-market/> and <https://siro.ie/siro-announces-magnet-networks-as-its-latest-retail-partner/>.

<sup>122</sup> "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/>

<sup>123</sup> *Ibid.*

<sup>124</sup> "Delivering the National Broadband Plan", May 2019, <https://www.dcca.gov.ie/documents/Delivering%20the%20National%20Broadband%20Plan.pdf>.

<sup>125</sup> *Ibid.*



- 3.95 Data provided to ComReg indicate that NBI intends to rollout over a seven-year period across the [REDACTED] EAs<sup>126</sup> in the State in which the NBP IA is located. This is broken down in Table 7 below:

**Table 7: Projected NBI Rollout [REDACTED]**

	EAs <sup>127</sup>	Buildings <sup>128</sup>	% 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]
<b>Total</b>	[REDACTED]	[REDACTED]	[REDACTED]

### Imagine

- 3.96 Imagine provides broadband, largely over FWA, to end users in predominantly rural locations. FWA subscriptions have remained relatively stable over time, having decreased by only 1% between Q3 2014 and Q4 2019 (see paragraph 3.22). In February 2019, Imagine announced plans<sup>129</sup> to cover 1.1 million premises in underserved regional and rural areas with 150Mbps 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 March 2020, having deployed a pilot network, Imagine announced that its service was live and available in 195 areas, and currently passes 828,445 rural and urban premises.<sup>130</sup> ComReg notes that the contended nature of FWA broadband services (typically 24:1 or 48:1) is significantly different from FNA or NG broadband services, which typically have a low contention ratio or are uncontended in practice. The higher contention ratios associated with FWA suggest that this service is unlikely to be able to serve 100% of the customers residing in these areas without some level of service degradation.

<sup>126</sup> 'Exchange Areas', or 'EAs' refers to Eircom's Exchange Areas which, as outlined in Annex: 9, has been designated as the appropriate geographic unit of measurement in this Consultation.

<sup>127</sup> In numerous instances, NBI rollout at an EA is completed over two or more years.

<sup>128</sup> While the NBI rollout consists of 537,000 premises (defined as 'Delivery Points' in the Eircode database), this amounts to only [REDACTED] 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).

<sup>129</sup> <https://www.siliconrepublic.com/comms/imagine-5g-broadband-rural-ireland>.

<sup>130</sup> <https://www.imagine.ie/the-broadband-network/>.



## Preliminary Conclusions on Retail Trends

- 3.97 ComReg is of the preliminary view that the following key trends are evident:
- (a) RFTS traffic is in consistent decline. However, 49% of households<sup>131</sup> and 77% of businesses<sup>132</sup> continue to retain access to fixed telephony;
  - (b) There has been significant growth in 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 5% between Q3 2014 and Q4 2019. The decline in FNA RFTS subscriptions by almost 19% has, in part, been offset by the significant increase in the demand for Managed VoIP, which has grown by 36% over the same time period;
  - (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).

### 3.3.3 Behavioural Trends in the RFTS Market

- 3.98 In this sub-section, ComReg identifies and discusses key behavioural trends in the RFTS Market. Paragraphs 3.36 to 3.41 above have already identified a decline in RFTS traffic and revenue. Developments in Managed VoIP and standalone broadband (hereafter, '**SAB**') are outlined at paragraphs 3.104 to 3.124 below. The 2019 Residential and SME Market Research highlights key trends in packages and bundles, including spend and types of bundles purchased. The section concludes with preliminary conclusions on RFTS trends.

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

- 3.99 ComReg has identified a strong and continued tendency for RFVC and RFVA to be purchased from a single retail SP.

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<sup>131</sup> 2019 Residential Market Research, slide 8.

<sup>132</sup> 2019 SME Market Research, slide 8.

- 3.100 At the time of the 2007 Decision it was common for SPs to purchase wholesale CPS<sup>133</sup> from Eircom and to utilise this to provide RFVC to end users, with the end users purchasing the line rental element separately from Eircom. However, since 2007 there has been an ongoing and significant decline in demand for CPS, falling from 148,854 CPS access paths in Q1 2007 to 26,148 in Q3 2014, to 6,414 in Q4 2019. As a consequence, the availability of a standalone RFVC service 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.<sup>134</sup> 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.
- 3.101 Apart from the provision of CPS and SB-WLR services, Eircom also offers WLV (see paragraph 3.15). As of Q4 2019, Eircom sold 258,837 WLV Access Paths, 267,278 SB-WLR Access Paths, and just 6,414 CPS Access Paths.<sup>135</sup>
- 3.102 As set out at Table 8 below, at Q4 2019<sup>136</sup> copper based SB-WLR used by Access Seekers accounted for 50% of indirect access paths, compared to 69% in Q3 2014. WLV paths 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.
- 3.103 These developments are likely to reflect the complementarity at the retail level between RFVC and RFVA:

**Table 8: Indirect Access Paths Q3 2014 – Q4 2019**

Access Paths	2014 Q3		2019 Q4		Change Q3 2014 – Q4 2019
	N	%	N	%	%
Carrier Pre-Select	26,148	5	6,414	1	-75%
SB-WLR	398,653	69	267,278	50	-33%
White Label Voice	148,750	26	258,837	49	+74%
<b>Total indirect access paths</b>	<b>573,551</b>	<b>100</b>	<b>532,529</b>	<b>100</b>	<b>-7%</b>

<sup>133</sup> CPS is a wholesale FVCO product which allows an SP to offer its end users an RFVC products, while the end user continues to pay Eircom for their retail line rental. As described in paragraph 2.12, CPS has been offered on a legacy-only basis since September 2016.

<sup>134</sup> In some cases, BT re-sells Eircom SB-WLR and/or combines Eircom's WLR with its own WLV service.

<sup>135</sup> Note that an access path (as opposed to subscriptions) 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 equates to between 16 and 30 access paths.

<sup>136</sup> ComReg QKDR, Q4 2019.

## Developments in Managed VoIP

3.104 As set out at paragraph 3.10 above, ComReg distinguishes three categories of Managed VoIP – Managed VoB, Hosted PBX, and SIP Trunking. Managed VoIP is increasingly being used as a means of providing voice services to residential and business end users. In total, Managed VoIP minutes accounted for approximately 20.3% of total RFTS minutes in Q4 2019, up from 11.7% in Q3 2014. There were 499,813 Managed VoIP subscriptions in Ireland at Q4 2019<sup>137</sup> representing 36% 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 25% since Q3 2015:

**Table 9: Percentage change in Managed VoIP subscriptions, Q4 2015 – Q4 2019**

	Q4 2015	Q4 2019	% Change
<b>Virgin Media VoIP subscriptions</b> <sup>138</sup>	358,139	335,171	-6%
<b>Total VoIP subscriptions</b> <sup>139</sup>	387,463	499,813	29%
<b>Virgin Media % of VoIP subscriptions</b>	92%	67%	-25%

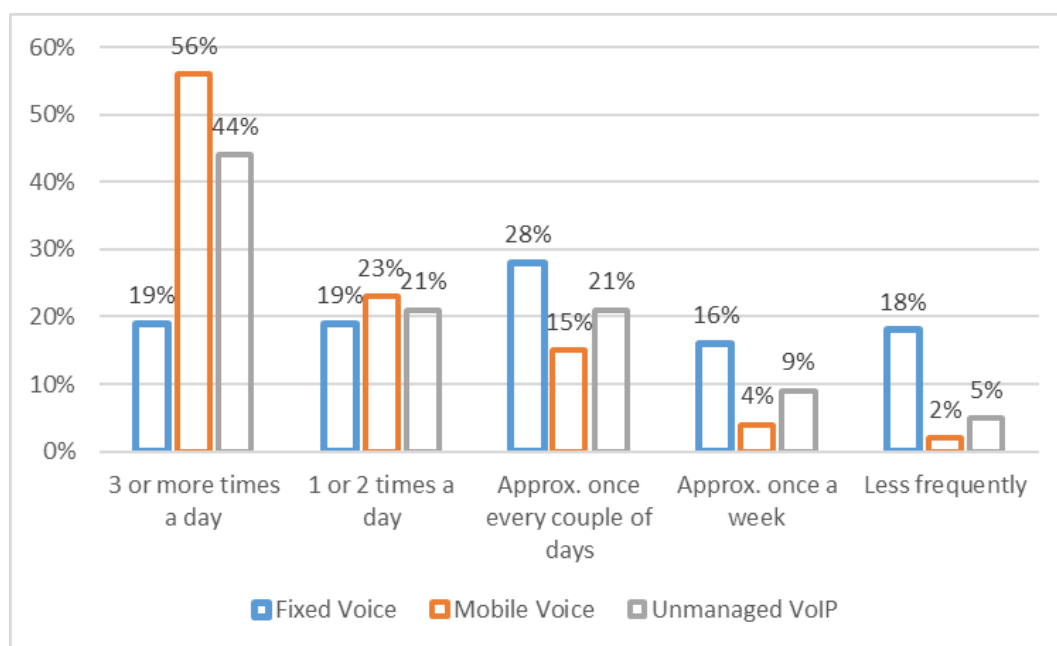
3.105 There has also been an increase in the use of unmanaged VoIP OTT, used by consumers via a personal computer, laptop computer, smart phone or tablet in order to communicate with other users on these devices. The 2019 Residential Market Research indicated that 67% of households with a fixed broadband service in their home claimed to have used unmanaged VoIP OTT services.<sup>140</sup> The reported usage for unmanaged VoIP services was quite substantial compared to other fixed voice services, with 65% of respondents using unmanaged VoIP services more than once a day (compared to 38% for other fixed landline services and 79% for mobile voice telephony) as illustrated by Figure 18 below:

<sup>137</sup> ComReg QKDR, Q4 2019. Note that these traffic and subscription figures refer to Managed VoIP only and do not include unmanaged VoIP OTT services such as Skype.

<sup>138</sup> Based on Liberty Global Quarterly Earnings Reports.

<sup>139</sup> Based on ComReg QKDR data.

<sup>140</sup> 2019 Residential Market Research, slide 68.

**Figure 18: Usage of fixed voice, mobile voice and unmanaged VoIP services<sup>141</sup>**

- 3.106 In addition to the above, residential respondents to the 2019 Market Research identified a clear difference in usage preferences between unmanaged VoIP services and other voice telephony services. For example, household respondents indicated a clear preference for using their fixed voice telephony service 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 their 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 indicated unmanaged VoIP as their communications method of choice for international calls (15% preferred to use unmanaged VoIP for international calls compared to 45% preferring fixed voice telephony and 21% preferring mobile voice telephony for making international calls).<sup>142</sup>
- 3.107 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. In addition to changes in VoB services, it is also important to consider how Standalone Broadband services may contribute to changes in end user behaviour, enabling a move away from voice services delivered over FNA, at both wholesale and retail level.

<sup>141</sup> 2019 Residential Market Research, slides 59, 61 and 69.

<sup>142</sup> 2019 Residential Market Research, slide 74.

## VoIP Categories

### **Managed VoIP Service Providers**

- 3.108 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 the IP access path from a third party (for instance, using WLA or Wholesale Central Access (hereafter, 'WCA') inputs).<sup>143</sup> 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 RFTS provided over FNA.
- 3.109 A number of Managed VoIP SPs are currently active in Ireland, including Virgin Media, Vodafone, Magnet and Digiweb. Eircom has also commenced rollout of Managed VoIP. 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.
- 3.110 Managed VoIP minutes accounted for 20.6% of total RFTS traffic in Q4 2019, almost doubling from 11.7% in Q3 2014.<sup>144</sup> ComReg recorded 499,813 Managed VoB subscriptions in Ireland as of Q4 2019, an increase of 36% from the Q3 2014 figure of 367,010.<sup>145</sup> 91% of this increase is accounted for by increases in Eircom and Vodafone Managed VoIP subscriptions.
- 3.111 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.
- 3.112 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 6), but only as part of a bundle.<sup>146</sup>

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<sup>143</sup> 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”.

<sup>144</sup> See ComReg QKDR, Q3 2014 and Q4 2019.

<sup>145</sup> ComReg QKDR, Q4 2019. These traffic and subscription figures refer to Managed VoB only and do not include Unmanaged VoB OTT services such as Skype.

<sup>146</sup> As at Q4 2019, Virgin Media's subscriber base accounted for 23.9% of the RFTS market.

- (b) Imagine offers Managed VoB services over FWA. As of Q4 2019, Imagine had [redacted] rural-based subscribers.<sup>147</sup> As of Q4 2019, [redacted] of these subscribers purchased Managed VoB.
- (c) Digiweb offers Managed VoB services over FWA and very localised FTTP networks. As of Q4 2019, [redacted] Digiweb subscribers purchased Managed VoB.
- (d) Magnet provides Managed VoB over very localised FTTP networks, and over SIRO. As of Q4 2019, Magnet had [redacted] fixed subscribers and [redacted] of these subscribers purchased Managed VoB.
- (e) Eircom had [redacted] RFTS subscribers as of Q4 2019, and [redacted] of these subscribers purchased Managed VoB, which represents [redacted] of all Managed VoB subscriptions.
- (f) Vodafone had [redacted] RFTS subscribers as of Q4 2019, and [redacted] of these subscribers 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 2019.

3.113 Eircom continues to offer RFTS over its FNA network. However, commensurate with its broadband rollout, currently largely consisting of FTTC, 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<sup>148</sup>). However, 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 the broadband footprint who do not purchase broadband, or purchase broadband together with FNA-based RFTS.

3.114 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.<sup>149</sup>

<sup>147</sup> ComReg QKDR Q4 2019

<sup>148</sup> <https://www.eir.ie/eirbroadbandtalk/>

<sup>149</sup> 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.



- 3.115 Since Eircom continues to be the main originator of RFTS, the shift from circuit-switched interconnection to IP-based interconnection at an industry level is dependent upon Eircom's migration to IP interconnection arrangements.<sup>150</sup> At product launch, IP interconnection will facilitate the handover of calls between networks using, for example, an SP's Wholesale Ethernet Interconnection Link (hereafter, 'WEIL').

### **Partially-managed VoIP Service Providers**

- 3.116 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.
- 3.117 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.<sup>151</sup>

### **Unmanaged VoIP Service Providers**

- 3.118 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,<sup>152</sup> Vodafone,<sup>153</sup> Pure Telecom,<sup>154</sup> and Virgin Media<sup>155</sup> offer SAB services with no fixed line home phone (see Table 6). ComReg data indicate that, as of Q4 2019, there were [X █████ X] SAB subscriptions, having increased from [X █████ X] in Q3 2014. This amounts to [X █████ X] of all broadband subscriptions – that is, [X █████ X] of broadband subscriptions are purchased as part of a bundle. Of these [X █████ X] SAB subscriptions, [X █████ X], were Eircom retail SAB subscriptions.
- 3.119 The emergence of SAB may enable growth of unmanaged VoIP, particularly offered by Over-the-top (hereafter, 'OTT') providers. Unmanaged VoIP services are web-based VoIP services accessed via a personal computer, laptop, smartphone or tablet in order to communicate with other users of the service on a compatible device. Unmanaged VoIP service providers include Skype, Viber and WhatsApp, for example.

<sup>150</sup> [X █████ X]

<sup>151</sup> As set out at <https://www.comreg.ie/industry/licensing/numbering/number-assignments-availability/>.

<sup>152</sup> <https://www.eir.ie/broadband-only>.

<sup>153</sup> <http://www.vodafone.ie/home/broadband>.

<sup>154</sup> <https://www.puretelecom.ie/residential/broadband-only>.

<sup>155</sup> <https://www.virginmedia.ie/naked-broadband-only-deal/>.



### 3.4 Overall Preliminary Conclusion on Retail Trends and Developments

- 3.120 Further to the above assessment of retail trends in the provision of RFTS, ComReg is of the preliminary view that a number of key trends may be observed.
- 3.121 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 and business RFTS subscriptions have declined by 5% and 6% respectively. However, as indicated in Eurobarometer data, a (declining) majority of households (55%) continue to have retail voice connections at a fixed location.
- 3.122 The purchase of RFTS as part of a bundle is an increasingly popular choice for end users. As of Q4 2019, 82% of end users purchased RFTS as part of a bundle (dual, triple or quadruple play), compared to 70% in Q3 2014.
- 3.123 The increasing footprint of NG technology 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 are now offering Managed VoIP services;
  - (b) Managed VoB SPs are continuing to provide services, particularly with bundled services over CATV and FTTx;
  - (c) Through innovation and development traditional 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.
- 3.124 Managed VoIP is an emerging trend in the RFTS market, and a number of SPs offer Managed VoIP services, although it should be noted that just 5 of the 27 SPs listed in the footnote below - Eircom, Virgin Media, Vodafone, Sky and Pure Telecom respectively - account for over 94.4% of total RFTS subscriptions.<sup>156</sup>

**Q. 1. Do you agree that the main developments identified in the provision of RFTS are those which are most relevant in informing the assessment of the Relevant Markets? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual/empirical evidence supporting your views.**

<sup>156</sup> AirSpeed, ATT, Blueface, BT, Colt, Crossan, DigitalForge, Digiweb, Eircom, Fastcom, Goldfish, Imagine, Intellicom, Ivertec, Magnet, Nova, Onwave, Permanet, Pure Telecom, Rapid, Ripplecom, Sky, Sprint, Three, Virgin Media, Vodafone, and Weltel.

## 4 Relevant RFTS Market Definition

- 4.1 In this section, ComReg defines, on a preliminary basis, 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, the 2014 EC Recommendation does not identify '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 3CT<sup>157</sup> at local level (see paragraphs 2.28 to 2.31 above), 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 Market definition 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. Market definition determines the product and geographic boundaries of a given market, including the direct and indirect competitive constraints that SPs face – with the exception of any SMP SP, which, by definition, is not subject to these competitive constraints.
- 4.3 In defining the Relevant RFTS Markets, ComReg begins by identifying the appropriate focal product. Having done so, ComReg then examines whether this focal product constitutes a market on its own, or whether a broader market should be defined, taking into account direct demand-side and supply-side substitutes (and in the case of wholesale markets, any effective indirect constraints).
- 4.4 The Notice on Market Definition defines a relevant market as follows:
- (a) A relevant **product market** comprises all those products and/or services which are regarded as interchangeable or substitutable by the end user by reason of the products' characteristics, prices and intended use;
  - (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.

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<sup>157</sup> 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.

- 4.5 As set out at paragraph 1.16 above, ComReg applies the MGA when carrying out its assessment. ComReg notes that the MGA allows for the assumption that relevant upstream regulation continues to be in place (in the current instance any regulation present in the FACO, WLA, and WCA markets, as appropriate), when assessing the downstream RFTS markets. However, as set out in Section 7, the FACO markets are assessed and, on the basis of ComReg's proposal that Eircom does not have SMP in certain FACO Markets (i.e. the Urban FACO Markets), regulation is proposed to be withdrawn in the geographic areas falling into the Urban FACO markets. Similarly, pursuant to the 2018 WLA/WCA Decision,<sup>158</sup> regulation has been removed in the Urban WCA Market. Where upstream regulation (of FACO, WLA or WCA) continues to be in place, this is consistent with the MGA, and assures that upstream inputs to the downstream RFTS market are provided in accordance with regulatory obligations. Where, despite the assumptions permissible under the MGA, upstream markets are not subject to regulation, this implies that the provision of these inputs is characterised by the presence of sufficient competition, such that these inputs are capable of being provided on a competitive basis. WLA/WCA regulation still pertains such that FACO/RFTS can still be provided, and this has implications for the downstream RFTS markets. This is discussed further in paragraphs 6.7 to 6.8.
- 4.6 ComReg notes that under the 2016 USO Decision,<sup>159</sup> Eircom is obliged to provide an RFVA service to every household in the country that requests it and is required to provide such RFVA at a geographically averaged price ('**GAP**'). This restricts Eircom's commercial pricing freedom by requiring it to charge the same price for RFVA, regardless of location. Thus, Eircom is not entitled to charge more to end users who, for example, live in remote rural areas. In applying the MGA, ComReg assesses the Relevant RFTS Markets absent upstream FACO regulation but in the presence of GAP under the USO.
- 4.7 Market definition is not an end in itself but is undertaken to provide the context for the subsequent 3CT in Section 6, which examines whether the Relevant RFTS Markets should continue, in principle, to be susceptible to *ex ante* regulation. Market definition allows ComReg to consider the competitive constraints imposed by demand and supply-side substitutes (and, consequently, the buyers and suppliers of those substitute products) on a forward-looking basis; that is, taking into account expected or foreseeable technological or economic developments over a reasonable time horizon linked to this market review.
- 4.8 Accordingly, this section is structured as follows:

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<sup>158</sup> 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**').

<sup>159</sup> Universal Service Requirements - Provision of access at a fixed location (AFL USO), Decision D05/16, ComReg Document 16/65, 29 July 2016, the '**2016 USO Decision**.'

- (a) Summary of the 2014 RFVA Decision (discussed in paragraphs 4.10 to 4.17 below);
- (b) Identifying the focal product, which is the initial product against which potential substitute products are assessed (discussed in paragraphs 4.18 to 4.173 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 4.174 to 4.327 below); and
- (d) The geographic scope of the Relevant RFTS Markets (discussed in paragraphs 4.328 to 4.386 below).

4.9 As part of its assessment, ComReg considers the 2019 Market Research, information provided by SPs in response to ComReg requests for information, using both statutory information gathering powers (Statutory Information Requests (hereafter, '**SIRs**'), and on a non-statutory basis (Informal Information Requests (hereafter, '**IIRs**')), as well as other available data, including ComReg's QKDR. 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 (hereafter, '**HMT**') in a general sense (see paragraph 4.176), 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

4.10 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

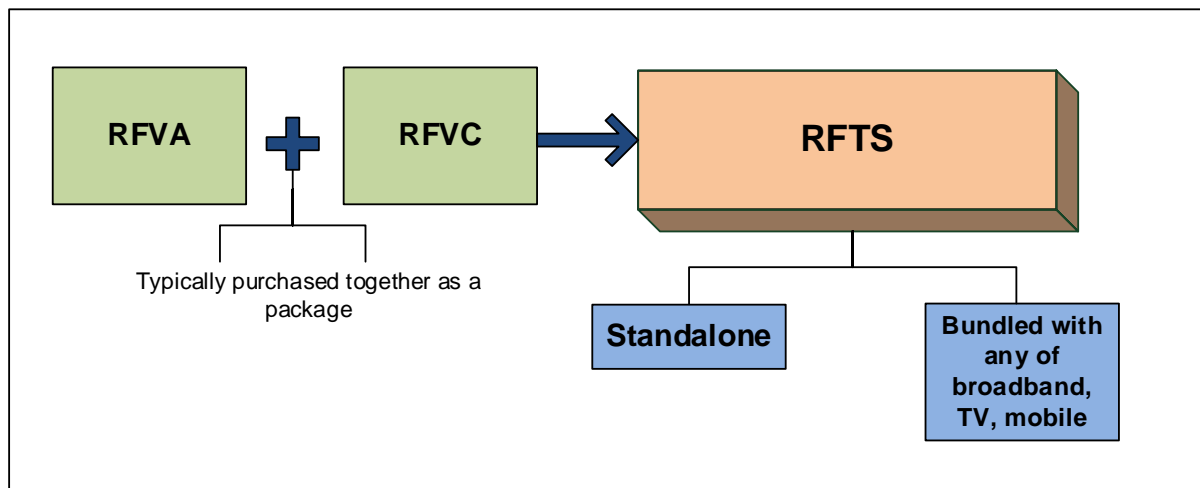
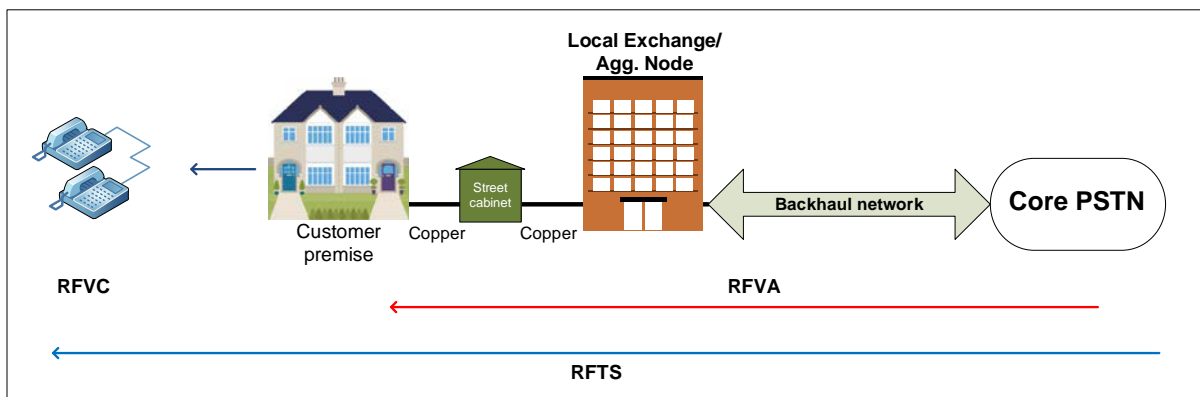
4.11 Retail Fixed Voice Access ('**RFVA**')<sup>160</sup> is a retail service which provides a connection or access at a fixed location to the Public Switched Telephone Network ('**PSTN**') or equivalent for the purpose of making and/or receiving telephone calls, as well as related services. RFVA provides the network access necessary for the provision by SPs of a Retail Fixed Voice Calls ('**RFVC**') service. Together, RFVA and RFVC provide a Retail Fixed Telephony Service ('**RFTS**').

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<sup>160</sup> Commonly referred to as '(retail) Line Rental'.

4.12 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 19 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 2019, RFTS is most commonly bundled with broadband, as the broadband access path can, in many cases, also be used for the delivery of RFTS by means of Managed<sup>161</sup> Voice over Broadband (hereafter, ‘VoB’).

Figure 19: Overview of RFTS



4.13 While it is, in principle, possible for end users to purchase RFVA and RFVC separately from different SPs, the data shows 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 20 below.

<sup>161</sup> ‘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 (hereafter, ‘QoS’) standards.

## Conclusions from the 2014 RFVA Decision

- 4.14 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.<sup>162</sup> ComReg accordingly 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 ultimately allow for the inclusion of RFVC. ComReg's SMP assessment was further clarified in the 2013 RFVA Consultation,<sup>163</sup> based on analysis carried out by Oxera on behalf of ComReg of a SSNIP of a hypothetical Retail Fixed Voice Access and Calls (hereafter, '**RFVAC**') product (equivalent to RFTS). 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 (hereafter, 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

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<sup>162</sup> At paragraph 4.195.

<sup>163</sup> 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, (hereafter, 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, (hereafter, 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 In defining the relevant RFVA geographic markets, ComReg considered:

- (a) Entry conditions, distribution and evolution of market shares;
- (b) Geographic differences in retail product characteristics;
- (c) Retail prices; and
- (d) Wholesale Input Prices.

4.17 ComReg was 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 Relevant Assessment

### 4.2.1 Identifying the RFVA Focal Product

4.18 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.”<sup>164</sup>*

<sup>164</sup> 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](https://www.berec.europa.eu/eng/document_register/subject_matter/berec/reports/363-berec-report-impact-of-fixed-mobile-substitution-fms-in-market-definition)



- 4.19 As noted in paragraph 4.14, the 2014 RFVA Decision<sup>165</sup> 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 (RFVA) 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, which is a discrete decision. 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 differ 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.
- 4.20 In determining the appropriate starting point for the analysis of the Relevant Markets in this current assessment, ComReg seeks to consider the following key questions:
- (a) Should the Focal Product include RFVA and RFVC as a single product offering? (see paragraphs 4.23 to 4.57 below);
  - (b) Is the appropriate Focal Product a standalone RFTS product or a bundle of RFTS and other services? (see paragraphs 4.58 to 4.90 below);
  - (c) Are calls made to all types of telephone numbers in the same RFTS market? (see paragraphs 4.91 to 4.115 below); and
  - (d) Are low-volume and high-volume RFTS users in the same relevant market? (see paragraphs 4.116 to 4.167 below).
- 4.21 ComReg may, if justified by the evidence available, define one or more focal products (e.g. RFVA and RFVC). While ComReg defined only one focal product in the 2014 RFVA Decision, the 2015 FACO Decision<sup>166</sup> concluded that Eircom's FVCO product was the appropriate starting point for defining the focal product, but went on to define a single focal product, in which Fixed Access (hereafter, 'FA') and Fixed Voice Call Origination ('FVCO') were bundled together and defined as Fixed Access and Call Origination ('FACO').

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<sup>165</sup> At paragraph 4.195.

<sup>166</sup> At paragraph 4.41.

- 4.22 As with the FACO market assessment, the focal product does not distinguish between the types of telephone numbers being called. In paragraph 4.112 below, ComReg set out its preliminary view 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-geographic<sup>167</sup> and mobile numbers. Thus, it is clear that 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?

- 4.23 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.
- 4.24 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.
- 4.25 Consistent with guidance on the assessment of bundles for market definition purposes, in addition to the SSNIP tests, ComReg also gives consideration to the following additional factors:
- (a) Economies of scale and scope;
  - (b) Transaction costs faced by end users;
  - (c) Differences in competitive conditions; and
  - (d) End user behaviour.
- 4.26 ComReg is of the preliminary view that the appropriate focal product is standalone FNA RFTS, i.e. RFVA and RFVC in a single product offering over Eircom's PSTN network. As detailed below in paragraphs 0 to 4.57, the evidence available to ComReg suggests that the incidence of end users purchasing RFVA and RFVC from separate SPs is low, at 0.53% of total FNA paths (i.e. PSTN and ISDN) as at Q4 2019.

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<sup>167</sup> 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.

- 4.27 As at Q4 2019 there were 968,839 PSTN access paths in the State, as outlined in Table 10 below. PSTN remains the predominant means of delivering RFVA, and is currently regulated by ComReg pursuant to the 2014 RFVA Decision and the related 2015 FACO Decision:

**Table 10: FNA Paths and Managed VoIP Subscriptions Q4 2019<sup>168</sup>**

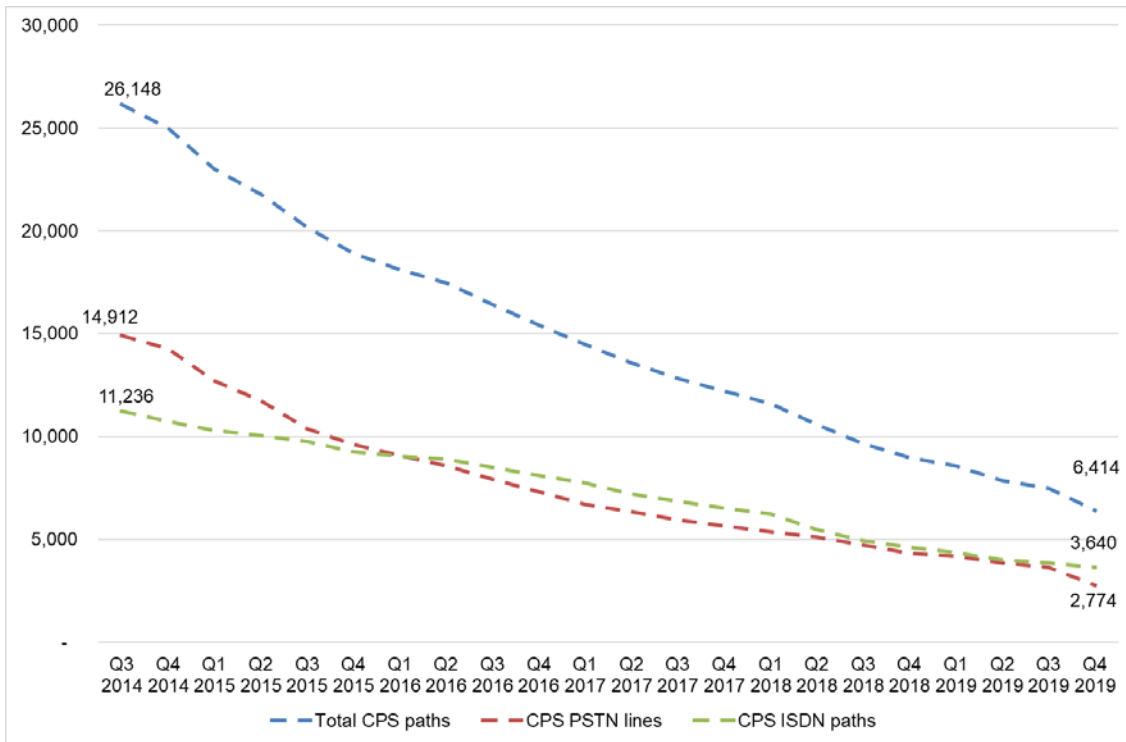
Path Type	Q4 2019	Change Q4 2018 – Q4 2019	Change since 2014 RFVA Decision Q3 2014 – Q4 2019
PSTN	968,839	-7.6%	-22.3%
ISDN Basic	94,818	-7.0%	-28.7%
ISDN Fractional	37,216	-8.9%	-35.7%
ISDN Primary	114,540	-5.1%	-28.6%
<b>Total ISDN</b>	<b>246,574</b>	<b>-6.4%</b>	<b>-29.8%</b>
<b>Total PSTN and ISDN access paths</b>	<b>1,215,413</b>	<b>-7.4%</b>	<b>-24.0%</b>
<b>Managed VoIP Subscriptions</b>	<b>499,813</b>	<b>6.5%</b>	<b>36.2%</b>

- 4.28 As noted in paragraph 4.14, 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.
- 4.29 ComReg was of the view that competitive pressures for RFVA and RFVC were likely somewhat different 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.
- 4.30 In the current market review, ComReg is of the preliminary view 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.

<sup>168</sup> As noted in paragraph 3.32 (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. See also Table 14.

4.31 As of Q4 2019, there were 6,414 CPS<sup>169</sup> access paths (or 3,614 lines). This suggests that fewer than 4,000 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 20: Total CPS paths – Q3 2014 to Q4 2019**



4.32 In response to ComReg’s IIR, one SP noted [redacted].

4.33 ComReg’s preliminary view 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.

<sup>169</sup> CPS allows the user to receive all or a portion of calls from one SP and RFVA from another SP (usually Eircom).

- 4.34 In bilateral meetings with ComReg and responses to IIRs, an SP indicated [REDACTED]. Of note is that CPS is no longer available to purchase from Open eir, having been discontinued on 8 September 2016.<sup>170</sup> This suggests that competition has not evolved separately for RFVA and RFVC over the period since the 2014 RFVA Decision.
- 4.35 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

- 4.36 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 there is a significant upfront capital investment and sunk costs 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.
- 4.37 The provision of RFVA and RFVC services 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.

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<sup>170</sup> See documentation at [https://www.openeir.ie/Products/Voice/Carrier\\_Pre\\_Select/](https://www.openeir.ie/Products/Voice/Carrier_Pre_Select/)

- 4.38 ComReg data indicate that Access Seekers are purchasing less CPS (that is, standalone FVCO) and have migrated to Single Billing-Wholesale Line Rental ('**SB-WLR**' – being the combination of line rental and FVCO), which allows an Access Seeker to offer a bundled RFTS product to end users (see Figure 22).<sup>171</sup> 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 2019 (see Figure 22), SB-WLR is in decline and is being eclipsed by Wholesale Switchless Voice ('**Wholesale SV**')<sup>172</sup>, 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. Eircom's Wholesale SV product is known as White Label Voice (hereafter, '**WLV**'). As WLV includes line rental and FVCO, SB-WLR is ultimately an input to WLV.
- 4.39 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. In other words, their retail fixed voice offering integrates line rental and calls into a single package.
- 4.40 RFTS SPs typically charge a fixed price for bundles which is 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.<sup>173</sup> Standalone RFVA is priced at €25.78 per month from Eircom,<sup>174</sup> €25.50 per month from Pure Telecom (with a €3.50 add on for unlimited Irish landline calls),<sup>175</sup> and €30 per month from Sky (with a €7.50 add on option for unlimited landline (national/20 destination international) calls).<sup>176</sup> Full prices of standalone RFTS packages from these SPs are outlined in Table 18 below.

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<sup>171</sup> SB-WLR allows the user to receive calls and line rental from one single SP.

<sup>172</sup> The exception being Q4 2019, which saw SB-WLR access paths rise above WLV access paths (see Figure 22).

<sup>173</sup> Off-Peak Landline, details of which were accessed on <https://www.eir.ie/phone/> on 20 May 2020.

<sup>174</sup> Details of which were accessed on <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/Pt1.1.pdf> on 13 March 2020.

<sup>175</sup> Details of which were accessed on <https://www.puretelecom.ie/landline-service> on 13 March 2020.

<sup>176</sup> Details accessed on <https://www.sky.com/ireland/broadband-talk/talk-compare/> on 13 March 2020.

- 4.41 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: 3 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.<sup>177</sup>
- 4.42 ComReg's preliminary view 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 22. 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 likely value a bundle of RFTS over purchasing RFVA and RFVC separately.

### Transaction costs faced by end users

- 4.43 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 'Simply Broadband'<sup>178</sup> for €35, totalling €79.99 per month, is more expensive than buying Vodafone 'Simply Broadband with Voice' which is €50 per month,<sup>179</sup> or Virgin Media's 30 day contract package of broadband and voice for €59 per month.<sup>180</sup>

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<sup>177</sup> Anytime Landline, details of which were accessed on <https://www.eir.ie/phone/> on 20 May 2020.

<sup>178</sup> Accessed May 2020: <https://n.vodafone.ie/shop/broadband.html> €35 per month after initial 6 month discount.

<sup>179</sup> Accessed May 2020: <https://n.vodafone.ie/shop/broadband.html> €50 per month after initial 6 month discount (€35 for broadband plus €15 for unlimited calls to Irish landlines and mobiles).

<sup>180</sup> Accessed on 13 March 2020: <https://www.virginmedia.ie/broadband/buy-a-broadband-package/250-mb-freedom-broadband-world-talk/>



- 4.44 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 Research indicated that the vast majority of end users purchase bundled products consisting of both RFVA and RFVC from a single SP – the survey showed that just 4% of fixed landline users purchased RFVC and RFVA from separate SPs.<sup>181</sup> 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.<sup>182</sup>
- 4.45 The high demand from end users for such bundles suggests that end users face some degree of 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 consider RFVA and RFVC as a single product (i.e. RFTS) rather than as separate products with different usage characteristics.
- 4.46 ComReg notes also that many 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 in below in paragraphs 4.178 to 4.239.

#### Differing competitive conditions

- 4.47 Markets for bundled products are less likely to arise in circumstances where the 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 either 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 suggest that each element belongs in a separate relevant market.
- 4.48 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, all FNA and NG (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 (FTTC) broadband typically includes a line rental charge for the access connection (i.e. the same access path that is used for RFVA).

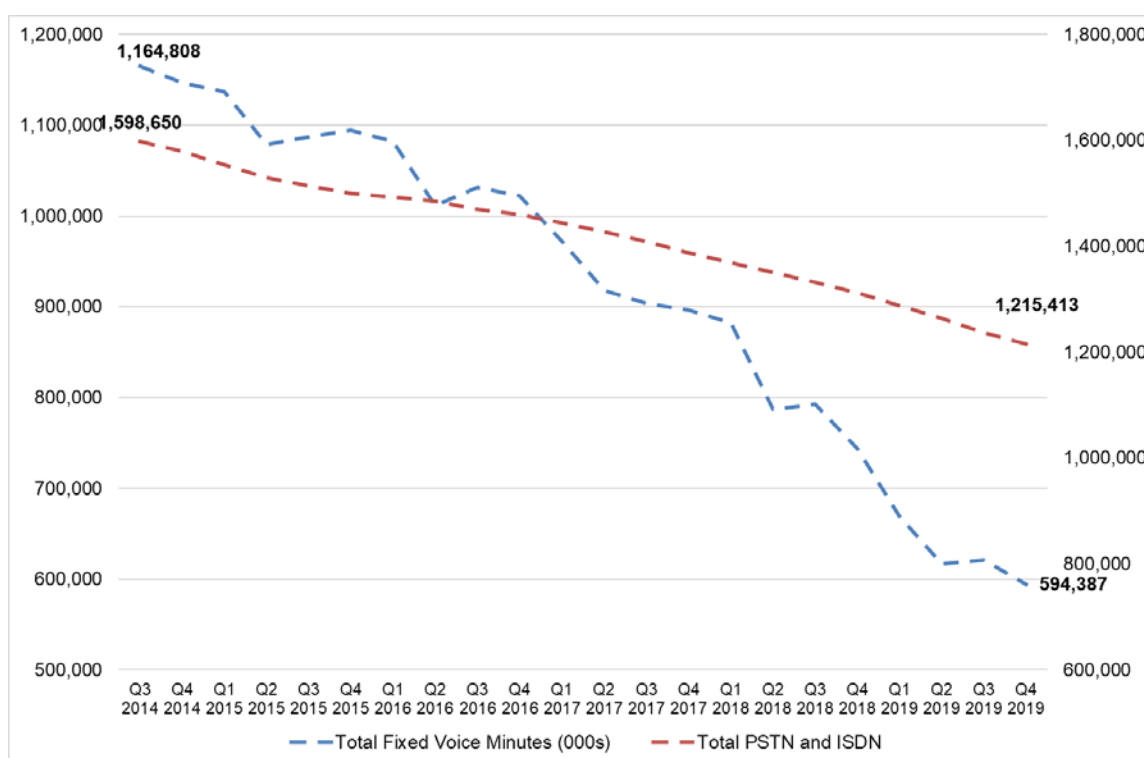
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<sup>181</sup> Slide 35 of the 2019 Residential Market Research.

<sup>182</sup> Slide 8 of the 2019 Residential Market Research.

- 4.49 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.<sup>183</sup> In addition, one SP [X ██████████ 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 the increased demand for broadband services which are provided over these PSTN lines.
- 4.50 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 21 below:

**Figure 21: Fixed Access and Fixed voice traffic trends, Q3 2014 to Q4 2019**



- 4.51 Thus, ComReg’s preliminary view 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.

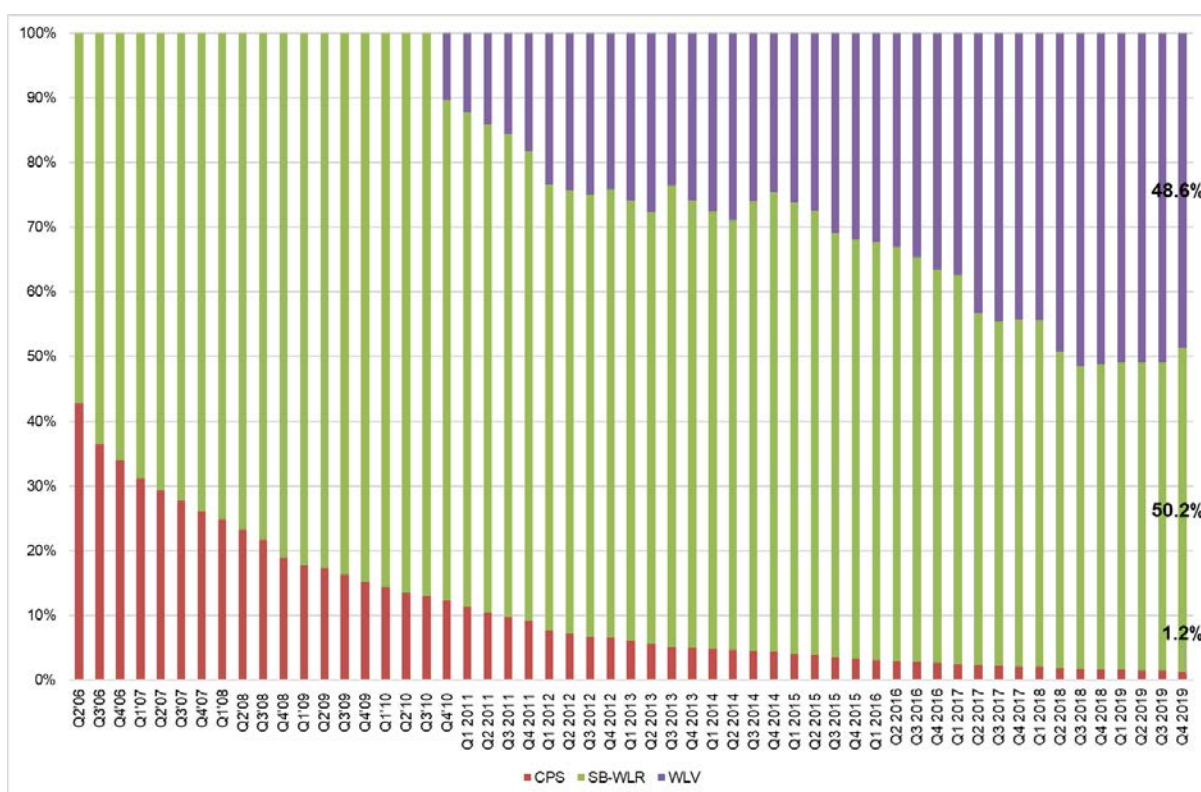
**End User Behaviour**

- 4.52 ComReg’s view on the relevant market definition is informed by the availability of data relating to end user behaviour surrounding RFVA and RFVC.

<sup>183</sup> Slide 26 of the 2019 Residential Market Research.

4.53 ComReg QKDR data indicate that, as of Q4 2019, purchases of CPS by wholesale Access Seekers accounted for 1.2% of total wholesale FNA access paths (i.e. SB-WLR, WLV and CPS) or 0.53% of total FNA access paths (wholesale, Eircom retail and other SPs’ FNA access paths). As illustrated below in Figure 22, purchases of CPS have fallen dramatically over time. 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 services, with Eircom having discontinued new CPS orders as of 8 September 2016 (see paragraph 4.34).<sup>184</sup> Thus, RFTS end users likely no longer have the option of purchasing RFVA and RFVC from separate SPs:

Figure 22: Wholesale FNA Access Paths 2006 – 2019



<sup>184</sup> 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.

- 4.54 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 reported they thought about their RFTS bill. Of respondents who had a fixed line, just 4% indicated that they purchased access and calls separately.<sup>185</sup> 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.<sup>186</sup> 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.
- 4.55 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.<sup>187</sup>

### Preliminary conclusion

- 4.56 ComReg's preliminary view is that there is limited scope for competitive constraints to evolve for RFVA and RFVC separately, which implies that they potentially belong to the same market as a single product offering. This view draws on ComReg QKDR data on CPS purchases and on the 2019 Market Research. This was also ComReg's approach in the 2015 FACO Decision.<sup>188</sup> ComReg notes, however, that, regardless of whether a narrower RFVA market or a broader RFTS (RFVA + RFVC) market is defined, it should not have a significant impact on the subsequent 3CT and SMP assessment, given that RFVA and RFVC are, in almost all cases, currently jointly supplied as RFTS.
- 4.57 For this reason, ComReg considers RFVA and RFVC together as RFTS. As illustrated in Figure 22, just 1.2% of non-Eircom RFTS involve RFVA and RFVC from separate SPs. 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 SP, given their complementary nature and therefore switching generally occurs across the two services in tandem.

### Is the appropriate Focal Product a standalone RFTS product or a bundle of RFTS and other services?

- 4.58 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.

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<sup>185</sup> Slide 35 of the 2019 Residential Market Research.

<sup>186</sup> Slide 36 of the 2019 Residential Market Research.

<sup>187</sup> Slide 37 of the 2019 SME Market Research.

<sup>188</sup> See paragraph 3.4(a) of the 2015 FACO Decision and paragraph 4.46 of the 2014 FACO Consultation.

- 4.59 Table 11 below gives a breakdown of total RFTS subscriptions as at Q4 2019. The data show that 82% 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 mirrored 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:<sup>189</sup>

**Table 11: Total Subscriptions to Retail Fixed Telephony Service Q4 2019**

Subscription type	Number of subscriptions	% Total
SA RFTS	247,627	18%
RFTS and TV	6,097	<1%
RFTS and broadband	577,312	41%
RFTS and mobile voice	5,761	<1%
RFTS, broadband, TV	408,341	29%
RFTS, mobile voice, broadband	94,461	7%
RFTS, mobile voice, TV	247	<1%
RFTS, broadband, TV, mobile voice	61,475	4%
<b>Total RFTS Subscriptions</b>	<b>1,401,321</b>	<b>100%</b>

- 4.60 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**

- 4.61 There are likely economies of scale, scope and density 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 4.36; economies of density refer to potential efficiencies associated with supplying customers who are geographically concentrated.

<sup>189</sup> Slide 26 of the 2019 Residential Market Research.

- 4.62 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 likely achieve economies of scope when it provides RFTS and broadband, as it can leverage part of the PSTN network for RFTS. Economies of scale likely arise as RFTS or broadband subscriptions increase.
- 4.63 For SPs that purchase wholesale inputs from Eircom, such as Vodafone and BT, the incremental cost of purchasing FVCO in addition to the fixed access path for broadband in some cases incurs an additional 30% charge.<sup>190</sup> Thus, for an Access Seeker, the cost of RFTS as a proportion of the total wholesale cost of broadband and RFTS is just 30%. This suggests that there is an economy of scope for an Access Seeker in providing RFTS in a bundle with broadband.
- 4.64 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 (hereafter, '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.
- 4.65 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 other SPs not to incur the costs of network rollout to those areas.
- 4.66 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 Table 11 above.

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<sup>190</sup> For standalone NG Bitstream in the Regional WCA Market, the charge is €24.58 and to add a POTS service to this, the additional cost is €10.76. See Wholesale Bitstream Access Offer (hereafter, 'WBARO') – Bitstream price list, page 33. [https://www.openeir.ie/Reference\\_Offers/](https://www.openeir.ie/Reference_Offers/).



## Transaction costs faced by end users

- 4.67 As set out at paragraph 4.43, 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.
- 4.68 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 11 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.<sup>191</sup> 50% of respondents with more than one product had a bundle.<sup>192</sup> Similarly, ComReg's 2017 ICT survey showed that 56% of 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.<sup>193</sup>
- 4.69 On the business side, ComReg's 2019 SME Market Research showed that 2 in 3 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 (74%).<sup>194</sup> SME respondents expressed their main reason for bundling as "*easier to manage one provider*".<sup>195</sup>
- 4.70 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.<sup>196</sup>
- 4.71 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 likely to be a constraint on end users switching away from standalone RFTS provided by means of FNA.<sup>197</sup>

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<sup>191</sup> Slide 8 of 2019 Residential Market Research.

<sup>192</sup> Slide 21 of 2019 Residential Market Research.

<sup>193</sup> 2017 ICT Survey, slides 14 and 15.

<sup>194</sup> Slide 28 of 2019 SME Market Research.

<sup>195</sup> Slide 29 of 2019 SME Market Research.

<sup>196</sup> 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.

<sup>197</sup> Standalone RFTS end users are discussed in paragraphs 4.75 to 4.82 below.



## End User Behaviour

- 4.72 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 jointly, as RFTS with other telecommunications services.
- 4.73 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 communication services, as illustrated in Table 11. However, a proportion of end users continues to purchase RFTS on a standalone basis (i.e. not bundled with broadband, TV or mobile).
- 4.74 The 2019 Residential Market Research indicated that 23% of residential end users (that have a fixed landline) purchased RFTS on a standalone basis,<sup>198</sup> while 31% of SMEs (that have a fixed landline) report this to be a standalone service.<sup>199</sup> This suggests that a small cohort of residential and SME end users show a preference for purchasing a fixed landline on a standalone basis. Of those residential end users that purchased standalone RFTS, they tended to be older respondents (23% were aged 55+) and were evenly spread across urban, suburban and rural locations.<sup>200</sup>

### **Standalone RFTS Customers**

- 4.75 ComReg has undertaken an analysis of standalone RFTS end users in terms of demographics, location, preferences and broadband availability.
- 4.76 Figure 23 indicates that 17.6% (247,627) of RFTS subscriptions are purchased on a standalone basis as at Q4 2019, having declined by 28% since Q1 2016. This is divided between 58% among residential end users and 42% among non-residential end users:

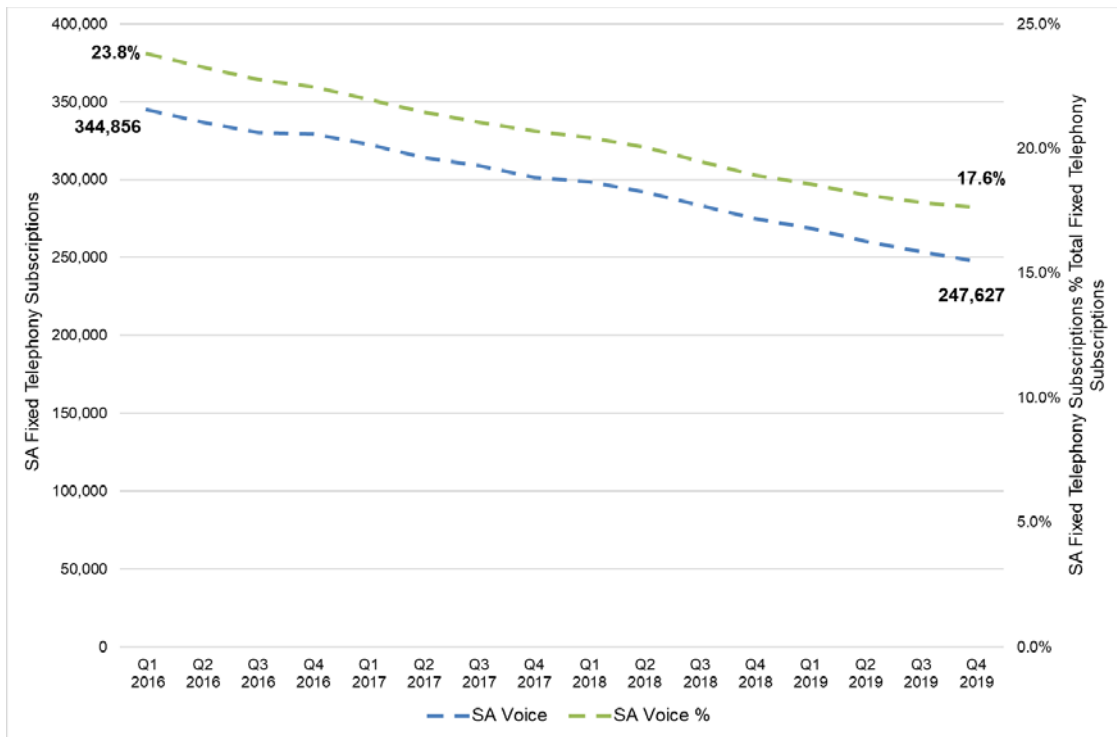
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<sup>198</sup> Slide 8 of the 2019 Residential Market Research. This amounted to 12% of the total sample of 2,011.

<sup>199</sup> Slide 15 of the 2019 SME Market Research.

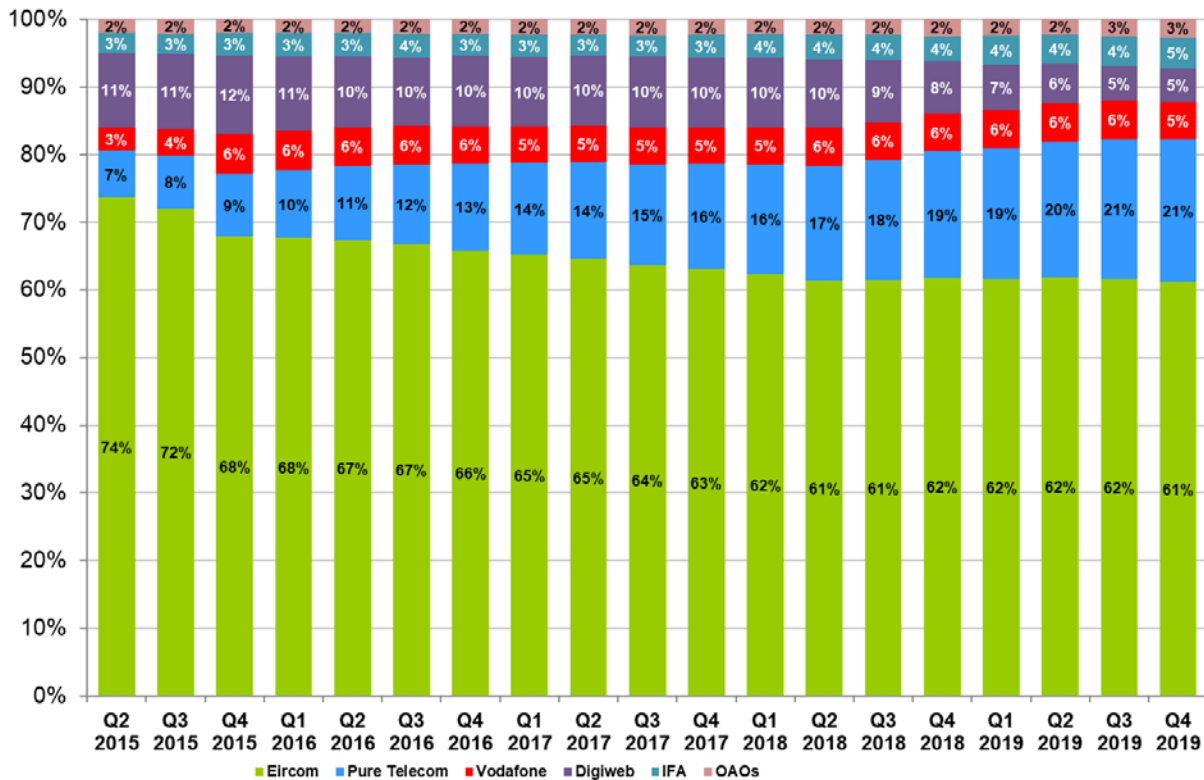
<sup>200</sup> Slide 8 of the 2019 Residential Market Research.

**Figure 23: Standalone RFTS end user subscriptions – Q1 2016 to Q4 2019**



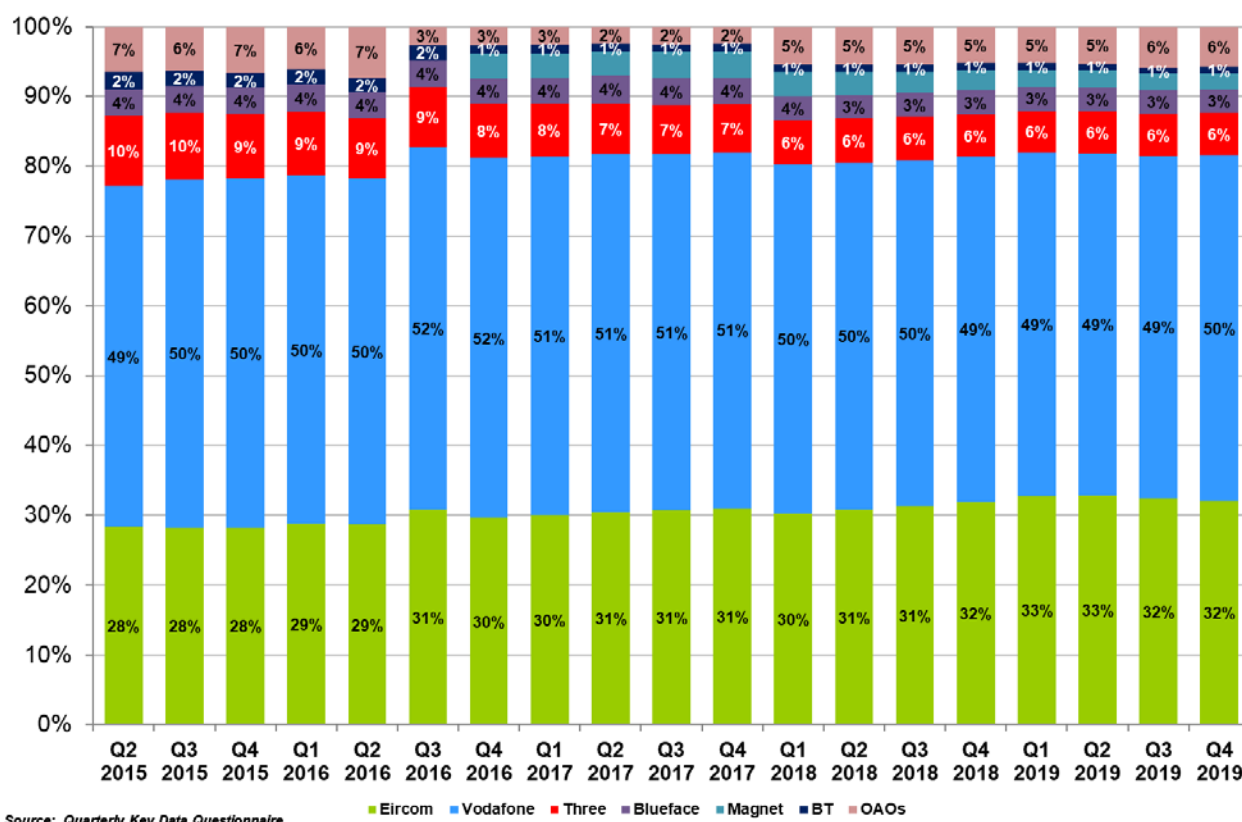
4.77 Figure 24 and Figure 25 below outline the market shares of SPs for standalone RFTS subscriptions. Eircom holds a higher market share (61%) among residential end users compared to business standalone RFTS end users (32%):

**Figure 24: Residential Market Shares among Standalone RFTS End Users (subscriptions) – Q2 2015 to Q4 2019**



Source: Quarterly Key Data Questionnaire

**Figure 25: Business Market Shares among Standalone RFTS End Users (subscriptions) – Q2 2015 to Q4 2019**



4.78 In ComReg's view, discrete demand for standalone RFTS is likely to persist where end users:

- 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 (i.e. broadband with Managed VoIP-based RFTS);
- 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, for instance 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.

- 4.79 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 may place less value on a bundle of services.
- 4.80 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.
- 4.81 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 respective customers 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.
- 4.82 According to the 2019 Residential Market Research, of respondents that had a landline, 23% were on a standalone (non-bundle) basis. Of this group, 60% had a landline only, while 22% were considered '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.<sup>201</sup> For those on a standalone landline that do not have broadband, 64% indicated that they don't need or use internet, 19% indicated that they do not know how to use the internet and 5% indicated that internet was not available in their area.<sup>202</sup> For those without broadband available or because it is 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.<sup>203</sup>

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<sup>201</sup> Slide 8 of the 2019 Residential Market Research.

<sup>202</sup> Slide 18 of the 2019 Residential Market Research.

<sup>203</sup> Slide 19 of the 2019 Residential Market Research. Sample sizes too small to divide this group into standalone RFTS and bundled RFTS (where applicable).

- 4.83 In relation to the question of 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*”.<sup>204</sup> 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 on their home RFTS and 18% said they would stay with their current SP but switch to a cheaper calls package.<sup>205</sup> Those that would remain with their current SP said they would use their mobile phone more for both calls and texts (41%) and make fewer RFTS calls (32%).<sup>206</sup>
- 4.84 This suggests that this group of 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.
- 4.85 On the business side, 31% of SMEs that have a fixed landline report this to be a standalone service.<sup>207</sup> Low base sizes for SME related SSNIP questions mean that statistics are not reported for these questions.

### Preliminary conclusion

- 4.86 Overall, ComReg’s analysis suggests that end users exhibit an increasing preference for purchasing RFTS and 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 4.82 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 2019 remains significant (247,627 or 17.6% of total RFTS subscriptions) but has declined significantly since the 2014 RFVA Decision, when it was close to 600,000 end users.<sup>208</sup>
- 4.87 ComReg’s preliminary view is that standalone RFTS constitutes a separate market to RFTS sold as part of a bundle of services.

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<sup>204</sup> 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.

<sup>205</sup> Slide 99 of the 2019 Residential Market Research. Small sample size.

<sup>206</sup> Slide 100 of the 2019 Residential Market Research. Small sample size.

<sup>207</sup> Slide 15 of the 2019 SME Market Research.

<sup>208</sup> Paragraph 5.17 of the 2014 RFVA Decision.

- 4.88 As previously noted in paragraph 4.57, RFVA and RFVC are largely purchased jointly and are considered as a single product offering (RFTS) in the current market review. 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.
- 4.89 Accordingly, ComReg's view is that the standalone FNA RFTS product is the appropriate starting point 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.
- 4.90 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?

- 4.91 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 telephones, mobile phones, international fixed line or international mobile phones, and NGNs (including, but not limited to, low/shared cost numbers, freephone numbers, special rate services numbers and competition line numbers.)<sup>209</sup> ComReg notes that some non-geographic numbers (hereafter, '**NGNs**') are being withdrawn. NGNs are phone numbers beginning with 1800, 1850, 1890, 0818 and 076. 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.<sup>210</sup>
- 4.92 ComReg considers below whether calls made to different types of numbers fall within a single product market, or whether they represent separate retail markets.

### Product characteristics

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

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<sup>209</sup> NGNs are sometimes referred to as Number Translation Codes (hereafter, '**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.

<sup>210</sup> ComReg Decision D15/18 (Document No. 18/106); see also <https://www.comreg.ie/industry/licensing/numbering/ngn-review/>.



- 4.94 The functionality involved in providing a call capability is likely to differ depending on the type of destination number being called. For example, the provision of a local 'on-net' call<sup>211</sup> by the customer of an SP can be managed entirely on the SP's own network, without the need to purchase a FVCT or MVCT service from a third-party SP.<sup>212</sup> For example, if an Eircom RFTS customer calls another Eircom RFTS customer, Eircom does not incur third party FVCT charges as the call stays within its network. Conversely, an RFVC made, for example, from a fixed line telephone to a mobile telephone number involves the purchase of Mobile Voice Call Termination (hereafter, '**MVCT**'). For example, 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.
- 4.95 Calls to Premium Rate Services (hereafter, '**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).
- 4.96 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 (hereafter, '**IN**')<sup>213</sup> 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.

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<sup>211</sup> '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. Vodafone customer calling Digiweb customer).

<sup>212</sup> Although implicit, within an on-net call is the SP's self-supply of FVCT to itself.

<sup>213</sup> 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

4.97 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 two variations in pricing between different types of calls:

- (a) **Local and national calls:** these are typically provided at the lowest price relative to 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.<sup>214</sup> 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 made from a fixed line telephone:** 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.<sup>215</sup>

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<sup>214</sup> 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 13 March 2020.

**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](https://www.virginmedia.ie/pdf/terms/VM_CRM_21715_Charges-Website_JANUARY20v2.pdf)

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

<sup>215</sup> For example, Virgin Media's '250Mb Freedom Broadband and Home Phone' includes 400 minutes to select international numbers (total standard cost is €59 per month). Quote retrieved on 13 March 2020: <https://www.virginmedia.ie/broadband/buy-a-broadband-package/250-mb-freedom-broadband-world-talk/>.

- 4.98 Making calls from a fixed line telephone to mobile numbers is typically more expensive relative to the price of making calls to a local or national landline (geographic numbers).<sup>216</sup> However, the inclusion of mobile minutes in bundles with fixed voice calls is becoming more prevalent.<sup>217</sup>
- 4.99 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 4.91, ComReg has harmonised the costs of these types of calls.

### End User Behaviour

- 4.100 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:<sup>218</sup>
- (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.
- 4.101 SME respondents did not display strong tendencies towards any particular types of calls.<sup>219</sup>
- 4.102 As shown in Figure 26, overall traffic volumes provided by SPs<sup>220</sup> show the following overall call distributions in terms of traffic generated from fixed line telephones:
- (a) 45% to local/national fixed line numbers;
  - (b) 16% to mobile numbers;
  - (c) 19% of calls to international phone numbers; and
  - (d) 20% to other (including PRS) numbers.

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<sup>216</sup> 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](https://www.virginmedia.ie/pdf/terms/VM_CRM_21715_Charges-Website_JANUARY20v2.pdf)

Prices retrieved 13 March 2020.

<sup>217</sup> See Table 18 to Table 23 below and also Annex 3 of this Consultation.

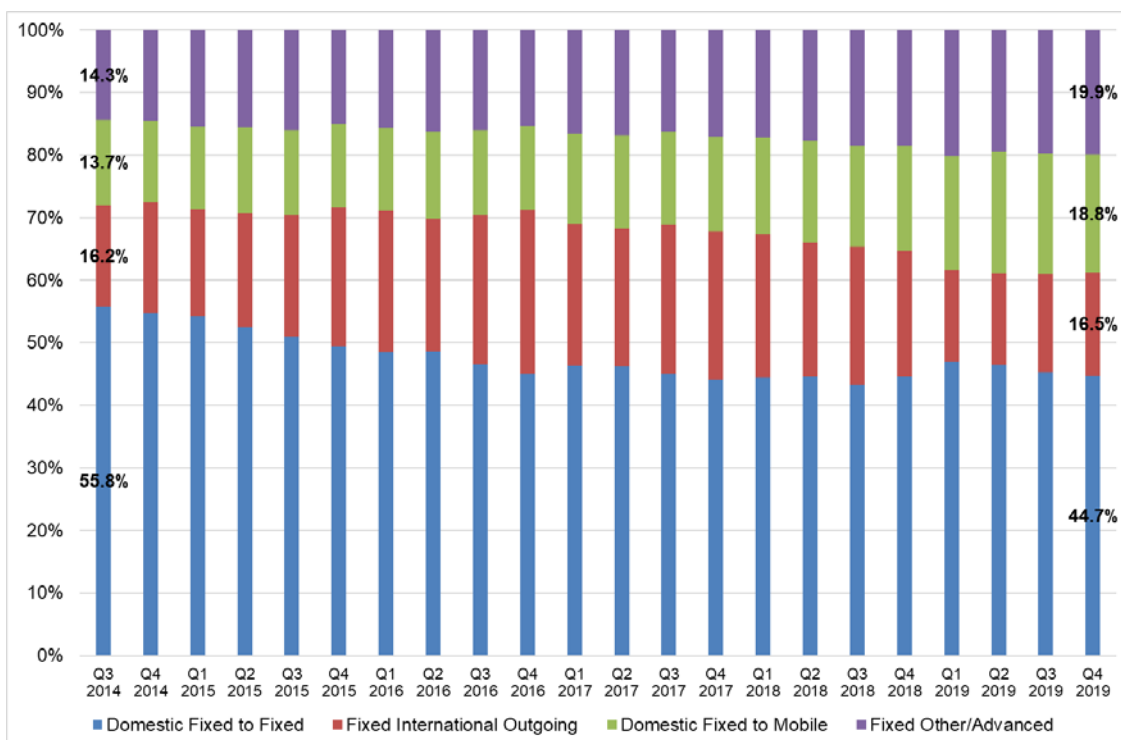
<sup>218</sup> Slide 73 of the 2019 Residential Market Research.

<sup>219</sup> Slide 52 of the 2019 SME Market Research.

<sup>220</sup> ComReg QKDR Q4 2019.

4.103 Figure 26 indicates that the bulk of RFTS calls are made to other RFTS numbers (i.e. fixed-to-fixed calls):

Figure 26: RFTS call minutes, Q3 2014 to Q4 2019



4.104 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.

4.105 Table 12 below, taken from the 2019 Residential Market Research,<sup>221</sup> 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:

<sup>221</sup> 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 12: Residential preferences - device use by call type**

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

4.106 Table 13 below sets out the views of SME respondents on this same issue:

**Table 13: SME preferences - device use by call type<sup>222</sup>**

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

4.107 Table 12 and Table 13 suggest that, for the majority of residential and SME respondents with both a fixed line telephone and mobile, the fixed line telephone was the preferred platform when making calls to 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 the calls.

<sup>222</sup> 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.

- 4.108 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.<sup>223</sup> 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.<sup>224</sup>
- 4.109 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 12). 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 services instead of making international calls using their fixed line. This may, to some extent, explain why certain FSPs have started including within RFTS packages an inclusive number of minutes which can be made for calls to international destinations.
- 4.110 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).<sup>225</sup> 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.<sup>226</sup> 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%).<sup>227</sup>

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<sup>223</sup> Slide 77 of the 2019 Residential Market Research.

<sup>224</sup> Slide 78 of the 2019 Residential Market Research.

<sup>225</sup> Slide 74 of the 2019 Residential Market Research.

<sup>226</sup> Slide 52 of the 2019 SME Market Research.

<sup>227</sup> Slide 56 of the 2019 Residential Market Research.

- 4.111 In summary, the calling patterns observed in paragraphs 4.100 to 4.110 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.

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

- 4.112 ComReg notes that the tendency of a significant proportion of households and SMEs is 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.
- 4.113 In any case, households or businesses may, 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 the preferred option for calling international numbers (relative to other call types). These represent examples of where it is more cost effective for customers 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.<sup>228</sup>
- 4.114 The EC's Explanatory Note<sup>229</sup> to the 2007 Recommendation 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 Explanatory Note to the 2014 Recommendation noted that:

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<sup>228</sup> Although the anticipated impact of lower mobile termination rates over the period this market review may reduce the price of fixed-to-mobile calls.

<sup>229</sup> See page 23 of the Explanatory Note to the 2007 Recommendation.

*“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.”<sup>230</sup>*

- 4.115 ComReg’s overall preliminary view 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 (see Table 12), 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 Access<sup>231</sup> (hereafter, ‘CA’) and CPS<sup>232</sup> (discussed in paragraph 4.31) services which facilitate the ability for customers to buy calling services on a call by call basis from a different SP. As such, ComReg considers that there are unlikely to be separate markets representing different types of calls made from a fixed location. ComReg notes, however, that international calls are likely to face a higher degree of competitive constraint than other call types due to, for example, pressure from OTT services such as Skype.

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

- 4.116 This section considers whether it is appropriate to define narrower focal products specific to customer type (i.e. low-volume v. high-volume users).
- 4.117 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 customer groups, notably those in different geographic areas or types of premises. It is thus 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 substitution<sup>233</sup> linking all categories of end user arises.

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<sup>230</sup> See page 26 of the Explanatory Note to the 2014 Recommendation.

<sup>231</sup> 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.

<sup>232</sup> Carrier Pre-Select is a service provided by Eircom whereby the end user’s telecommunications equipment, such as a private automatic branch exchange (hereafter, ‘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.

<sup>233</sup> 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.



- 4.118 ComReg notes that the EC did not distinguish between residential and non-residential customers in the characterisation of the RFVA market set out in the 2007 Recommendation, or in the Explanatory Note to the 2014 Recommendation.
- 4.119 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 the customer groups. However, it has 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.<sup>234</sup> For 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:
- (a) Single call services (PSTN and VoB1 connections) for residential customers;
  - (b) Dual call services (ISDN1 and ISDN2 connections including stacked connections and VoB2 services with up to 12 simultaneous calls and hosted voice services up to 100 seats) for SMEs; and
  - (c) Multiple call services and connections (ISDN15/20/30 and VoB connections exceeding 12 simultaneous calls and hosted voice services with more than 100 seats) for business customers.
- 4.120 The Explanatory Note to the 2014 Recommendation 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.”*<sup>235</sup>

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<sup>234</sup> 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.

<sup>235</sup> Page 20 of the Explanatory Note to the 2014 Recommendation.

- 4.121 As recognised in the Explanatory Note to the 2007 Recommendation, the NRA has 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.<sup>236</sup>

### Demand-Side Substitution

- 4.122 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).
- 4.123 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

- 4.124 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. This FNA network 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).
- 4.125 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. 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 (hereafter, '**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.

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<sup>236</sup> European Commission Explanatory Note accompanying the 2007 Recommendation, SEC (2007) 1483/2, C (2007) 5406, page 22.

- 4.126 Access paths per line vary by RFTS product (PSTN v. ISDN), as noted previously in paragraph 3.32 and illustrated in Table 14 below. For example, as ISDN PRA has 32 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:

**Table 14: PSTN and ISDN Access Paths**

Product	Lines	Access paths (voice channels)
PSTN	1	1
ISDN Basic	1	2
ISDN Fractional	1	16
ISDN Primary	1	30/31 <sup>237</sup>
Managed VoB	1	Dependent on VoIP product design
SIP Trunking	1 <sup>238</sup>	Dependent on VoIP product design
Hosted PBX	1	Dependent on VoIP product design

- 4.127 The functional differences between the most basic form of ISDN (ISDN BRA) and PSTN is 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.
- 4.128 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 customer's side of the network termination point (hereafter, '**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.

<sup>237</sup> ISDN PRA consists of 32 channels, but, typically, one channel is reserved for sync and one channel is reserved for signalling. However, if multiple ISDN PRAs are combined, one signalling channel is enough between them.

<sup>238</sup> Any of leased line or NG broadband line used for SIP Trunking.

- 4.129 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.
- 4.130 ComReg's preliminary view 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.
- 4.131 Given this distinction in type of RFVC service provided over RFVA, the 2014 RFVA Decision delineated markets for Low-Level Voice Access (hereafter, '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**

- 4.132 SPs generally provide both residential and non-residential RFTS, which are broadly targeted at low and high-volume end users. Table 15 illustrates the crossover between the five largest RFTS SPs for residential and non-residential end users. Virgin Media has a more significant presence in supplying residential end users and Three Group (hereafter, 'Three') does not provide RFTS to residential end users, but is the third largest SP to non-residential end users:

**Table 15: Residential and Non-residential RFTS Subscriptions by SP Q4 2019<sup>239</sup>**

Residential		Non-residential	
<b>Eircom</b>	38%	<b>Eircom</b>	45%
<b>Virgin Media</b>	27%	<b>Vodafone</b>	38%
<b>Sky</b>	16%	<b>Three</b>	6%
<b>Vodafone at Home</b>	10%	<b>Virgin Media</b>	5%
<b>Pure Telecom</b>	5%	<b>Magnet</b>	2%
<b>OAOs</b>	4%	<b>OAOs</b>	6%

<sup>239</sup> ComReg QKDR Q4 2019. This includes all RFTS subscriptions including PSTN, ISDN and Managed VoIP.

- 4.133 Business products tend to be more flexible than residential products as they are often tailored to the needs of a specific business. There can be differences in terms of additional features offered as part of the RFTS, 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 standard 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.
- 4.134 The 2019 SME Market Research showed that 84% of SMEs with RFTS had a traditional phone line (i.e. PSTN), followed by 15% on ISDN (of various types) and 6% on Managed VoIP.<sup>240</sup> The numbers on PSTN were evenly spread across the four provinces around the country 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.<sup>241</sup>

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<sup>240</sup> Slide 16 of the 2019 SME Market Research.

<sup>241</sup> Slide 43 of the 2019 SME Market Research.

- 4.135 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.<sup>242</sup> In general, 52% of residential respondents made calls from their mobile more frequently than their fixed landline.<sup>243</sup> This may reflect a greater reliance by businesses on the fixed line connection for making and receiving calls – there is a perception that a fixed line phone is important to the day-to-day functioning of the business, as demonstrated by the 2019 Market Research.<sup>244</sup> In addition, there is a higher mobile penetration rate across households, relative to businesses (where employees more often only have a fixed connection). As of Q4 2019, there were almost double the number of residential mobile voice subscriptions (i.e. excluding mobile broadband and machine to machine),<sup>245</sup> compared to business mobile voice subscriptions.<sup>246</sup>
- 4.136 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 27 below:

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<sup>242</sup> Slide 74 of the 2019 Residential Market Research and slide 52 of the 2019 SME Market Research.

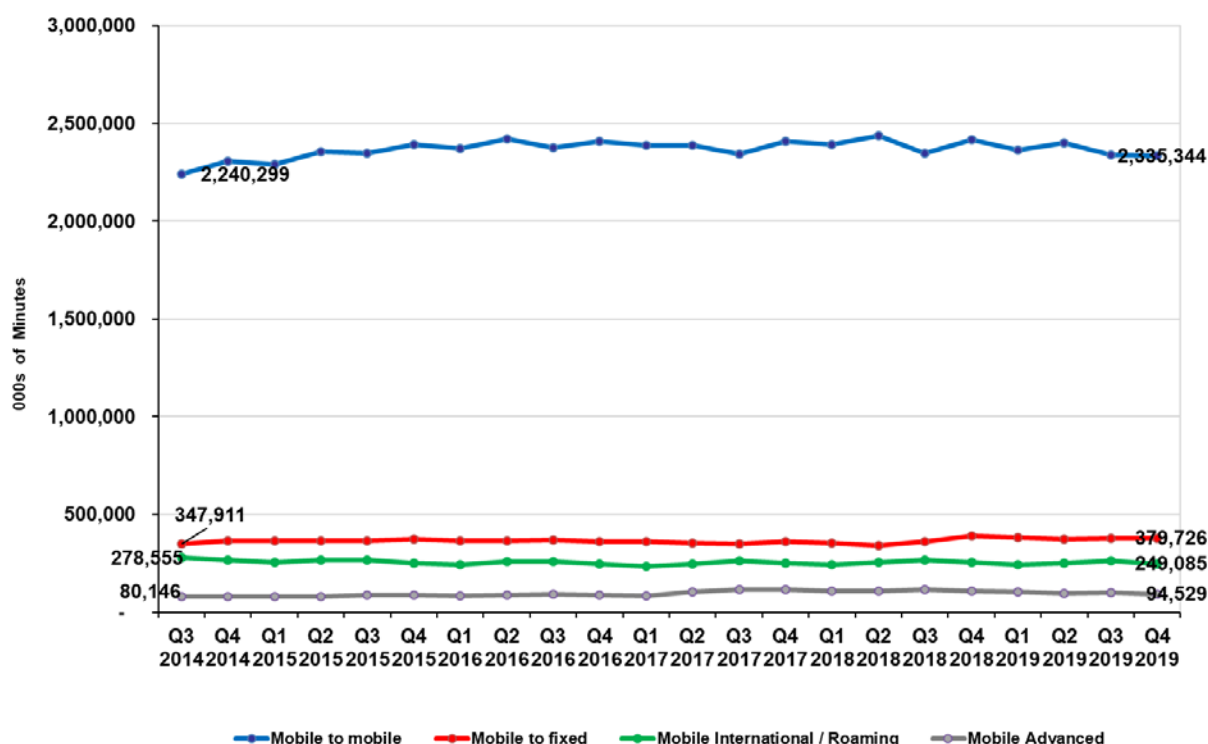
<sup>243</sup> Slide 65 of the 2019 Residential Market Research.

<sup>244</sup> 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.

<sup>245</sup> Machine to Machine (hereafter, '**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.

<sup>246</sup> ComReg QKDR Q4 2019 – Figure 4.2.5, page 58.

Figure 27: Mobile Voice Call Minutes – Q3 2014 to Q4 2019



4.137 Despite these variances, there is a 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 the RFVA service, 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.<sup>247</sup>

4.138 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.<sup>248</sup> 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.

<sup>247</sup> Slide 83 of the 2019 Residential Market Research and slide 61 of the 2019 SME Market Research.

<sup>248</sup> Slide 43 of the 2019 SME Market Research.



4.139 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 14 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 4.142.

**Eircom plans to phase out ISDN BRA**

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

4.141 As indicated in correspondence and meetings during September and October 2019, Eircom wishes to decommission its ISDN BRA network due, in part, to Intel ceasing production of ISDN BRA chips 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. ComReg’s preliminary views on phasing out ISDN BRA are outlined in paragraphs 10.84 to 10.88.

**Pricing**

4.142 Table 16 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.

4.143 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 16: Retail Pricing of Eircom FNA Services excluding VAT<sup>249</sup>**

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	€32.51	€16.26
ISDN FRA	16	€3,299	€215.00	€13.44
ISDN PRA	30	€3,299	€355.00	€11.83

<sup>249</sup> Prices available at ‘Your Telephone Line’ as at 1 January 2020  
<https://www.eir.ie/opencms/export/sites/default/group/pricing/phoneline/>

- 4.144 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.
- 4.145 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 purchasing 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 customers' usage (i.e. it appears feasible to price discriminate between customers based on their volume of purchases).
- 4.146 Table 17 below uses Eircom retail prices from Table 16 to illustrate how prices would vary depending on which product is purchased to obtain between 1 and 30 voice channels. Table 17 suggests that there is a gap in the chain of substitution between lower and higher-level access services. 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 17: Demand-side substitution analysis using Eircom retail prices – excl. VAT<sup>250</sup>**

Product	Number of 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	€592.59	€592.59	€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 <sup>251</sup>
ISDN PRA	30	€7,559.00	€7,559.00	€7,559.00	€7,559.00	€7,559.00

<sup>250</sup> 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.

<sup>251</sup> 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.

- 4.147 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 are likely 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.
- 4.148 ComReg's preliminary view on demand-side substitutability between FNA products is that low-volume RFTS end users and high-volume RFTS end users likely 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 preliminary view is that there are likely to be 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, respectively.

**Pricing of retail residential v. business RFTS packages**

- 4.149 SPs typically distinguish between low-volume and high-volume users in terms of usage by offering bundles of communications services at different price points for each set of customers. For RFTS in a bundle or standalone, the 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) – see Annex: 3.
- 4.150 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.

- 4.151 Furthermore, ComReg recognises that large business customers may demand certain 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 service their RFTS needs, such as for example a leased line service.
- 4.152 In any case, the 2019 SME Market Research indicates that more than two-thirds (68%)<sup>252</sup> of SMEs surveyed are on standard as opposed to customised contracts for their RFTS and this is likely driven by the predominantly SME profile of businesses in Ireland.
- 4.153 While residential and business customers may have different needs in terms of RFTS features/add-ons, BEREC notes that this does not necessarily imply the existence of separate residential and business markets.<sup>253</sup> 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.
- 4.154 Table 18 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:

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<sup>252</sup> Slide 43 of the 2019 SME Market Research.

<sup>253</sup> BEREC Report on relevant market definition for business services –

[https://bereg.europa.eu/eng/document\\_register/subject\\_matter/bereg/reports/199-bereg-report-on-relevant-market-definition-for-business-services](https://bereg.europa.eu/eng/document_register/subject_matter/bereg/reports/199-bereg-report-on-relevant-market-definition-for-business-services)

Table 18: Pricing of Standard RFTS Residential and Business Packages, Q4 2019<sup>254</sup>

Residential			
SP	Product	No. of Bundles	Price Range incl. VAT p/m
Digiweb	Standalone Voice	4	€29.47 - €39.95
	Voice and Broadband Bundles	11	€34.95 - €59.95
Magnet	Voice and Broadband Bundles	6	€29.99 - €77.99
Imagine	Voice and Broadband Bundles	1	€59.99
Pure Telecom	Standalone Voice	3	€29.00 - €35.50
	Voice and Broadband	2	€55.00 - €75.00
Virgin Media	Voice and Broadband Bundles	9	€59.00 - €79.00
Vodafone	Voice and Broadband	3	€60.00 - €95.00
Eircom	Standalone Voice	2	€39.99-€49.98
	Voice and Broadband Bundles	5	€59.99 - €85.99
Sky	Standalone Voice	2	€30.00 - €37.50
	Voice and Broadband Bundles	2	€84.50 - €94.50
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	€9.95 - €28.95
	Voice and Broadband Bundles	1	*dependent on end user requirements <sup>255</sup>
Imagine	Voice and Broadband Bundles	1	€48.77 <sup>256</sup>
Virgin Media	Voice and Broadband Bundles	4	€45.00 - €75.00
Pure Telecom	Standalone Voice	3	€38.00 - €95.00
	Voice and Broadband		€65.00 - €122.00
Eircom	Standalone Voice	7	€66.07 - €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

<sup>254</sup> Table 18 presents data and calculations which are based on publicly available information on the relevant SP's websites, as at Q4 2019. Not all offerings are listed as the full suite of products may not be actively available and/or advertised online.

<sup>255</sup> <https://www.magnetnetworks.com/>

<sup>256</sup> <https://www.imagine.ie/business-broadband/>

- 4.155 Table 18 shows that there are some price variations in the retail product offerings to business and residential customers. ComReg notes that not all business packages that are offered by SPs are listed in Table 18, 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 4.152, many SMEs purchase standard packages for their RFTS needs.
- 4.156 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: 3 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 €2.50 per month.<sup>257</sup>
- 4.157 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). The more expensive products have either additional bundled minutes included, or faster broadband speeds.
- 4.158 In addition to these standard products, most SPs offer bespoke products to meet the needs of large businesses and corporate customers with specific telecommunications needs. These are typically products with an enhanced specification that include services, for example, RFVA may be purchased in the form of an ISDN PRA connection with a virtual private network (hereafter, 'VPN').<sup>258</sup> 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 4.146), and varying competitive conditions for high-end business connectivity and related products.

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<sup>257</sup> <https://business.eir.ie/product/business-line-8-hour-repair/>

<sup>258</sup> Virtual Private Networks (hereafter, '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

- 4.159 Overall, having considered demand-side substitution between low-volume and high-volume RFTS end users, ComReg's preliminary view is that, given that demand for RFTS platforms reflects differing demand conditions, it is suggestive that 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

- 4.160 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 that these are declining in demand (Table 10) 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).
- 4.161 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).<sup>259</sup> 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.
- 4.162 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 4.160, there may be limited incentives to invest in ISDN technology if it is declining in demand, as SPs may not gain a return on their investment. This was reflected in [X [REDACTED] 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.

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maintaining 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.

<sup>259</sup> ComReg QKDR Q4 2019, Figure 3.1.6, page 33.



## Preliminary conclusion

- 4.163 Given the considerations above, ComReg's preliminary view is that, taking demand and supply-side considerations into account, low-volume RFTS end users (i.e. SMEs and residential customers) are likely to be 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 customer usage, it is likely that there is a chain of substitution between residential and business users in relation to low-volume RFTS. As shown in Table 18, 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 €55 per month (€67.65 including VAT) for 200mbps broadband with calls to Irish/UK landlines and 200 minutes to Irish mobiles.<sup>260</sup> Similarly, a Virgin Media RFTS and broadband package marketed at residential end users costs €48 per month (€62 after 12 months) for 250mbps broadband and unlimited minutes to landlines and mobiles in Ireland.<sup>261</sup> In addition, given that some 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).
- 4.164 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 preliminary view is that high-volume products including ISDN FRA and ISDN BRA are likely to be in a separate market to low-volume RFTS products (PSTN and ISDN BRA).
- 4.165 As noted in the 2012 RFVA Consultation,<sup>262</sup> it is possible for multiple (single voice channel) PSTN lines to be connected to a private branch exchange (hereafter, 'PBX'),<sup>263</sup> 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.

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<sup>260</sup> <https://www.virginmedia.ie/business/business-broadband-phone/>

<sup>261</sup> <https://www.virginmedia.ie/bundles/broadband-and-homephone/>

<sup>262</sup> See paragraph 4.118 of the 2012 RFVA Consultation.

<sup>263</sup> 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.

- 4.166 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 the different 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 associated with ISDN FRA or PRA as an effective demand-side substitute for PSTN access.
- 4.167 Thus, in trying to ascertain the appropriate focal product as a starting point for the market definition exercise, 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. For that reason, ComReg's preliminary view 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.

### Overall Preliminary View on RFTS Focal Products

- 4.168 ComReg's preliminary view is that standalone FNA RFTS products provided over a copper based FNA network constitute appropriate focal products for the definition of the Relevant RFTS Markets. As of Q4 2019, PSTN remains the most common network over which RFTS is delivered (just under 1m subscriptions, accounting for 69% of total RFTS subscriptions (1.4m))<sup>264</sup> and for high-volume users, there is considerable uptake of ISDN products.<sup>265</sup>
- 4.169 ComReg proposes to define 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)'**).

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<sup>264</sup> See Table 11.

<sup>265</sup> ComReg QKDR Q4 2019, Figure 2.2.1.1, page 18.

- 4.170 ComReg's analysis suggests that end users with a preference for RFTS and broadband are likely to purchase these products as a bundle (paragraphs 4.67 to 4.71 and Table 11). 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 17.6% of households continue to purchase RFTS on a standalone basis (Figure 23). This may be due to the unavailability of broadband at their location, a preference for a voice-only service or some level of inertia (split purchaser). While many SMEs consume both RFTS and fixed broadband access, 31% of SMEs surveyed as part of the 2019 SME Market Research still consumed RFTS as a standalone (non-bundled) product.<sup>266</sup>
- 4.171 Irrespective, however, of whether there is a separate market for standalone RFTS, it is also possible that 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 consume both RFTS and broadband services, 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 services are viewed by some end users as a form of substitute to RFTS.<sup>267</sup> In light of this, ComReg considers below the suitability of various product bundles as potential substitutes for a standalone RFTS.
- 4.172 As previously noted in paragraph 4.57, in ComReg's view, RFVA and RFVC comprise a single offering (i.e. RFTS). As illustrated in Figure 20 above, the low number of CPS lines purchased at the wholesale level indicates that very few RFVA lines are delivered separately from RFVC. This is bolstered by the 2019 Market Research which showed limited purchasing of RFVA and RFVC from separate SPs.<sup>268</sup> In addition, ComReg found that none of the largest SPs sell RFVA and RFVC as separate retail products. This suggests that end users likely consider RFVA and RFVC as a single product over which the purchasing decision is made.
- 4.173 As previously noted in paragraph 4.112, ComReg does not distinguish between fixed line call types in determining the appropriate focal products.

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<sup>266</sup> Slide 14 of the 2019 SME Market Research.

<sup>267</sup> Slide 19 of the 2019 Residential Market Research.

<sup>268</sup> Slide 35 of the 2019 Residential Market Research.

## 4.2.2 Assessment of Direct Constraints

- 4.174 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) Potential demand-side substitution (paragraphs 4.176 to 4.304 below); and
  - (b) Potential supply-side substitution, including the self-supply of vertically-integrated SPs (see paragraphs 4.305 to 4.324 below).
- 4.175 ComReg's overall preliminary conclusions on the assessment of direct constraints are set out at paragraphs 4.325 to 4.327.

### Demand-Side Substitution

- 4.176 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 (hereafter, 'HM') would provoke 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.
- 4.177 On the demand side, ComReg considers whether the following forms of voice service can be considered effective direct constraints on the duly-defined focal products (and therefore may fall to be included in the same relevant market):
- (a) Managed VoIP-based RFTS delivered over fixed NG broadband access (paragraphs 4.178 to 4.241 below);
  - (b) Mobile Service (paragraphs 4.242 to 4.289 below); and
  - (c) RFTS over alternative fixed access technologies, including high quality access (paragraphs 4.290 to 4.304 below).

## Managed VoIP-based RFTS delivered over fixed NG broadband

4.178 This section considers whether Managed VoIP, a voice service delivered over broadband can be considered a demand-side substitute for the focal products (LL-RFTS and HL-RFTS). In the 2014 RFVA Decision, ComReg included broadband access (over analogous broadband connection including CATV, FTTx, FWA and DSL) in the relevant market definitions on the basis that prospectively, an SP could deliver Managed VoIP over broadband either on a standalone basis or in a bundle.<sup>269</sup>

4.179 In the Explanatory Note to the 2007 Recommendation, 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.”<sup>270</sup>*

4.180 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.”<sup>271</sup>*

4.181 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 the high-speed internet and data services, whereas broadband can be, and is being used, by SPs as a platform for delivery of RFTS, as well as internet and data services.

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<sup>269</sup> See paragraph 2.6 of the 2014 RFVA Decision.

<sup>270</sup> Page 30.

<sup>271</sup> Footnote 31.

- 4.182 The Explanatory Note to the 2014 Recommendation noted that RFTS solutions based on VoIP technology were expected to become increasingly important in the near future. The potential effects from the transition to VoIP telephony will depend on various factors such as broadband penetration, availability of alternative platforms (CATV, mobile broadband, LTE), and intended use (residential or business customers).<sup>272</sup>
- 4.183 Broadband penetration is high in Ireland, with 89% of households reported to have (FNA or NG) broadband access in 2018<sup>273</sup> and there are more than 1.46 million broadband subscriptions in the country (see Figure 13 and paragraph 3.55 in Section 3). Of these 1.46 million broadband subscriptions, 1.2 million (82%) are delivered over NG broadband. Approximately 80% of households are passed for high-speed NG broadband (i.e. VDSL or FTTP) – see Table A9.7 in Annex 9. High-speed fixed broadband connections are increasingly facilitating the delivery of Managed VoIP services that are broadly similar to RFTS offered over FNA connections. These include Virgin Media, which offers fixed voice products bundled with broadband and/or TV over its DOCSIS 3.0 enabled CATV network, Digiweb<sup>274</sup> and Imagine<sup>275</sup> offering fixed voice and broadband bundles over their respective FWA networks,<sup>276</sup> and Blueface offering a VoIP service that relies on the end user having an existing broadband connection with a third-party network provider. Unmanaged VoIP OTT services are also offered by third parties (e.g. Skype, Facebook, WhatsApp, and Viber).
- 4.184 The end user experience of Managed VoIP is often not distinguishable from the focal PSTN/ISDN RFTS. This view is consistent with SPs responses to ComReg's IIRs.<sup>277</sup> For example, one SP [X [REDACTED] 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.”*
- 4.185 As NG broadband connections are, in principle, capable of offering similar functions 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.

<sup>272</sup> Page 22 of the Explanatory Note to the 2014 EC Recommendation.

<sup>273</sup> <https://www.cso.ie/en/releasesandpublications/er/isshh/informationstistics-households2018/>

<sup>274</sup> <https://digiweb.ie/metro-broadband/>

<sup>275</sup> <https://www.imagine.ie/>

<sup>276</sup> Digiweb also offers FTTP broadband, FNA broadband and satellite broadband.

<sup>277</sup> 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.



- 4.186 ComReg recognises the option exists of an alternative source of supply of RFTS through Managed VoIP. Where residential and business end users increasingly purchase broadband, including as part of a bundle with other services, Managed VoIP may increasingly act 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, from a forward looking perspective, 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.
- 4.187 In the 2018 WLA/WCA Decision, ComReg excluded narrowband internet access from the retail broadband market definition.<sup>278</sup> ComReg set out its view 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 provided over a copper network. Since the 2018 WLA/WCA Decision was issued, ComReg's view has not changed in this regard.

#### Functionality, product characteristics and intended use

- 4.188 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);<sup>279</sup>
  - (d) Access to emergency services numbers;
  - (e) A telephone handset that is functionally equivalent to a PSTN handset;
  - (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.
- 4.189 The retail customer experience is not distinguishable from FNA RFTS, in that the handset produces a dial tone and voice quality is comparable to FNA RFTS.

<sup>278</sup> See paragraph 3.9 of the 2018 WLA/WCA Decision.

<sup>279</sup> 076 numbers will be withdrawn by ComReg on 1 January 2022  
<https://www.comreg.ie/industry/licensing/numbering/ngn-review/>



- 4.190 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.<sup>280</sup>
- 4.191 ComReg distinguishes three broad sub-categories of Managed VoIP,<sup>281</sup> which is the provision of RFTS over an IP access path on single or multiple channels:
- (a) Managed Voice over Broadband (hereafter, '**Managed VoB**') allows for the transmission of RFVC over a broadband connection. Managed VoB is generally provided to the end user over CATV or FTTx<sup>282</sup> networks;
  - (b) Hosted private branch exchange (hereafter, '**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 NGA broadband; and
  - (c) Session Initiation Protocol Trunking (hereafter, '**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 NGA broadband.
- 4.192 The pace of growth in Managed VoIP products, 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 their take-up of Managed VoIP. Most of the growth in Managed VoIP to date has been in Managed VoB among residential RFTS end users.

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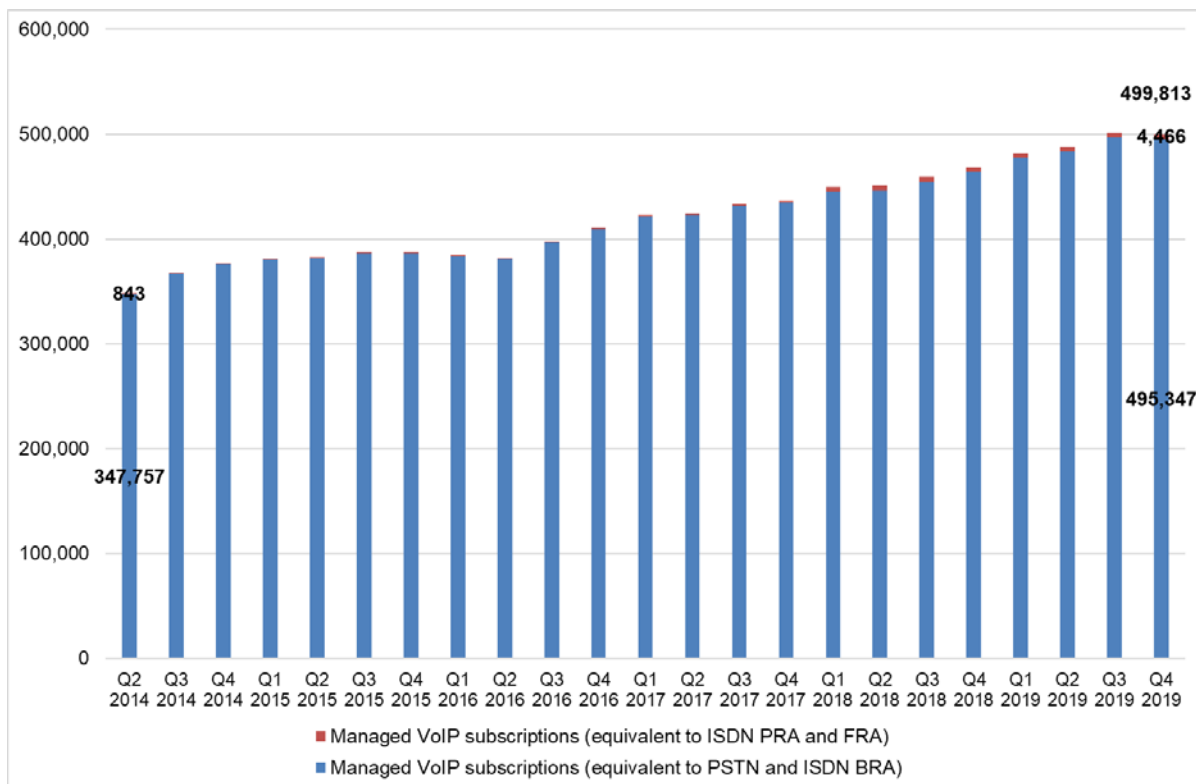
<sup>280</sup> [REDACTED].

<sup>281</sup> 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 Consultation.

<sup>282</sup> VDSL is the underlying technology in FTTC. Accordingly, exchange-based VDSL (eVDSL) is included within FTTC.

4.193 As shown below in Figure 28, as of Q4 2019, there were 499,813 Managed VoIP subscriptions.<sup>283</sup> 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 2019), 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:<sup>284</sup>

**Figure 28: Total Managed VoIP subscriptions (Residential and Non-residential) Q3 2014 to Q4 2019**

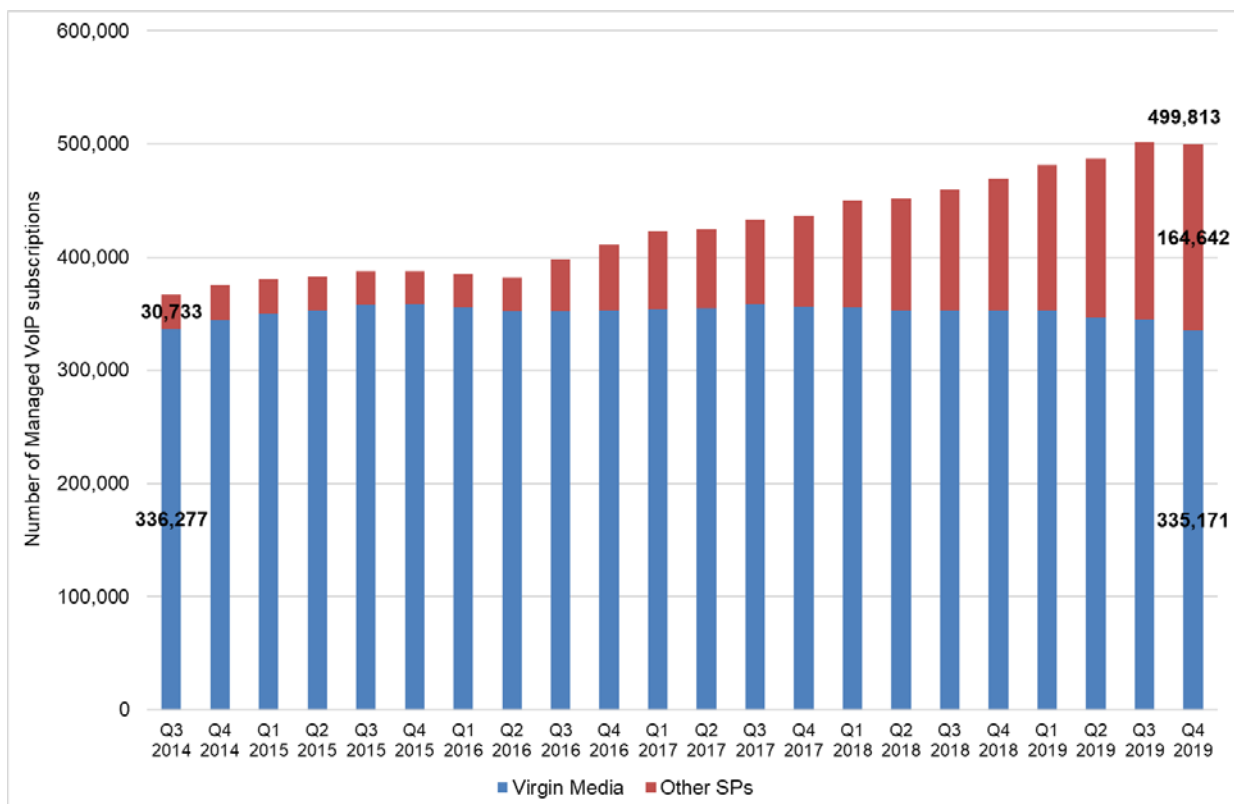


<sup>283</sup> ComReg QKDR Q4 2019, Figure 2.2.1.1, page 18.

<sup>284</sup> Slides 16, 31 and 32 of the 2019 SME Market Research.

4.194 Figure 29 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),<sup>285</sup> 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 29: Virgin Media and other SPs’ Managed VoIP subscriptions (Residential and Non-residential) Q3 2014 to Q4 2019**



<sup>285</sup> Most Virgin Media Managed VoIP subscribers are Managed VoB (i.e. over home broadband).

**Managed VoB**

- 4.195 Managed VoB is predominantly delivered over CATV, VDSL and FTTP broadband, in addition to high capacity access such as leased lines. In IIR responses, SPs indicated their unwillingness to provide Managed VoIP over DSL/FNA (copper-based) broadband and over speeds of less than 30Mbps.<sup>286</sup> 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)<sup>287</sup> and adhered to by the network (as they are on Eircom's NG network). Each voice channel requires a bandwidth of approximately 100kbps in the uplink and downlink direction. As a result, one of the lowest NG profiles (7Mbps download, 1Mbps upload) could support up to 10 VoIP channels simultaneously, thereby supporting a Managed VoB service.
- 4.196 Managed VoB can also be delivered over Fixed Wireless Access (hereafter, 'FWA'), where speeds permit sufficient bandwidth and other quality of service parameters such as contention enable it. An FWA service<sup>288</sup> 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 two being Digiweb<sup>289</sup> and Imagine.<sup>290</sup> Purchasing RFTS over an FWA network 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.<sup>291</sup>

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<sup>286</sup> [X [REDACTED] X]

<sup>287</sup> Customer Premises Equipment ('CPE').

<sup>288</sup> Eircom uses FWA in some places to provide an equivalent to its traditional FNA RFTS. FNA RFTS is already considered as the starting focal/ candidate 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).

<sup>289</sup> [https://digiweb.ie/product/metro-freedom-broadband/#tab-additional\\_information](https://digiweb.ie/product/metro-freedom-broadband/#tab-additional_information)

<sup>290</sup> <https://www.imagine.ie/broadband-questions-answers/>

<sup>291</sup> See paragraphs 3.16 and 3.17 and paragraphs 3.79 to 3.116 of the 2018 WLA/WCA Decision.

- 4.197 The 2019 Residential Market Research showed that just 3% of respondents with broadband accessed broadband via FWA.<sup>292</sup> 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.<sup>293</sup>
- 4.198 Managed VoB products offered over FWA are likely to offer similar functionality and characteristics to traditional FNA RFTS in terms of the key features described in paragraph 4.188 above. However, it should be noted that the coverage and use of RFTS provided over FWA is substantially lower than the coverage over other networks.
- 4.199 Moreover, demand for broadband and other services provided over FWA has fallen significantly, and at Q4 2019, FWA accounted for less than 3% of business and residential broadband subscriptions.<sup>294</sup> As a platform for the potential delivery of RFTS, FWA appears to be in decline and this is likely to dampen demand for RFTS delivered over FWA.
- 4.200 In relation to Managed VoB over DSL, it is by no means clear that the quality of DSL/ADSL-based broadband services will support an 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 is of the preliminary view that Managed VoB over VDSL would likely be a substitute for an RFTS provided over an FNA (the focal product – PSTN and ISDN BRA) or 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 quality of service and the lack of meaningful entry to date by SPs doing so.

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<sup>292</sup> Slide 16 of the 2019 Residential Market Research.

<sup>293</sup> Slide 17 of the 2019 SME Market Research.

<sup>294</sup> ComReg QKDR Q4 2019, Figure 3.1.4, page 32.

4.201 Currently, Managed VoB is primarily offered as part of a suite of broader services, typically broadband bundle or Pay-TV. This means that Managed VoB typically suits end users that wish to also purchase broadband or Pay-TV services (i.e. the Managed VoB RFTS not frequently purchased as a standalone product). However, there are some SPs providing 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.<sup>295</sup> This includes Managed VoB and services over SIP Trunk/Hosted PBX.<sup>296</sup> Blueface is largely positioned towards business end users and as of Q4 2019 had [X [REDACTED] X] subscriptions.

### **SIP Trunking and Hosted PBX**

4.202 SIP Trunking<sup>297</sup> and Hosted PBX<sup>298</sup> 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.<sup>299</sup> The 2014 RFVA Decision excluded SIP Trunking and Hosted PBX from the Relevant Markets which it defined in that Decision. ComReg's reasoning was that 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 Eircom's ISDN PRA and FRA products. Table 19 gives an overview of some SIP Trunking/Hosted PBX products available:

**Table 19: SIP Trunking and Hosted PBX products available in Ireland**

Service Provider	Features	Connection
Eircom <sup>300</sup>	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	

<sup>295</sup> <https://www.blueface.com/small-business/landline/>. Blueface was acquired by Comcast in January 2020 - <https://www.blueface.com/blog/comcast-acquires-blueface/>

<sup>296</sup> <https://www.blueface.com/enterprise/managed-sip/>

<sup>297</sup> <https://www.magnetnetworks.com/business/products/sip-trunks/>

<sup>298</sup> <https://www.iptelecom.ie/hosted-pbx>

<sup>299</sup> 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 4.292.

<sup>300</sup> [https://business.eir.ie/media/82751-eircom-Business-SIP-product-sheet\\_D9.pdf](https://business.eir.ie/media/82751-eircom-Business-SIP-product-sheet_D9.pdf)

BT <sup>301</sup>	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	
Virgin Media <sup>302</sup>	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 <sup>303</sup>	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 <sup>304</sup>	Voice services, IP Connectivity, Resiliency and Disaster Recovery, Codec, Transcoding and Security, <b>Outbound calls:</b> Standard Pay-As-You-Go: usage based, standard rates apply for all calls; Voice Freedom / Bundle Minutes: Monthly charge for a fixed bundle or packs of minutes; All Inclusive / Unlimited: Monthly charge per channel for free national and international calls.	
GTT <sup>305</sup>	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.	

<sup>301</sup> <https://business.bt.com/products/business-phone-systems/bt-cloudvoice-sip/>

<sup>302</sup> <https://www.virginmedia.ie/business/internet-data-services/sip-trunking/>

<sup>303</sup> <https://www.verizon.com/business/products/sip-trunking/>

<sup>304</sup> <https://www.colt.net/wp-content/uploads/2019/04/SIP-Trunking-data-sheet-EN.pdf>

<sup>305</sup> <https://www.gtt.net/us-en/services/unified-communications/sip-trunking/>



	Supports direct routing to Microsoft Teams, Diverse global communications services integrated onto one connection.	
Magnet <sup>306</sup>	Flexibility with phone numbers, Business continuity, Line rationalisation, Save money, Resilience	Connection via broadband or ethernet
AT&T <sup>307</sup>	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.

- 4.203 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 group 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).
- 4.204 The main functional difference appears to be that FNA RFTS is offered by SPs on a standalone basis, whereas broadband-based RFTS 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 access 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).
- 4.205 ComReg notes that Blueface offer a standalone Managed VoIP solution for business/non-residential end users which requires that such end users already have in place broadband access.<sup>308</sup>
- 4.206 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 11, 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.<sup>309</sup>

<sup>306</sup> <https://www.magnetnetworks.com/business/products/sip-trunks/>

<sup>307</sup> <https://www.business.att.com/learn/what-is-sip-trunking.html#>

<sup>308</sup> <https://www.blueface.com/small-business/landline/>

<sup>309</sup> Slide 24 of the 2019 SME Market Research.

- 4.207 ComReg's preliminary view 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, as to potentially constrain a SSNIP of the focal products. For low-volume RFTS users (e.g. residential or small business), Managed VoB is likely to be 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 could be considered 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.<sup>310</sup>
- 4.208 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.
- 4.209 However, such switching would only be feasible where NG broadband is available to the customer. As noted in paragraph 4.78, 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 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 (i.e. broadband with Managed VoIP-based RFTS);
  - (b) End users that have NG services available, and purchase RFTS and broadband/other services separately (**'Split Purchasers'**) from separate SPs. In this case, bundling is a possibility, but the end user chooses not to bundle these products, for instance 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) End users that 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 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.

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<sup>310</sup> BT, Eircom, Vodafone.

- 4.210 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.
- 4.211 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*”.<sup>311</sup> Of the 26% that would change their behaviour, 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, and 15% would cancel their subscription with their current SP.<sup>312</sup> Of the 31% that would downgrade, 50% said they would downgrade to a cheaper bundle that still includes RFTS, 15% would downgrade to a basic RFTS, 12% would keep internet but drop RFTS, 9% would reduce out of bundle spend on calls and 6% would unpick the bundle.<sup>313</sup>
- 4.212 As noted in paragraph 4.67 to 4.71, 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 broadband; and (b) standalone FNA RFTS.

### Pricing

- 4.213 Pricing often influences the extent to which end users are likely to consider Managed VoIP to be substitutable with the focal product.
- 4.214 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 may represent 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 20 to Table 24 below outline the price ranges for a sample of residential Managed VoB product offerings (all of which are bundled with broadband):<sup>314</sup>

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<sup>311</sup> Slide 101 of the 2019 Residential Market Research. Caution small sample size.

<sup>312</sup> Slide 102 of the 2019 Residential Market Research. Caution small sample size.

<sup>313</sup> Slide 103 of the 2019 Residential Market Research. Caution small sample size.

<sup>314</sup> Information retrieved from individual SP’s websites in October 2019.

**Table 20: Digiweb - Sample of Residential Managed VoB offerings**

Product	Features	Price incl. VAT p/m
<b>Ultrafast 150</b>	150mbps download speed, 30 mbps upload speed, Unlimited downloads, Unlimited calls to mobiles and landlines in Ireland & UK (subject to €10 surcharge)	€54.95 (additional €10 for voice services)
<b>Ultrafast 300</b>	300 mbps download speed, 50 mbps upload speed, Unlimited Downloads, Unlimited calls to mobiles and landlines in Ireland & UK (subject to €10 surcharge)	€64.95 (additional €10 for voice services)
<b>Ultrafast 1000</b>	1,000 mbps download speed, 100 mbps upload speed, Unlimited downloads, Unlimited calls to mobiles and landlines in Ireland & UK (subject to €10 surcharge)	€74.95 (additional €10 for voice services)
<b>Electric Broadband 1000</b>	1,000 Mbps download speed, 200 Mbps upload speed, Talk Off-peak calls to landlines Ireland & UK, Talk Off-peak calls to mobiles in Ireland & UK, Unlimited Downloads	€59.95

**Table 21: Virgin Media - Sample of Residential Managed VoB offerings**

Product	Features	Price incl. VAT p/m
<b>Virgin Full House 500</b>	500Mb download speed, World unlimited talk home phone, 100+ TV Channels, Virgin Media Sport & eir Sport 1	€99
<b>Virgin Mix 500</b>	500Mb Download Speed, Virgin Mix TV, Virgin Media Sport, World Unlimited Talk Home Phone	€94
<b>Virgin Mix 250</b>	250 Mb download speed, World Talk Home Phone, Virgin Mix TV, Virgin Media Sport.	€89
<b>Limitless 250Mb World Talk</b>	250 Mb download speed, 25 Mb upload speed, Unlimited calls to Irish landlines, mobiles and 400 minutes to 22 countries.	€59
<b>Limitless 500MB World Unlimited Talk</b>	500 Mb download speed, 50 Mb upload speed, unlimited minutes to landlines and mobiles in Ireland and 22 International countries	€69
<b>500Mb + Home Phone</b>	Virgin Media TV Anywhere Sports Pass, 500Mb download speed, Home Phone, Unlimited mins to landlines & mobiles in Ireland	€69
<b>360Mb + Home Phone</b>	360 Mb download speed, Unlimited minutes to landlines and mobiles in Ireland,	€64
<b>250Mb + Home Phone</b>	250 Mb download speed, Free Virgin Media TV Anywhere Sports Pass	€59
<b>250Mb Broadband with Home Phone and Freedom TV</b>	250 Mb download speed, 25 Mb upload speed, Home Phone with World Talk, Freedom TV, Unlimited calls to Irish landlines, mobiles and 400 minutes to 22 countries	€79

**Table 22: Magnet - Sample of Residential Managed VoB offerings**

Product	Features	Price Range incl. VAT p/m
<b>Fibre Broadband 60</b>	Unlimited Irish Landline Calls, Anytime Unlimited Mobile & Landline Calls, Unlimited Downloads	€29.99
<b>Fibre Broadband 100</b>	Unlimited Irish Landline Calls, Anytime Unlimited Mobile & Landline Calls, Unlimited downloads	€49.99
<b>24Mb Fatpipe Fibre</b>	20 mb download speed, Unlimited downloads, *Unlimited Irish Landline Calls, Anytime Unlimited Mobile & Landline Calls	€30 for broadband, *€10 or **€20 phone add-on
<b>Fatpipe Fibre 100</b>	100 mb download speed, unlimited downloads, *Unlimited Irish Landline Calls, Anytime Unlimited Mobile & Landline Calls	€49.99 for broadband, *€10 or **€20 add-on
<b>Fatpipe Fibre 100</b>	100 mb download speed, unlimited downloads, no contract, unlimited Irish Landline Calls, anytime unlimited mobile & landline calls	€57.99, *€10 or **€20 add-on

**Table 23: Eircom - Sample of Residential Managed VoB offerings**

Product	Features	Price incl. VAT p/m
<b>Broadband and Landline</b>	100 Mb download speed, unlimited downloads, Unlimited Off-Peak local & national calls, FREE eir sport pack with Virgin Media Sport	€59.99
<b>Broadband and Landline</b>	150 Mb download speed, unlimited downloads, Unlimited Off-Peak local & national calls, FREE eir sport pack with Virgin Media Sport	€65.99
<b>Broadband and Landline</b>	1 Gb download speed, unlimited downloads, Unlimited Off-Peak local & national calls, FREE eir sport pack with Virgin Media Sport	€85.99
<b>Broadband and International Calls</b>	100 Mb download speed, unlimited downloads, Unlimited Superfast fibre broadband, eir broadband talk mobile world, Unlimited calls to Irish landlines & mobiles and to top international landlines & mobiles, Free eir sport pack	€69.98
<b>Broadband and Off-Peak Calls</b>	Unlimited Superfast fibre broadband, eir broadband talk, Unlimited off-peak calls to Irish landlines, Free eir sport	€59.99

**Table 24: Vodafone - Sample of Residential Managed VoB offerings<sup>315</sup>**

Product	Features	Price incl. VAT p/m
<b>Fibre Broadband 150 and Landline</b>	Unlimited calls to Irish landlines, Gigabox Modem included, Unlimited Fibre Broadband	€60.00
<b>Fibre Broadband 300 and Landline</b>	Unlimited calls to Irish landlines, Gigabox Modem included, Unlimited Fibre Broadband	€70.00
<b>Fibre Broadband 1000 and Landline</b>	Unlimited calls to Irish landlines, Gigabox Modem included, Unlimited Fibre Broadband	€95.00

<sup>315</sup> Information retrieved from website 08 April 2020.

- 4.215 The tables above show that most SPs' Managed VoB products are bundled 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 the potential Managed VoIP-based substitutes, while prices for FNA RFTS bundles (with broadband) are priced similarly to Managed VoIP bundles with broadband (see Table 18).
- 4.216 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 a Managed VoIP service. For example, Managed VoIP may offer enhanced voice features compared to the focal product such as additional minutes (Table 20 to Table 24 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 traditional PSTN. The wider bundle of services including broadband may open up new opportunities to the end user that they did not avail of when only purchasing standalone FNA RFTS. In addition, some FTTx broadband bundles offer WiFi-calling features, where end users can use their smartphone to call and text over a WiFi connection. This can assist in overcoming issues around mobile network coverage in the indoor environment.
- 4.217 ComReg's preliminary view is that a sufficient proportion of households and businesses are likely to place value on broadband internet access and TV, which encourages the purchase of bundles that include broadband, TV and RFTS. ComReg's Q4 2019 QKDR data show that 82% of RFTS subscriptions are bundles of RFTS with one or more of broadband, TV, or mobile telephony (Table 11). The 2019 Market Research showed that 73% of households, and almost 75% of SMEs purchase fixed broadband internet access.<sup>316</sup> Of those residential respondents with a bundle, 92% had a bundle comprising broadband.<sup>317</sup>

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<sup>316</sup> Slide 14 of the 2019 Residential Market Research and slide 13 of the 2019 SME Market Research.

<sup>317</sup> Slide 22 of the 2019 Residential Market Research.



- 4.218 For those customers that purchase the LL-RFTS focal product and do not have a demand for broadband (i.e. customer type (a) in paragraph 4.209), 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. The incremental cost of switching from standalone RFTS to a basic bundle of broadband and RFTS via Managed VoB could be as low as €10. For example, eir's basic RFTS package is €39.99 (12-month contract),<sup>318</sup> while the cheapest Vodafone RFTS and broadband package with Managed VoIP is €40 for 12 months and then €55 thereafter.<sup>319</sup> Where available, Pure Telecom offers basic RFTS for €29 a month.<sup>320</sup>
- 4.219 For customers that purchase the HL-RFTS focal product (i.e. ISDN FRA and ISDN PRA), it is possible that, in response to a SSNIP, they would switch to Managed VoIP products that offer equivalent voice channels to ISDN FRA and ISDN PRA.
- 4.220 For Split Purchasers (i.e. customer type (b) in paragraph 4.209), a household or business that purchases the focal product(s) may consider switching to Managed VoIP-based products 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.
- 4.221 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 4.209), there is a possibility that when broadband does become available and consequently retail bundles comprising a Managed VoIP service, these customers 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 available would switch to a bundle of broadband and RFTS if NG broadband became available.<sup>321</sup> A further 16% of respondents said that they would purchase broadband if it became available and keep their RFTS with their current SP.

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<sup>318</sup> <https://www.eir.ie/phone/> Prices were retrieved 13 March 2020.

<sup>319</sup> <https://n.vodafone.ie/content/dam/gowingmyself/pdfs/broadband-home-phone-and-tv-tariffs.pdf> Prices were retrieved 13 March 2020.

<sup>320</sup> <https://www.puretelecom.ie/landline-service> Prices were retrieved 13 March 2020.

<sup>321</sup> Slide 19 of the 2019 Residential Market Research.



- 4.222 For business end users that have an active NG broadband connection, ComReg considers that such businesses could, in principle, switch their RFTS (be it PSTN or ISDN) to a standalone Managed VoIP service 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.
- 4.223 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 €29.00<sup>322</sup> v. €40.00<sup>323</sup> 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.

### **Unmanaged VoIP**

- 4.224 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.<sup>324</sup>
- 4.225 As noted in paragraph 3.119, Unmanaged VoIP services can be provided by a third-party SPs 'over the top' of an existing broadband connection which is supplied to the end user by another separate 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.
- 4.226 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.
- 4.227 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.<sup>325</sup>
- 4.228 Unmanaged VoIP ultimately 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).

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<sup>322</sup> <https://www.puretelecom.ie/landline-service> Prices were retrieved 13 March 2020.

<sup>323</sup> <https://n.vodafone.ie/content/dam/gowingmyself/pdfs/broadband-home-phone-and-tv-tariffs.pdf> Prices were retrieved 13 March 2020.

<sup>324</sup> 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.

<sup>325</sup> As explained at <https://support.skype.com/en/faq/FA331/what-is-a-skype-number>

- 4.229 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 that 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 quality of service 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.
- 4.230 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.<sup>326</sup> Skype also offers call minutes packages to various types of numbers.<sup>327</sup>
- 4.231 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 issues.
- 4.232 Unmanaged VoIP offers only the call origination component of RFTS, relying on the end user providing the access component. As noted previously in paragraph 4.57, end users have to date shown a preference for purchasing RFVA and RFVC jointly as a single RFTS product offering.
- 4.233 Reported 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.<sup>328</sup> Usage of Unmanaged VoIP tended to be higher among respondents aged 18-34.

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<sup>326</sup> Skype rates are published online at <https://www.skype.com/en/international-calls/Ireland#> as of 13 March 2020.

<sup>327</sup> Ibid.

<sup>328</sup> Slides 69 and 61 of the 2019 Residential Market Research.

- 4.234 Despite occasional usage of Unmanaged VoIP by households, there still 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, international calls.<sup>329</sup>
- 4.235 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 Skype/Skype/another OTT instead.<sup>330</sup>
- 4.236 ComReg's 2019 Mobile Customer Experience (hereafter, '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.<sup>331</sup> 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.<sup>332</sup> 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 more rural areas.<sup>333</sup>
- 4.237 ComReg's preliminary view is that Managed VoIP (either standalone or bundled with NG broadband<sup>334</sup> or SIP Trunk) constitutes a substitute to the focal products, while Unmanaged VoIP (which is not provided by the largest SPs offering RFTS) is unlikely to be a good substitute for the focal products.
- 4.238 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 preliminary view that Unmanaged VoIP calls are unlikely to be an effective substitute for FNA RFTS or Managed VoIP.

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<sup>329</sup> Slide 74 of the 2019 Residential Market Research.

<sup>330</sup> Slide 93 of the 2019 Residential Market Research.

<sup>331</sup> Slide 52 of ComReg MCE survey.

<sup>332</sup> Slide 53 of ComReg MCE survey.

<sup>333</sup> Slide 54 of ComReg MCE survey.

<sup>334</sup> The incidence of Managed VoIP delivered over DSL or FWA broadband is likely to be low, as SPs prefer the bandwidth associated with NGA broadband (e.g. FTTx) to offer Managed VoIP services.

### Preliminary conclusion

- 4.239 Overall, ComReg's preliminary view 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 often 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 2019 shows that 81% of RFTS subscriptions are sold in a bundle with at least one of broadband, TV, and mobile telephony (Table 11). 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 23), again indicating a willingness to switch to bundles of services. While FNA RFTS subscriptions have fallen somewhat since the 2014 RFVA Decision (see Figure 11), Managed VoIP subscriptions have increased and, for new FTTP broadband subscriptions, many end users are migrating to Managed VoIP for their RFTS.
- 4.240 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 make the investment in suitable equipment on site and SPs have indicated to ComReg that in greenfield sites, businesses would invest in Managed VoIP via SIP Trunking/Hosted PBX. ComReg considers SIP Trunking/Hosted PBX delivered over NGA 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 4.290 to 4.304.
- 4.241 ComReg does not consider Unmanaged VoIP calls to constitute an effective direct constraint to the focal products (LL- RFTS or HL-RFTS).

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

- 4.242 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.<sup>335</sup>
- 4.243 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 6). Mobile telephony is therefore potentially a growing constraint on RFTS. The EC notes that:

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<sup>335</sup> Paragraph 4.155, page 95 of the 2014 RFVA Decision.

*“Although mobile networks can, to a large extent, replicate the offers from fixed networks, providing end customers with offers which are 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.”<sup>336</sup>*

- 4.244 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 markets<sup>337</sup> as including both fixed and mobile access: Austria (2017), Bulgaria (2016), Czech Republic (2016), Finland (2010) and Latvia (2015).<sup>338</sup>
- 4.245 Below, ComReg assesses whether the focal products and mobile telephony can be considered to be in the same market i.e. whether ‘Fixed Mobile Substitution’ (hereafter, ‘**FMS**’) is taking place or whether RFTS and mobile telephony constitute separate markets.
- 4.246 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.

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<sup>336</sup> Page 21 of the Explanatory Note to the 2014 EC Recommendation.

<sup>337</sup> 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).

<sup>338</sup> 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.

## Fixed and mobile ownership and usage

- 4.247 Ownership of mobile phones has now outstripped that of fixed landlines. On the residential side, of the 1.9 million households in Ireland,<sup>339</sup> 63% have a fixed landline,<sup>340</sup> indicating that more than a third of households may rely solely on a mobile phone for voice services.
- 4.248 ComReg's 2019 MCE survey showed that there is almost universal ownership of mobile phones (98%) among all adults 18+ in Ireland,<sup>341</sup> 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.<sup>342</sup> 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.<sup>343</sup>
- 4.249 The Eurobarometer 2018 report on E-communications and Digital Single Market estimates Ireland's household fixed line telephone access at 55%.<sup>344</sup> This has dropped significantly from 2012 when it was estimated at 64%.<sup>345</sup> 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%).

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<sup>339</sup> CSO estimate of number of households in Ireland is 1,893,700 as at Q4 2019 (Labour Force Survey).

<sup>340</sup> Calculation using ComReg's QKDR data. CSO estimate of number of households in Ireland is 1,893,700 as at Q4 2019 (Labour Force Survey); total residential RFTS subscriptions were 1,190,753 as at Q4 2019.

<sup>341</sup> Slide 11 of ComReg MCE survey.

<sup>342</sup> Slides 14 and 53 of the 2019 Residential Market Research and Figure 4.2.1 (page 56) of Q4 2019 QKDR.

<sup>343</sup> Slide 21 of ComReg MCE survey.

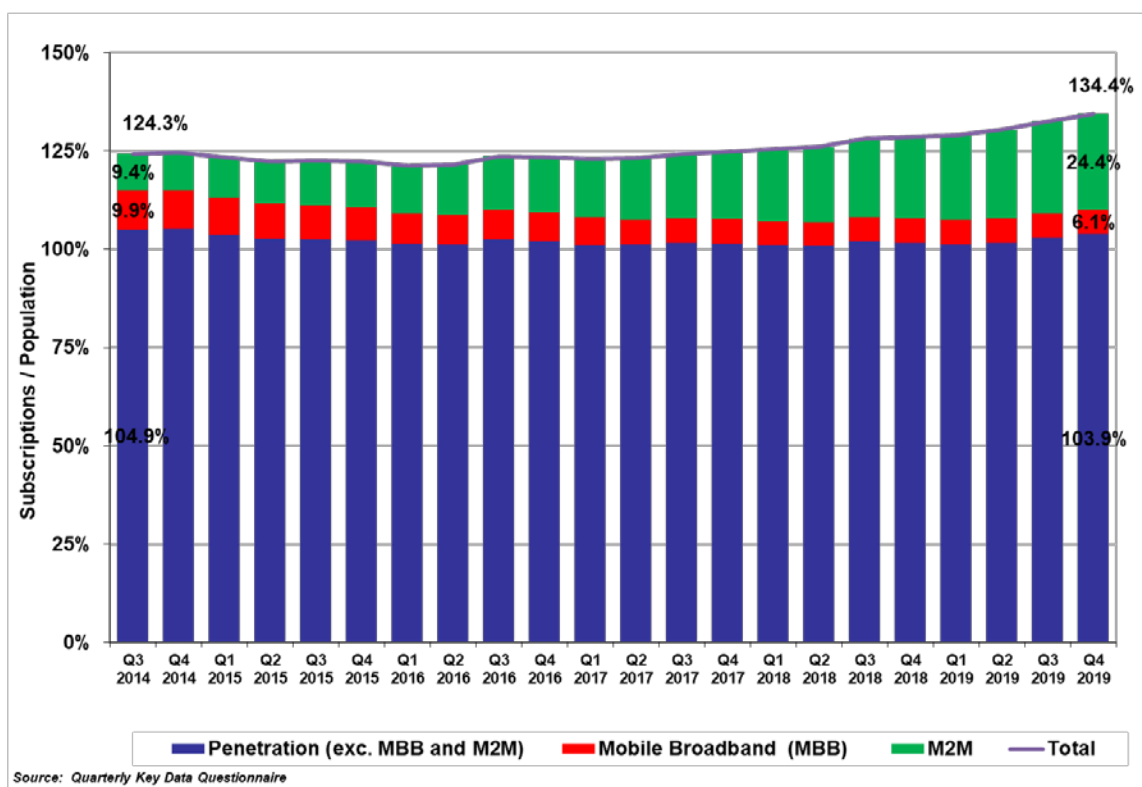
<sup>344</sup> Page 31 - <https://publications.europa.eu/en/publication-detail/-/publication/57889a55-8fb6-11e8-8bc1-01aa75ed71a1/language-en>

<sup>345</sup> E-communications Household Survey 2012: [http://ec.europa.eu/public\\_opinion/archives/ebs/ebs\\_381\\_en.pdf](http://ec.europa.eu/public_opinion/archives/ebs/ebs_381_en.pdf)



4.250 Mobile penetration in Ireland is estimated at 97% based on the CSO’s Household Budget Surveys.<sup>346</sup> ComReg’s QKDR for Q4 2019<sup>347</sup> shows that mobile penetration is estimated at 104% (excluding mobile broadband or M2M subscriptions). Figure 30 charts mobile penetration since Q3 2014 and shows that at the end of Q4 2019, mobile penetration, based on a population of 4,950,100 (using the CSO Q4 2019 estimate), was 104% 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.<sup>348</sup> As of Q4 2019, there were almost double the number of residential mobile voice subscriptions (i.e. excluding mobile broadband and M2M) compared to business mobile voice subscriptions.<sup>349</sup> 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 14 above):

**Figure 30: Irish Mobile Penetration Rate – Q3 2014 to Q4 2019**



<sup>346</sup> Household Budget Survey 2015-2016: <https://www.cso.ie/en/releasesandpublications/ep/p-hbs/hbs20152016/hfa/>

<sup>347</sup> See page 55 and Figure 4.1.3. Calculated based on the number of active SIM cards relative to the population.

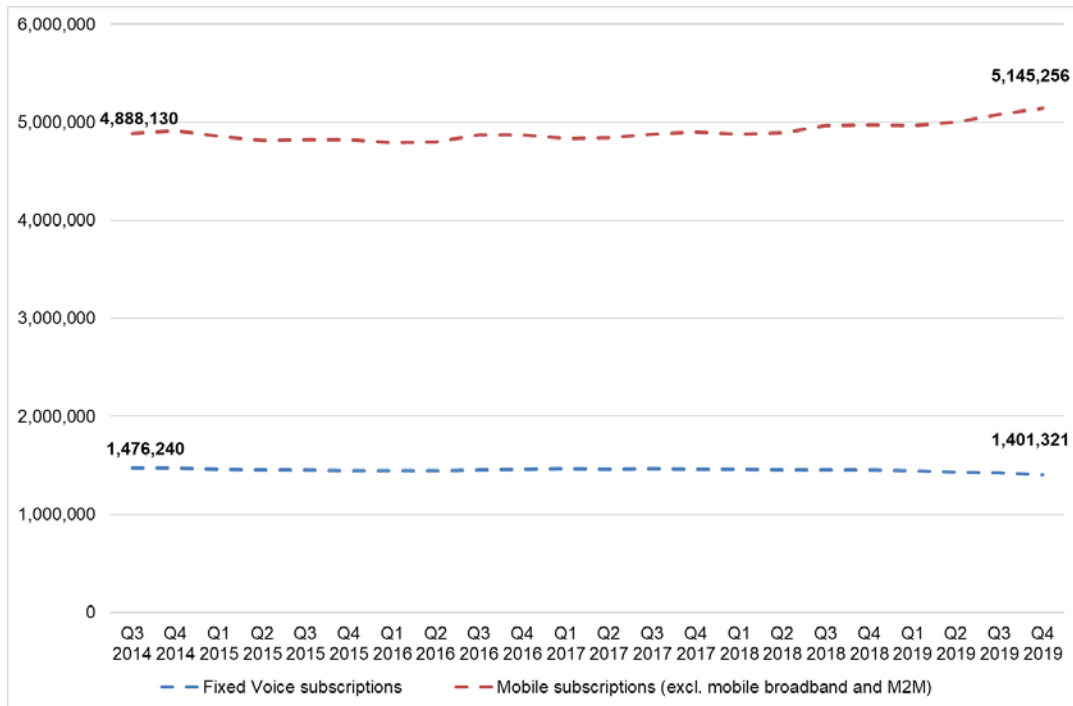
<sup>348</sup> As noted on page 54 of the QKDR for Q4 2019, given that some mobile users may have used more than one active SIM card during the period, there is likely to be some over-estimation of actual individual mobile penetration using this metric. ComReg’s calculation of mobile subscriptions includes 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.

<sup>349</sup> ComReg QKDR Q4 2019 – Figure 4.2.5, page 58.



4.251 While there has been relatively low growth in mobile subscriptions between Q3 2014 and Q4 2019 (5%), the number of RFTS subscriptions has not decreased in the manner that would be expected if customers were actively substituting their RFTS in favour of a mobile subscription, as shown in Figure 31 below:

**Figure 31: Fixed and Mobile Subscriptions – Q3 2014 to Q4 2019**



4.252 The 2019 Residential Market Research showed that a mobile phone is not the sole or primary means of access to electronic communication services. While mobile phone ownership is universal (96%)<sup>350</sup>, 49% of households also retain RFTS.<sup>351</sup> SMEs also show a high level of fixed line ownership at 77%, with 40% of SMEs having more than one RFTS connection.<sup>352</sup> The MCE survey showed that 52% of a sample of 2,800 adults had both a mobile and a fixed telephone.<sup>353</sup>

<sup>350</sup> Slide 14 of the 2019 Residential Market Research.

<sup>351</sup> Slide 7 of the 2019 Residential Market Research.

<sup>352</sup> Slides 8 and 9 of the 2019 SME Market Research.

<sup>353</sup> Slide 27 of ComReg MCE survey.

- 4.253 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.<sup>354</sup> 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%).<sup>355</sup> 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.<sup>356</sup>
- 4.254 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.<sup>357</sup>
- 4.255 Although traditional RFTS subscriptions (i.e. PSTN and ISDN) have been falling continuously (see Table 14 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%)<sup>358</sup> 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.<sup>359</sup> 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.<sup>360</sup>
- 4.256 As noted in paragraph 4.83, the majority of standalone RFTS users would not switch to mobile voice in response to a SSNIP of standalone RFTS. Similarly, as noted in paragraph 4.211, the majority of bundled RFTS users would not switch to mobile voice in response to a SSNIP of a bundle of RFTS and other services.

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<sup>354</sup> Slide 24 of ComReg MCE survey.

<sup>355</sup> Slide 25 of ComReg MCE survey.

<sup>356</sup> Slide 26 of ComReg MCE survey.

<sup>357</sup> Slide 20 of ComReg MCE survey.

<sup>358</sup> 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%.

<sup>359</sup> Slide 33 of the 2019 SME Market Research.

<sup>360</sup> Slide 15 of the 2019 SME Market Research.

- 4.257 In the MCE survey, the corresponding figure for mobile only was 46%.<sup>361</sup> For those that previously had a landline and cancelled it (37%), the reasons are outlined in paragraph 4.253 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%).<sup>362</sup>
- 4.258 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%).<sup>363</sup> 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%).
- 4.259 FMS is most evident among a subset of predominantly residential customers – the 2019 Residential Market Research showed that mobile-only households are more likely prevalent among younger cohorts in urban areas<sup>364</sup> and among low income cohorts.<sup>365</sup> Nevertheless, other customer types, in particular, those aged 55+ and home owners remain most attached to RFTS for making calls in the home.<sup>366</sup> 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.<sup>367</sup>
- 4.260 Demand for RFTS appears to be driven by both 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%).<sup>368</sup>

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<sup>361</sup> Slide 23 of ComReg MCE survey.

<sup>362</sup> Slide 26 of ComReg MCE survey.

<sup>363</sup> Slide 93 of the 2019 Residential Market Research.

<sup>364</sup> Slide 89 of the 2019 Residential Market Research.

<sup>365</sup> 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.

<sup>366</sup> Slide 65 of the 2019 Residential Market Research.

<sup>367</sup> Slide 24 of ComReg MCE survey.

<sup>368</sup> Slide 85 of the 2019 Residential Market Research.

- 4.261 The MCE showed that the lower price of making calls with the home landline phone 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.<sup>369</sup> 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.<sup>370</sup> For those aged 65+, the security of having a landline surfaced as a key reason (26%).<sup>371</sup>
- 4.262 SMEs appear more reluctant to engage in FMS because they assign high importance to fixed network characteristics, such as access to the internet and a single contact phone number for the business.<sup>372</sup> There is a general perception among SMEs that RFTS is important to the day-to-day functioning of the business. This is reflected in the insignificant numbers cancelling their RFTS within the last three years (see Figure 10 which shows fairly stagnant numbers of ISDN connections). For SMEs, mobile service coverage was not reported as a key driver for retention of a fixed line in the 2019 SME Market Research.<sup>373</sup>

**Complementarity between fixed and mobile voice**

- 4.263 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.
- 4.264 While there has been a diversion in fixed and mobile minutes (Figure 6), end users (both residential and business) 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.<sup>374</sup> A similar trend was observed in the 2019 Residential Market Research among rural respondents and some standalone RFTS users.<sup>375</sup>

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<sup>369</sup> Slide 29 of ComReg MCE survey.

<sup>370</sup> Ibid.

<sup>371</sup> Ibid.

<sup>372</sup> Slide 63 of the 2019 SME Market Research.

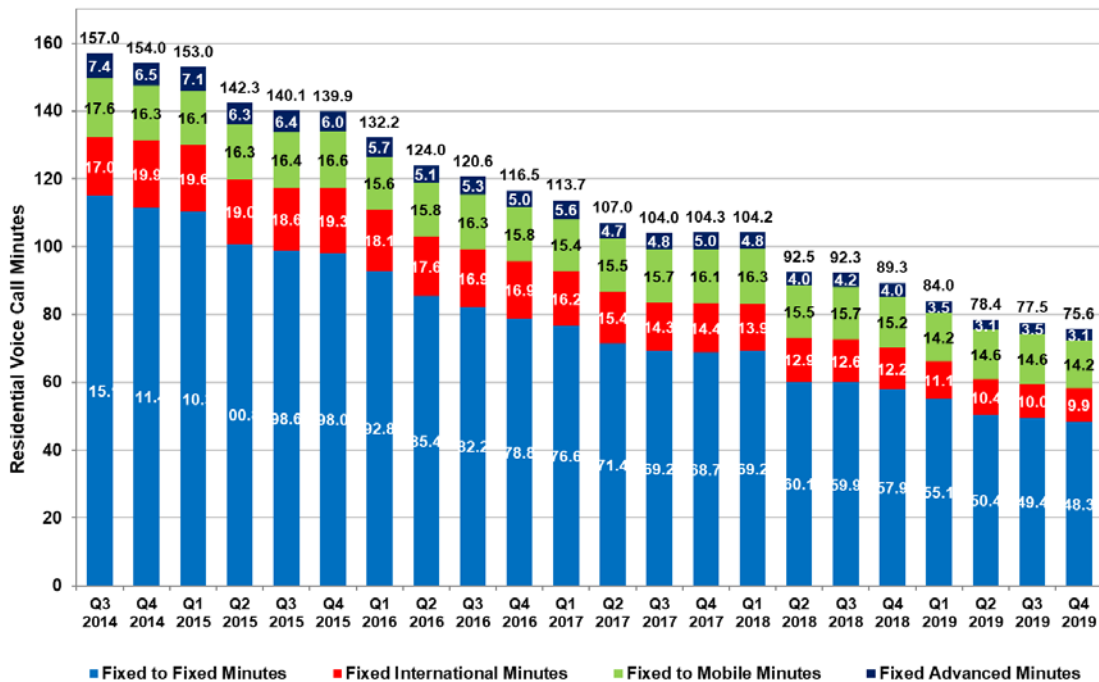
<sup>373</sup> Slide 63 of the 2019 SME Market Research.

<sup>374</sup> Slides 29 and 73 to 79 of ComReg MCE survey.

<sup>375</sup> Slide 85 of the 2019 Residential Market Research.

- 4.265 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 calls types, 66% of households indicated that their preference was to use RFTS for calling local/national fixed numbers.<sup>376</sup> Fixed line phones are also preferred for other 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.<sup>377</sup> These calling patterns suggest that households view access to fixed and mobile networks as complements rather than as substitutes, in that calls do not entirely traverse voice platforms. Moreover, the 2019 SME Market Research shows that RFTS is preferred by SMEs for all categories of calls.<sup>378</sup> 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.
- 4.266 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 32 and Figure 33:

**Figure 32: Monthly Fixed Call Minutes per Residential Subscriber, Q3 2014 – Q4 2019**

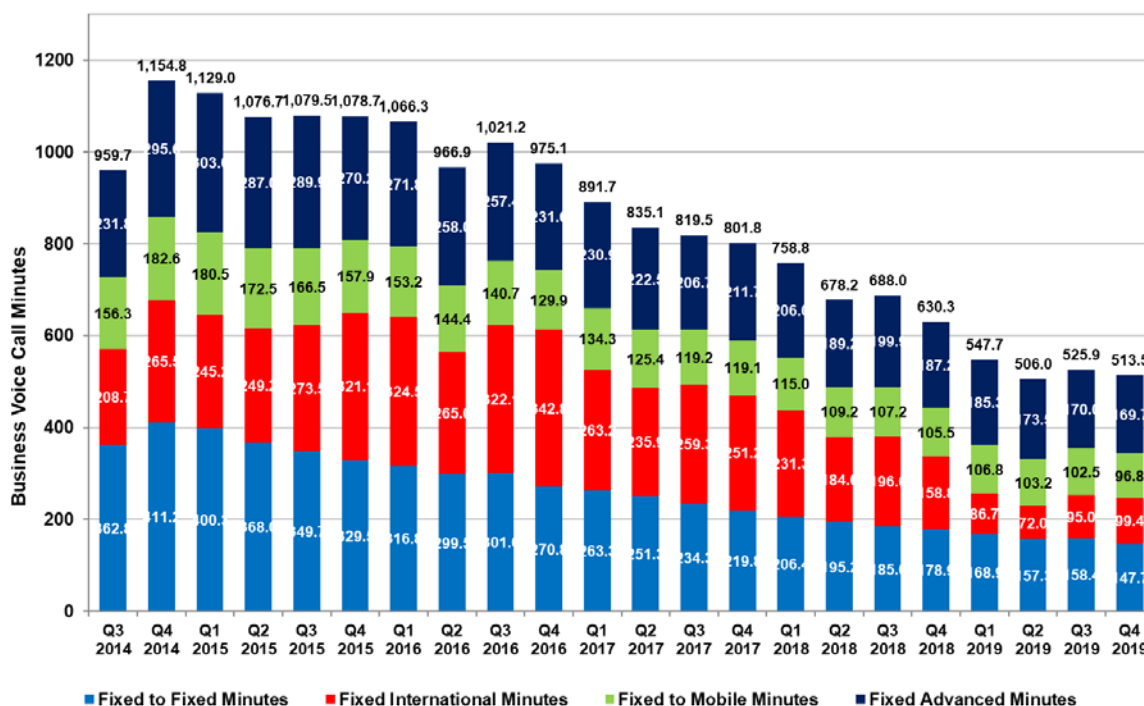


<sup>376</sup> Slide 75 of the 2019 Residential Market Research.

<sup>377</sup> Ibid.

<sup>378</sup> Slide 52 of the 2019 SME Market Research.

Figure 33: Monthly Fixed Call Minutes per Business Subscriber, Q3 2014 – Q4 2019



Source: Quarterly Key Data Questionnaire

4.267 While FNA RFTS subscriptions have declined since both the 2014 RFVA Decision and the 2015 FACO Decision (see Figure 11), 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. However, ComReg notes that in many cases, the option of purchasing standalone broadband is not always widespread, as many SPs offer bundles of RFTS with broadband, TV and mobile services. 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).<sup>379</sup>

4.268 ComReg has no evidence of mobile broadband being used to deliver Managed VoIP.<sup>380</sup> As discussed in paragraphs 4.195 and 4.202, Managed VoIP has, to date, been delivered over fixed broadband/IP only.

<sup>379</sup> Slide 22 of the 2019 Residential Market Research.

<sup>380</sup> The use of Unmanaged VoIP applications is discussed below in paragraphs 4.224 to 4.238.

**Coverage of mobile networks compared with fixed networks**

- 4.269 FNA RFTS (PSTN and ISDN) 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.<sup>381</sup> ComReg's mobile coverage map shows recent enhancements in mobile coverage;<sup>382</sup> 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 4.271). 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 the respondents who lived in urban locations.<sup>383</sup> 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.<sup>384</sup> Loss of signal (or no/poor signal/coverage) throughout the home for voice call and texts was highest in rural samples.<sup>385</sup> The survey also showed that dropped calls in a specific part of the house appear 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.<sup>386</sup>
- 4.270 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.<sup>387</sup>

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<sup>381</sup> See paragraphs 5.400 to 5.425, which discuss NG broadband coverage capable of delivering Managed VoIP.

<sup>382</sup> [www.comreg.ie/coveragemap](http://www.comreg.ie/coveragemap).

<sup>383</sup> Slide 74 of ComReg MCE survey.

<sup>384</sup> Slide 77 of ComReg MCE survey.

<sup>385</sup> Slide 78 of ComReg MCE survey.

<sup>386</sup> Slide 88 of ComReg MCE survey.

<sup>387</sup> Slide 14 of the 2019 Residential Market Research.



4.271 WiFi calling,<sup>388</sup> such as the eir WiFi calling product launched in May 2017,<sup>389</sup> allows users to use their smartphone instead of their fixed landline to make calls over WiFi services. 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.”<sup>390</sup>*

4.272 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, particularly given that access to WiFi calling will only be available in small 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 limited, undermining the case for FMS.

4.273 As noted in paragraph 4.270, 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.

4.274 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.<sup>391</sup>

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<sup>388</sup> <https://www.eir.ie/wificalling/>

<https://n.vodafone.ie/network/wi-fi-calling.html>

<sup>389</sup> <https://www.eir.ie/opencms/export/.content/pdf/terms/EirWiFiCallTermsandconditions.pdf>

<sup>390</sup> <https://www.eir.ie/opencms/export/sites/default/.content/pdf/terms/EirWiFiCallTermsandconditions.pdf>

<sup>391</sup> Slide 52 of ComReg MCE survey.

- 4.275 ComReg has considered demand-side substitution from the focal products to Unmanaged VoIP in paragraphs 4.224 to 4.232 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, nor does it consider Unmanaged VoIP over mobile to be substitutable with RFTS.
- 4.276 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.<sup>392</sup> In addition, one SP noted that mobile telephony is more likely to be a complement to RFTS as it facilitates OTT services.<sup>393</sup> ComReg also notes, as discussed in paragraphs 3.14 to 3.21, that a number of SPs offer both RFTS and mobile telephony, including Vodafone, Eircom ('eir mobile'), and Virgin Media ('Virgin Mobile').
- 4.277 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 telephone 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.
- 4.278 Additionally, the recent emergence of RFTS and mobile being offered in bundles also 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.<sup>394</sup>
- 4.279 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 4.260, households with RFTS claim to mainly keep it because:<sup>395</sup>
- (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%).

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<sup>392</sup> BT, Virgin Media, Vodafone, Pure Telecom.

<sup>393</sup> Virgin Media.

<sup>394</sup> See Annex 3 of this Consultation for an outline of RFTS packages offered by SPs.

<sup>395</sup> Slide 85 of the 2019 Residential Market Research.

- 4.280 In addition to other factors, such as the perception that the fixed line phone is important for the day-to-day functioning of the business, 22% of SMEs reported that an RFTS is important for *“having a single contact phone number for the business.”*<sup>396</sup>

## Pricing

- 4.281 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.<sup>397</sup> Other SPs charge line rental rates in a broadly similar range.<sup>398</sup> 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 4.40, and these RFTS packages are outlined in Annex: 4. Table 6 in Section 3 also compares prices of RFTS products.
- 4.282 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.
- 4.283 Table 25 below compares pre-pay and post-pay packages offered by MSPs. For each MSP, ComReg gives the price range of their pre-pay and bill-pay packages, e.g. for Vodafone, six 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 €20 to €45.<sup>399</sup> This suggests that a bill-pay mobile plan may be at least the same price as a standalone RFTS plan (see Table 6 in Section 3). Bundles of RFTS with other services including fixed broadband, TV and mobile voice are outlined in Annex 3; these indicate that the prices of bundles are higher than standalone mobile voice packages:

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<sup>396</sup> Slide 63 of the 2019 SME Market Research.

<sup>397</sup> <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/Pt1.1.pdf>

<sup>398</sup> 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>

<sup>399</sup> Note that this does not include plans tailored around acquiring certain types of handsets.

**Table 25: 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	4	€30 - €60
	Business			14	€25 - €80
Vodafone	Residential	6	€20 - €30	3	€20 - €45
	Business			4	€35 - €98
Tesco	Residential	1	€15	7	€10 - €40
Lycamobile	Residential	12	€9 - €25		
eir Mobile	Residential	5	€10 - €30	5	€15 - €69.99
48	Residential	2	€10 - €15		
Virgin Media	Residential			2	€15 - €25
GoMo	Residential			1	€12.99

- 4.284 It should be noted also 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).<sup>400</sup>
- 4.285 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.<sup>401</sup> 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.<sup>402</sup>

<sup>400</sup> 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](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 March 2020.

<sup>401</sup> Slide 49 of the 2019 Residential Market Research.

<sup>402</sup> Slides 50 and 51 of the 2019 Residential Market Research.

- 4.286 For these reasons, MTS may not be considered to be a sufficiently effective demand substitute for RFTS. The market research evidence does not suggest 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 4.83 and 4.211. 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).<sup>403</sup>
- 4.287 Overall, the available data on price trends and partial substitution of access to the mobile network for access to the fixed network would indicate that mobile access and services are not likely to be an effective substitute for RFTS, such that they justify inclusion in the same relevant market. As noted in the Explanatory Note to the 2014 Recommendation,

*“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.”<sup>404</sup>*

### Preliminary conclusion

- 4.288 Overall, ComReg’s preliminary view is that mobile telephony does not pose an effective demand-side constraint on the focal products for the following reasons (outlined in paragraphs 4.247 to 4.287 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;<sup>405</sup>

<sup>403</sup> <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/Part1.2.pdf> Accessed 13 March 2020.

<sup>404</sup> Page 22 of the Explanatory Note to the 2014 EC Recommendation.

<sup>405</sup> 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.

4.289 Although there is evidence of some substitutability of RFTS for mobile (particularly mobile-only households (46%), of which only 39% previously had RFTS)<sup>406</sup> 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 use 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, suggest that mobile telephony does not pose a sufficiently strong demand-side constraint on the focal products to warrant inclusion in the Relevant RFTS Markets.

### **Is there a direct demand-side constraint from alternative fixed access technologies such as leased lines?**

- 4.290 This section considers whether high quality access lines such as leased line services constitute a demand-side substitute to the high-level focal product (i.e. RFTS over ISDN FRA and PRA). As outlined in paragraph 4.167, ComReg considers that there are likely to be 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.
- 4.291 In the Explanatory Note to the 2014 Recommendation,<sup>407</sup> the EC notes that dedicated connections such as leased lines can be used to provide fixed access and voice 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.

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<sup>406</sup> Slide 89 of the 2019 SME Market Research.

<sup>407</sup> Page 22 of the Explanatory Note to the 2014 EC Recommendation.



**FNA RFTS products**

- 4.292 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, for instance, banks with multiple branches).<sup>408</sup>
- 4.293 As the focal products (LL-RFTS and HL-RFTS) are intended to provide a basic RFTS, it is unlikely that a retail end user would substitute a full leased line (plus a SIP Trunk) for RFTS or vice versa 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 below in paragraphs 5.135 to 0 in Section 5.
- 4.294 For LL-RFTS users, the cost of leased lines (Table 26 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.
- 4.295 For HL-RFTS users such as large organisations, a full leased line solution is used to provide a full spectrum of connectivity need 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.<sup>409</sup> 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.

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<sup>408</sup> See ‘Wholesale High Quality Access at a Fixed Location – Decision’ D03/20, ComReg Document 20/06, 24 January 2020, (hereafter, the ‘**2020 WHQA Decision**’).

<sup>409</sup> 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).



- 4.296 As Table 26 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.<sup>410</sup> The market research also gives a good overview of the types of leased lines in use by business end users.
- 4.297 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.
- 4.298 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 likely 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.
- 4.299 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:

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<sup>410</sup> 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 26: Leased Line<sup>411</sup> and ISDN FRA and PRA Costs<sup>412</sup>**

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, 10Mb/s	16				€27,660	€1,728.25
Ethernet, 10Mb/s	30				€27,660	€922
Ethernet, 10Mb/s	75				€27,660	€368.80
Ethernet, 10Mb/s	100				€27,660	€276.60

4.300 This suggests 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.

#### **NG RFTS products (Managed VoIP)**

4.301 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 (hereafter, '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 would provide the RFVC component of RFTS.

4.302 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 line 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 Managed VoIP (SIP Trunk or Hosted PBX) delivered over a leased line, given the higher cost of the latter.

<sup>411</sup> 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".

<sup>412</sup> <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/Part1.2.pdf>

- 4.303 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.<sup>413</sup>
- 4.304 ComReg’s preliminary view is that alternative fixed access technologies such as leased lines are unlikely to pose 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 Managed VoIP (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 in general.

### Supply-Side Substitution

- 4.305 ComReg must also consider whether any alternative products could 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.
- 4.306 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:<sup>414</sup>

*“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.**”*

- 4.307 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.

<sup>413</sup> Slide 17 of the 2019 SME Market Research.

<sup>414</sup> See paragraph 20. ComReg emphasis added.

- 4.308 Aside from the demand-side substitution possibilities identified at paragraph 4.177 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 of 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).
- 4.309 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).
- 4.310 ComReg considers below the potential for RFTS supply-side substitution by SPs (including self-supply where relevant) over the following platforms:
- (a) Mobile services (paragraphs 4.311 to 4.324 below).

#### Supply-side substitution over Mobile services

- 4.311 ComReg considers the potential for supply-side substitution arising from vertically-integrated mobile network operators (hereafter, '**MNOs**') that provide mobile telephony. Excluding mobile virtual network operators (hereafter, '**MVNOs**') which do not own their own networks, three MNOs provide mobile telephony, namely Vodafone, Eircom, and Three Ireland.
- 4.312 In the 2014 RFVA Decision, ComReg was of the view that a Mobile Service Provider (hereafter, a '**MSP**') would be unlikely to switch sufficiently promptly or on a sufficient scale to the supply of RFTS, such 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 4.306 above.

- 4.313 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.<sup>415</sup> Virgin Media offers quad play retail bundles comprising fixed voice, broadband, TV and mobile voice, the latter being provided over Three's network.<sup>416</sup> However, it should be noted that Vodafone uses upstream FACO inputs to provide RFTS, as set out in paragraph 5.296.
- 4.314 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).
- 4.315 Vodafone's supply of RFTS is still significantly reliant on the use of 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.
- 4.316 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.<sup>417</sup> The One Net Business product is marketed by Vodafone as an integrated fixed and mobile voice communications solution.<sup>418</sup> 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 potential substitute to LL-RFTS and HL-RFTS.

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<sup>415</sup> See <https://www.three.ie/business/>.

<sup>416</sup> <https://www.virginmedia.ie/customer-support/support-by-products/mobile/mobile-network-and-data/virginmedia-and-three-network/>.

<sup>417</sup> <https://onenet.vodafone.com/latest/ie/en/content/topics/learn-about-one-net/one-net-service-overview>.

<sup>418</sup> <https://n.vodafone.ie/business/products-and-solutions/unified-communications/one-net-business.html>.

BT also have a similar product called BT One Voice Anywhere for business users - <https://www.btireland.com/products-and-services/communication/voice>.

- 4.317 Eircom offers a Fixed Cellular Solution (hereafter, '**FCS**') product which involves a fixed voice service being delivered over a mobile network.<sup>419</sup> ComReg notes that this product is only offered in areas of country 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 obligations<sup>420</sup> and is provided 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.
- 4.318 Despite the developments described above, ComReg is of the preliminary view that the evidence available suggests that mobile telephony is unlikely to be 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 at this time.
- 4.319 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 4.247).
- 4.320 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 '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.

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<sup>419</sup> As distinct from eir mobile.

<sup>420</sup> Although the Universal Service Provider (hereafter, '**USP**') is entitled, in principle, under the USO to replace existing copper lines with fixed cellular service (hereafter, '**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.



- 4.321 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.<sup>421</sup> 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 recognition on the part of MSPs that end users place a distinct value on mobile voice telephony, possibly as a complement to RFTS.
- 4.322 Having considered relevant demand-side factors including functionality, price and end user usage, as well as relevant supply-side factors, ComReg's preliminary view is that mobile services are not a sufficiently effective substitute for the focal products.
- 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 for use at home or in the office. End users have 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, 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.
- 4.324 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 is of the preliminary view that delivery of RFTS over a mobile network through supply-side substitution is unlikely to occur over the timeframe of the current review.

### 4.2.3 Overall Preliminary Conclusions on Relevant RFTS Product Market

- 4.325 ComReg's preliminary view is that there are two distinct focal products for FNA 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.
- 4.326 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.

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<sup>421</sup> Such as eir mobile, Vodafone and Virgin Media.



- 4.327 ComReg's overall preliminary view is that there are three distinct Relevant RFTS Product Markets (hereafter, the '**Relevant RFTS Product Markets**')
- (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 Managed VoIP delivered over NGA 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

4.328 In this section, ComReg considers the geographic scope of the Relevant RFTS Product Markets, as outlined above in paragraph 4.327. ComReg's approach follows the approach adopted by the EC in the 2014 Recommendation.

4.329 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."*<sup>422</sup>

4.330 The EC further notes in its SMP Guidelines that:

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<sup>422</sup> Notice on Market Definition, paragraph 8.

*“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.”<sup>423</sup>*

- 4.331 In the 2014 RFVA Decision, ComReg considered that each of the Relevant RFVA Markets was national in terms of geographic scope. ComReg concluded that RFVA as delivered predominantly over Eircom’s network was national in scope and that, while some SPs providing RFVA did not have national coverage, they competed with Eircom RFVA where they were present. In addition, Eircom’s RFVA was provided on the same terms, conditions and prices across Ireland, regardless of location.
- 4.332 ComReg undertakes an assessment of the homogeneity of competitive conditions between geographic areas, taking account of both structural and behavioural criteria including entry conditions and evolution of SPs’ market shares in particular areas; retail pricing and marketing patterns; and a consideration of any geographic differences in retail product characteristics.
- 4.333 As noted in paragraph 4.5, ComReg assumes upstream FACO regulation and WLA/WCA regulation (where relevant). Where FACO regulation is not in place for 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 5.403 to 5.420 in Section 5). ComReg notes that the Urban WCA Market is not subject to regulation (see Appendix 10 and 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.

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<sup>423</sup> SMP Guidelines, paragraph 56.

- 4.334 In assessing potential 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.<sup>424</sup> 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 4.336 to 4.349);
  - (b) Variation in the number and size of potential competitors (paragraphs 4.350 to 4.357);
  - (c) Distribution of market shares (paragraphs 4.358 to 4.362);
  - (d) Evidence of differentiated pricing strategies or marketing (paragraphs 4.363 to 4.369); and
  - (e) Geographical differences in product functionality and demand characteristics (paragraphs 4.370 to 4.376).
- 4.335 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 there is, however, regulation 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 its use of upstream FACO, WLA or WCA inputs.

### 4.3.1 Geographic differences in entry conditions

- 4.336 Eircom supplies RFTS nationally over its FNA network to both its own retail arm and to Access Seekers through upstream wholesale access regulation. 64% of RFTS subscriptions are provided using Eircom's FNA network.
- 4.337 RFTS competition is, to some degree, dependent on upstream FACO regulation<sup>425</sup> (access to SB-WLR and WLW, which relies on an SB-WLR input), although SPs such as Virgin Media and Vodafone offer RFTS independently over Managed VoB.<sup>426</sup> 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 WLW (such as Pure Telecom), coverage is national as they simply resell Eircom's voice product using WLW. 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.

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<sup>424</sup> BEREC "[Common Position on Geographic Aspects of Market Analysis](#)", BoR (14) 73, 05.06.2014.

<sup>425</sup> This is assessed later in Sections 5, 7 and 8.

<sup>426</sup> Although as shown in paragraph 5.297, Vodafone continue to buy high volumes of WLW.

- 4.338 As noted in paragraph 4.5, ComReg assumes upstream FACO, WLA and WCA regulation (where relevant). Where FACO regulation is not in place for some geographic areas, WLA/WCA regulation is assumed, such that Access Seekers can provide RFTS in the form of Managed VoIP (see paragraphs 5.403 to 5.420). ComReg notes that the Urban WCA Market is not subject to regulation (see Appendix 10 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.
- 4.339 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 NGA 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 3.93 to 3.95, the NBP seeks to provide NGA 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 premises and Exchange Areas. The data underpinning the calculation is outlined at paragraphs A 9.13 to A 9.37:

**Table 27: NG Broadband coverage by Exchange Area for largest RFTS SPs, Q4 2019**  
[X<REDACTED>X]

	Premises Coverage as % of Total National Premises	Eircom EAs where SP is present or planning presence
<b>BT / Sky</b> <sup>427</sup>	 428	 429
<b>Digiweb</b>	 430	 431
<b>Eircom</b>		
<b>Pure Telecom</b>	 432	 433
<b>Virgin Media</b>	 434	 435
<b>Vodafone</b>	 436	 437

<sup>427</sup> Sky purchases services from BT including FACO and WCA.

<sup>428</sup> Between 80% and 90%.

<sup>429</sup> Between 1,000 and 1,100.

<sup>430</sup> Between 80% and 90%.

<sup>431</sup> Between 700 and 800.

<sup>432</sup> Between 80% and 90%.

<sup>433</sup> Between 800 and 900.

<sup>434</sup> Less than 50%.

<sup>435</sup> Between 100 and 200.

<sup>436</sup> Between 90% and 100%.

<sup>437</sup> Between 1,100 and 1,200.

- 4.340 Geographic variation in competitive conditions is also a function of availability of NG broadband. Where NG broadband is available, end users have the option of purchasing RFTS in a bundle with broadband, and it has been shown that 82% of total RFTS subscriptions are bundled with broadband (and in some cases TV and mobile telephony). The 2019 Residential Market Research has shown that, for those end users that purchase standalone RFTS, 5% do not have access to NG broadband.<sup>438</sup> 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.
- 4.341 In populous areas of the country, Access Seekers such as BT (for Sky retail end users) and Vodafone have availed 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.
- 4.342 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 that NBI will seek to connect the associated premises to an NG network. As discussed in paragraphs 3.93 to 3.95, NBI aims to bring NG broadband to those premises 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 4.77, 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.
- 4.343 Given that NBI is targeting the provision of NG broadband services to unserved areas of the State, its coverage is not likely to significantly overlap existing NG network coverage. Over a seven-year period, NBI will deliver NG broadband to up to 535,000 premises.<sup>439</sup>

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<sup>438</sup> Slide 18 of the 2019 Residential Market Research.

<sup>439</sup> <https://nbi.ie/about/what-were-delivering/>. As noted in footnote 128, the NBP rollout is based on 'Delivery Points' in the Eircode database.

- 4.344 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 11, 82% 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 23), potentially driven by a migration to bundles of RFTS with NG broadband (and/or other services), as outlined in paragraph 4.78.
- 4.345 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.
- 4.346 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.<sup>440</sup>
- 4.347 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 further discussed in Section 5 and 7 of this Consultation in the context of the market definition, SMP assessment and 3CT in the Relevant FACO Markets.
- 4.348 ComReg considers that Eircom is likely to face differing degrees of constraint in the Relevant RFTS Product Markets from the progressive rollout of respective 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 wholesale Access Seekers to provide bundles of broadband and Managed VoB.
- 4.349 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, paragraphs 5.330 to 5.426.

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<sup>440</sup> See paragraphs 7.7 to 7.138 which consider the presence of barriers to entry as part of the 3CT.



### 4.3.2 Variation in the number and size of potential competitors

- 4.350 Together, six SPs account for 94.4% of the RFTS market in Ireland,<sup>441</sup> 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.
- 4.351 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.<sup>442</sup>
- 4.352 Virgin Media has a network coverage of approximately 39% of premises (939,900 premises) as at Q4 2019 with its independent CATV network.<sup>443</sup> Vodafone and Sky's (BT) coverage in terms of being able to provide NG broadband amounts to [X [REDACTED] X] of premises, as indicated in Table 27 above. Pure Telecom's coverage is close to national level [X [REDACTED] X] for its RFTS subscribers.
- 4.353 At the wholesale level, two SPs operate FTTP networks – Eircom and SIRO.<sup>444</sup> Eircom's FTTP network extends to approximately [X [REDACTED] X] premises (15% of premises, discussed in paragraph A 9.16 in Annex: 9) and as of April 2020, SIRO's network extends to 320,000 premises (14% of premises).<sup>445</sup> 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.<sup>446</sup> 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 the RFTS is delivered over Managed VoB.<sup>447</sup>

<sup>441</sup> ComReg QKDR Q4 2019, Figure 2.2.3, page 19.

<sup>442</sup> 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.

<sup>443</sup> Liberty Global Full Year 2019 Results, page 18. <https://www.libertyglobal.com/wp-content/uploads/2020/02/Virgin-Media-Fixed-Income-Q4-2019.pdf>.

<sup>444</sup> The NBP aims to roll out an FTTP network commencing Q2 2020.

<sup>445</sup> <https://siro.ie/news-and-insights/siro-broadband-fibre-connectivity-essential-services-covid-19/>. Data in ComReg's position suggest that the number of premises passed by SIRO as of Q4 2019 was [X [REDACTED] X].

<sup>446</sup> <https://www.eir.ie/pressroom/eir-launches-0.5-billion-fixed-network-investment-programme/>

<sup>447</sup> Vodafone meeting with ComReg 9 October 2018.



- 4.354 These parallel infrastructures (FNA and FTTP), emerging in certain geographic areas, are primarily targeted at bundled offers, e.g., TV, broadband and voice (both mobile and fixed).<sup>448</sup> 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 potentially 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 4.78).
- 4.355 ComReg's preliminary view 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 likely to be greater, as end users can substitute to bundles of CATV or FTTx broadband and RFTS.
- 4.356 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.<sup>449</sup> 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.
- 4.357 While there may be some emergent localised competition for RFTS (for example from regional SPs such as Rapid Broadband,<sup>450</sup> Carnsore<sup>451</sup> or Westnet<sup>452</sup>), ComReg is of the preliminary view that the evidence on the number and size of potential competitors is insufficient to support the view that there is more than one geographic market. This is because the five 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 intends to continue to regulate FACO (see paragraphs 5.407 to 5.428). As previously noted in paragraph 4.192, 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 23).

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<sup>448</sup> Although mobile telephony is delivered over a different network to fixed broadband/RFTS.

<sup>449</sup> Slide 80 of the 2019 Residential Market Research.

<sup>450</sup> <http://rapidbroadband.ie/coverage/>

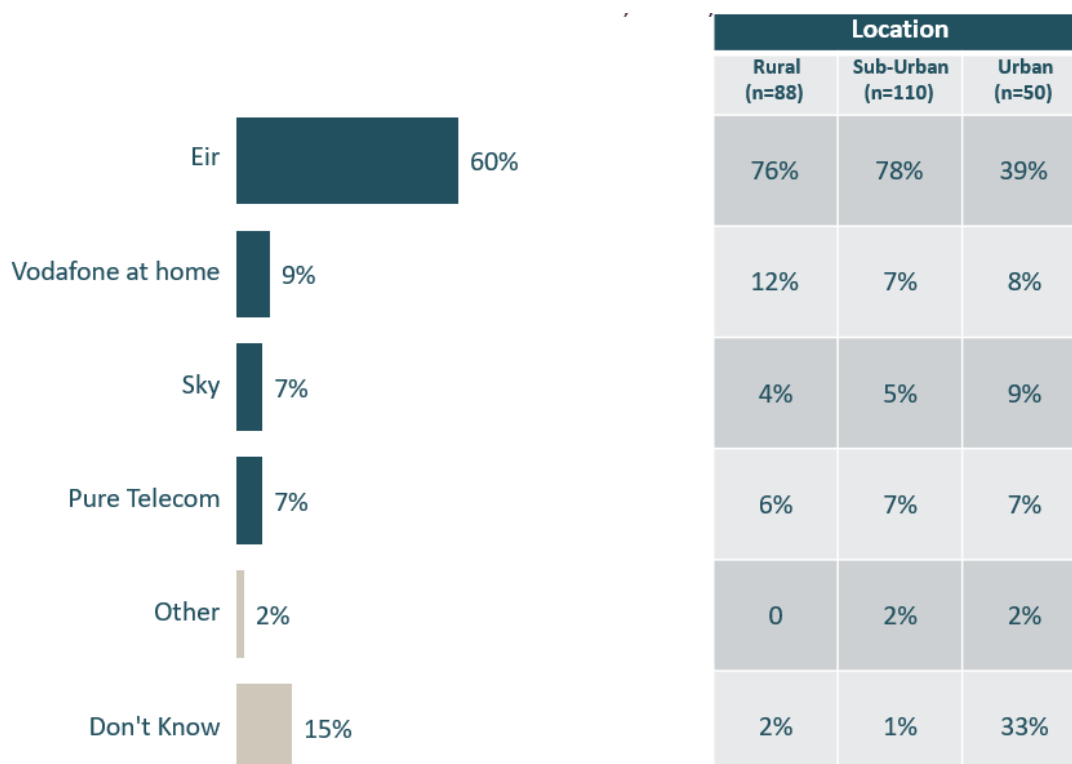
<sup>451</sup> <https://www.carnsorebroadband.com/>

<sup>452</sup> <https://www.westnet.ie/>

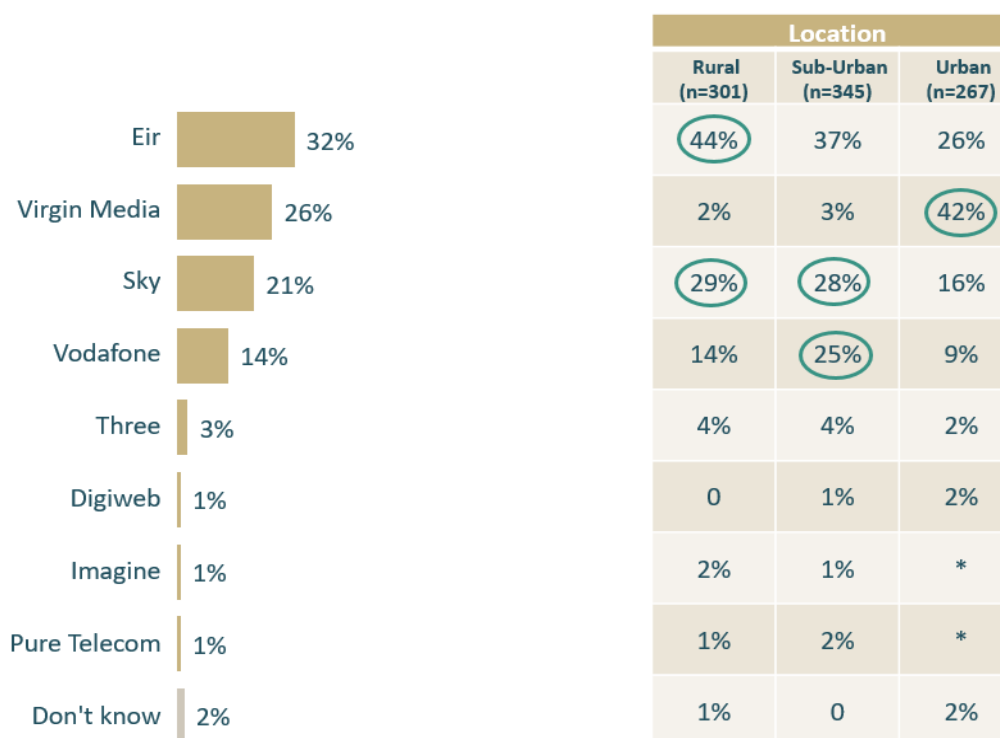
### 4.3.3 Distribution and evolution of market shares

4.358 Figure 34 and Figure 35 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:

**Figure 34: Residential Standalone RFTS Market Shares by Location<sup>453</sup>**



<sup>453</sup> Slide 29 of the 2019 Residential Market Research.

**Figure 35: Residential Bundled RFTS Market Shares by Location**<sup>454</sup>

- 4.359 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, in itself, is insufficient to support the existence of sub-national geographic markets.
- 4.360 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.
- 4.361 ComReg is of the preliminary view that it is unclear whether the increasing competition with regard to wider bundle of services (in particular RFTS and broadband) indicates that competitive conditions are sufficiently different between different areas and 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 Seeker SPs, means that the current boundaries of the bundles 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.

<sup>454</sup> Slide 33 of the 2019 Residential Market Research.

4.362 Thus, it is ComReg's preliminary view that, on a geographic basis, the distribution of market shares is not suggestive of differences in competitive conditions across different geographic areas.

#### 4.3.4 Evidence of differentiated pricing or marketing strategies

4.363 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.

4.364 As noted above in paragraph 4.336, 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.<sup>455</sup> The only geographic difference in pricing arises based on the availability of the 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.

4.365 As noted previously in paragraph 4.6, 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.

4.366 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 18).

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<sup>455</sup> In accordance with the 2014 RFVA Decision, Eircom's pricing of RFVA (retail line rental) 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.

- 4.367 While Eircom is required, under its USO obligation, to maintain GAP at the retail level for RFTS (connection and PATS service),<sup>456</sup> other SPs have no such restrictions. 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.
- 4.368 At the wholesale level, Eircom is the main supplier of wholesale products to support the retail 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.
- 4.369 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 proposes to continue to monitor the situation and to revisit its market definition, competition analysis and/or remedies as appropriate.

### 4.3.5 Geographic differences in product functionalities and demand characteristics

- 4.370 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.

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<sup>456</sup> See paragraph 532 of the 2016 USO Decision. '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.

- 4.371 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 4.178 to 4.327 above, with regard to product functionality, ComReg also considers Managed VoIP over NG broadband to be technically 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 a 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.
- 4.372 While differences might arise in the mix of underlying wholesale inputs being 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 the 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, those Access Seekers relying on Eircom FNA copper-based 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.
- 4.373 Demand for RFTS emanates from end users' demand to make 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 products 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.
- 4.374 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 there is no broadband available (i.e. the NBP IA), demand for Standalone LL-RFTS would pivot to the Bundled LL-RFTS Market as broadband becomes available.
- 4.375 Furthermore, in relation to HL-RFTS, the 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.
- 4.376 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 try to determine boundaries for each of these markets, as dynamic developments such as NG broadband rollout can ultimately mire these defined boundaries.

### 4.3.6 Preliminary Conclusion on RFTS Geographic Market Definition

- 4.377 ComReg's preliminary view is that the Relevant RFTS Product Markets are likely to be 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.
- 4.378 However, this is notwithstanding the emergence of some localised competitive pressure, 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.
- 4.379 ComReg notes that there may be some geographic differences in entry conditions around the country, depending on availability of NGA broadband which would allow Access Seekers SPs (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.
- 4.380 ComReg is of the preliminary view that, on balance, that 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 proposing to define sub-national geographic markets on the upstream Relevant FACO Markets – see Section 5).
- 4.381 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 8.4 to 8.17.
- 4.382 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 NGA broadband networks present, 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 the Urban RFTS Markets). WLA would, however, be offered on a regulated basis nationally. There would likely be effective competition in the provision of RFTS on the Urban RFTS Market, such that regulation of RFTS or upstream wholesale inputs would be unnecessary.



- 4.383 Within the footprint of a candidate Regional RFTS Market, Access Seekers would have fewer – or potentially no – opportunities to provide RFTS by means of Managed VoIP, given the lower coverage levels of NG broadband networks present, 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 ComReg proposes later in this Consultation that Eircom should be subject to SMP remedies on this market 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, currently the only existing 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, for example, price control, continues to be in effect on the Standalone-LLVA market.<sup>457</sup>
- 4.384 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 the Regional RFTS Market given the competition problems are addressed at the upstream level.
- 4.385 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 sub-national, geographic RFTS market is defined.

#### 4.4 Overall Preliminary Conclusion on RFTS Market Definition

- 4.386 ComReg's overall preliminary conclusion is 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

<sup>457</sup> See Table 1 on page 17 of the 2014 RFVA Decision.

- (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 NGA broadband, including, on a standalone basis or on a bundled basis together with any of broadband, television or mobile services.

**Q. 2. Do you agree with ComReg's preliminary conclusions on the product market assessment for the Relevant RFTS 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.**

**Q. 3. Do you agree with ComReg's preliminary conclusions on the geographic market assessment for the Relevant RFTS 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.**

## 5 Relevant FACO Market Definition

- 5.1 As noted in Section 2,<sup>458</sup> the 2014 Recommendation established that the FVCO market is no longer susceptible to *ex ante* regulation. Accordingly, ComReg must carry out a 3CT<sup>459</sup> 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. However, before doing so, it is first necessary to define the parameters of the FACO markets on which the 3CT will be carried out.
- 5.2 Market definition 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 candidate 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. ComReg also 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 candidate 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.
- 5.4 In line with the MGA, ComReg's market definition assessment starts from the assumption that regulation is not present in the market under consideration, i.e. the candidate 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.

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<sup>458</sup> See paragraph 2.24 above.

<sup>459</sup> The 3CT is detailed at footnote 144 above.

- 5.5 Market definition is not an end in itself. Rather, it provides the context for the 3CT and any subsequent competition analysis and SMP assessments. The market definition exercise allows ComReg to consider 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.<sup>460</sup>
- 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 5.7 to 5.66 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 5.67 to 5.172 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 5.173 to 5.290 below);
  - (d) Access Seeker alternatives to FACO (paragraphs 5.291 to 5.329 below); and
  - (e) The geographic scope of the Relevant FACO Markets (paragraphs 5.330 to 5.426 below).

## 5.1 Relevant FACO Product Market Assessment

### 5.1.1 Identifying the Focal Product

- 5.7 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.*”

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<sup>460</sup> As set out at Recital 27 of the Framework Directive, which is transposed into Irish law by means of the Framework Regulations.

*(.....) 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.”<sup>461</sup>*

- 5.8 The 2015 FACO Decision<sup>462</sup> 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 candidate product in respect of which the competition assessment can take place (as may be broadened, considering any effective substitutes).
- 5.9 The FACO focal products defined in the 2015 FACO Decision comprise of:
- (a) Wholesale fixed access (hereafter, ‘**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, which supports a single voice channel, or ISDN BRA which supports two voice channels, and
    - (ii) 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
  - (b) 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.
  - (c) 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).
- 5.10 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.

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<sup>461</sup> 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](https://www.berec.europa.eu/eng/document_register/subject_matter/berec/reports/363-berec-report-impact-of-fixed-mobile-substitution-fms-in-market-definition)

<sup>462</sup> At paragraph 4.41.

- 5.11 The definition of the FACO focal product does not distinguish between the types of telephone numbers being called. In Section 4 of this Consultation,<sup>463</sup> ComReg set out its preliminary view 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 also considers this to be the case at wholesale level, and notes that Eircom's FVCO encompasses call origination to all number types including geographic, non-geographic<sup>464</sup> and mobile numbers. Thus, it is clear that the same infrastructure can be utilised by Eircom (and other SPs) to deliver originated calls, irrespective of the number called.

### FACO should be the candidate focal product

- 5.12 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 (hereafter, '**Carrier Pre-Select**', or '**CPS**') to new wholesale customers, and CPS is now offered on a legacy basis only.<sup>465</sup> 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 candidate 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)

- 5.13 The candidate focal product is FACO, which includes WLR as the FA component. As discussed in Sections 3 and 4,<sup>466</sup> 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.

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<sup>463</sup> See paragraphs 4.91 to 4.115.

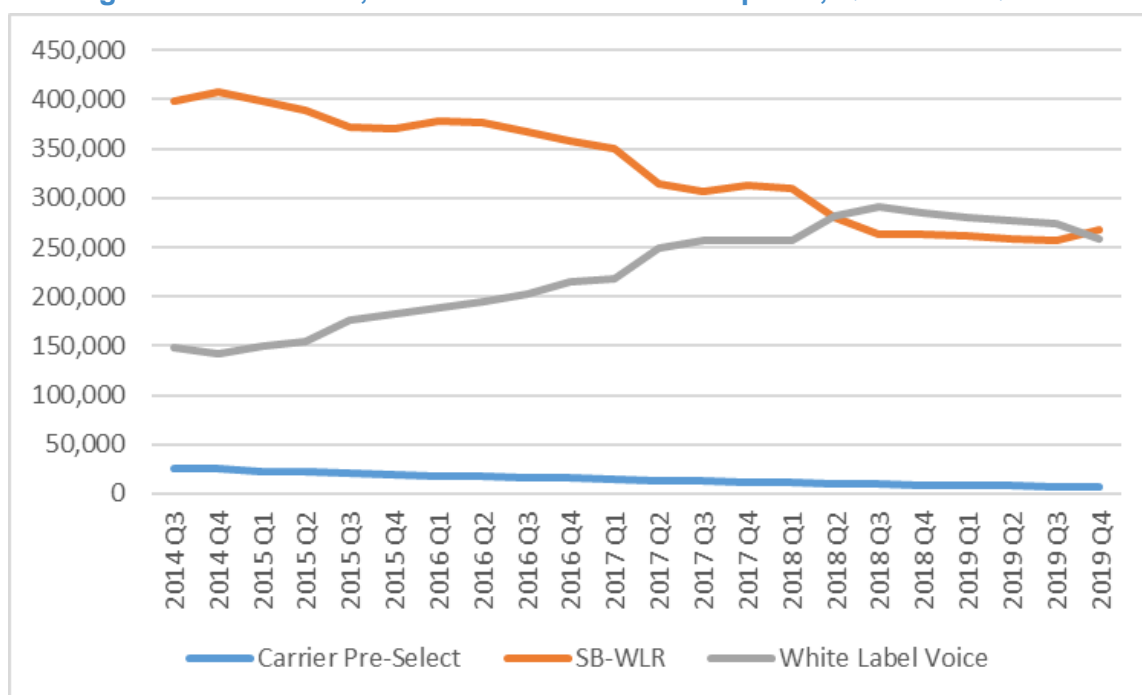
<sup>464</sup> Pursuant to ComReg Decision D15/18, from 1 December 2019, a call to an 1850, 1890, 0818 or 076 non-geographic number ('**NGN**') cost no more than the cost of calling a landline number. From 1 January 2022, the five NGN ranges will be reduced to two. The 1850, 1890, and 076 ranges will be withdrawn and the 1800 (Freephone) and 0818 range will remain.

<sup>465</sup> 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 8<sup>th</sup> September 2016. Any customer account availing of the service on this date will not be affected.*"

<sup>466</sup> See paragraphs 3.99 to 3.103, and paragraphs 4.23 to 4.57.

- 5.14 Access Seeker demand for SB-WLR greatly exceeds demand for CPS<sup>467</sup> (which was deregulated by means of the 2015 FACO Decision). As set out at Figure 22 above, in Q4 2019, CPS accounted for just 1.2% of all indirect access paths (comprised of CPS, SB-WLR and WLV), having fallen from 3.55% since 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 costs arising from purchasing RFTS from an SP.
- 5.15 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.<sup>468</sup>
- 5.16 Figure 36 below shows that, as at Q4 2019, there were a total of 532,529 indirect access paths<sup>469</sup> comprising 6,414 CPS access paths, 267,278 SB-WLR access paths and 258,837 WLV access paths:

**Figure 36: Total CPS, SB-WLR and WLV access paths, Q3 2014 – Q4 2019**



- 5.17 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.

<sup>467</sup> Regulatory obligations in respect of the provision of CPS were removed by means of the 2015 FACO Decision. Accordingly, Eircom is not obliged to fulfil CPS access requests.

<sup>468</sup> 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 VoB component (FVCO) itself, and need not purchase both components from the same SP.

<sup>469</sup> Note that a single indirect access path may consist of multiple voice channels. For example, a single ISDN BRA access path includes 2 voice channels.



- 5.18 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

- 5.19 The 2014 Explanatory Note states:

*“The issue of how to take into account the self-provision of wholesale inputs arises frequently in both defining and analysing wholesale markets. In some cases, what is under consideration is the self-supply of the incumbent operators. In others, it is the self-supply of alternative operators.*

*In many cases the incumbent is the only Undertaking that is in a position to provide a potential wholesale service. It is likely that there is no merchant market as this is often not in the interest of the incumbent operator. Where there is no merchant market and where there is consumer harm at retail level, it is justifiable 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.*

*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 the self-supply concerned into 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, to discourage market entry. 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 the ubiquity within the relevant geographic market expected by access seekers, and/or if alternative providers have difficulty in entering the merchant market readily.”<sup>470</sup>*

- 5.20 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’s 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.

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<sup>470</sup> 2014 Explanatory Note, at p.18.

- 5.21 Eircom offers SB-WLR in accordance with its FACO SMP obligations on terms of supply which are published in its Reference Interconnect Offer (hereafter, 'RIO').<sup>471</sup> ComReg also understands that Eircom launched a wholesale White Label VoIP product in March 2019.

### Eircom self-supply of Managed VoIP<sup>472</sup>

- 5.22 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 a Managed VoB service at any meaningful scale.
- 5.23 ComReg proposes to remove Eircom self-supply of Managed VoB from the focal product, and instead to assess it as a direct constraint, for the following reasons.
- 5.24 **Firstly**, ComReg's assessment in the 2015 FACO Decision was based, in large part, on the assumption that Eircom Managed VoB RFTS might ultimately replace the traditional circuit-switched delivery of RFTS over Eircom's FNA network, leading to a decline in demand for SB-WLR. ComReg further considered that RFTS delivered over FNA would likely remain relevant for end users who could not obtain broadband (or did not want a broadband service) for "*a number of years to come*."<sup>473</sup> ComReg considers that this is still likely to be the case.
- 5.25 These forward-looking assumptions have not been entirely realised. At Q4 2019, Eircom had a total of [redacted] [redacted].<sup>474</sup> Eircom retail Managed VoB subscriptions stand at [redacted] [redacted] [redacted]. In respect of FNA, while demand for SB-WLR has declined, this has been largely offset by increased demand for WLV. Even where end users purchase broadband from Eircom, their RFTS is still delivered over PSTN in many cases, rather than Managed VoB, in the case of POTS-based NG WLA (Virtual Unbundled Access, hereafter, 'VUA') or NG WCA (hereafter, '**Bitstream Plus**').<sup>478</sup>

<sup>471</sup> Available at [https://www.openeir.ie/Reference\\_Offers/](https://www.openeir.ie/Reference_Offers/).

<sup>472</sup> Unlike this Consultation, 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.

<sup>473</sup> As set out at paragraphs 5.15 to 5.17 of the 2014 FACO Consultation.

<sup>474</sup> Between 525,000 and 550,000 subscriptions.

<sup>475</sup> Between 50,000 and 75,000 subscriptions.

<sup>476</sup> Based on data provided confidentially to ComReg set out in [redacted] [redacted].

<sup>477</sup> Between 450,000 and 475,000 subscriptions.

<sup>478</sup> 'Bitstream' describes services provided over Wholesale Central Access ('WCA') which typically include access to capacity over an SP's FNA (typically copper) or 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 (hereafter, 'PoP').

- 5.26 **Secondly**, from a methodological perspective, the focal product offered over FNA by Eircom includes both merchant market supply and self-supply of the product in question, because self-supply is easily convertible to merchant market supply. Merchant market supply of Managed VoB is not included in the focal product because it is not delivered over FNA, and it is therefore inappropriate to include self-supply of Managed VoB in the focal product in circumstances where it is not easily convertible. It is, however, considered later in this Consultation.
- 5.27 For these reasons, ComReg proposes to exclude Eircom self-supply of Managed VoIP from the focal product, and instead to consider it at the direct constraint stage of the analysis.

### Eircom FACO Points of Interconnection

- 5.28 The FVCO component of FACO provided by Eircom varies in terms of the point of interconnection (hereafter, '**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 (hereafter, '**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).
- 5.29 According to the 2015 FACO Decision,<sup>479</sup> FVCO products with handover on CG (circuit-switched) interconnection<sup>480</sup> at the tandem or double-tandem level include an element of conveyance. Accordingly, Eircom FVCO charges depend on the level at which an Access Seeker interconnects to Eircom's network. The deeper an Access Seeker is interconnected to Eircom (and, therefore, the more infrastructure investment an Access Seeker makes), the earlier/deeper the Access Seeker can take FVCO traffic off Eircom's network and onto its own network, thereby incurring a lower FVCO charge arising from the lower traffic conveyance that Eircom has to undertake.

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<sup>479</sup> See footnote 175 of the 2015 FACO Decision.

<sup>480</sup> 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. Circuit-switched interconnection refers to interconnection on Current Generation copper networks.

- 5.30 In November 2019,<sup>481</sup> Eircom presented preliminary proposals to industry to modernise its PSTN network by means of Multi-Service Access Nodes, or '**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 (hereafter, '**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 the 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). 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.<sup>482</sup>

### Code hosting / sharing

- 5.31 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 POIs. 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.
- 5.32 Due to the absence of code hosting / sharing,<sup>483</sup> 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.

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<sup>481</sup> Eircom presented proposals at the Industry Product Development Workshop on 13 November 2019.

<sup>482</sup> See paragraphs 10.84 to 10.88.

<sup>483</sup> 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 Point of Interconnection (hereafter, '**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

- 5.33 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

- 5.34 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.<sup>484</sup> There was also no evidence of SPs offering Managed VoB-based RFTS based on these inputs.
- 5.35 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.
- 5.36 ComReg's reasoning 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 at the time of SB-WLR, which together suggested that there was little demand for the provision of a Managed VoB service provided over xDSL.
- 5.37 The 2015 FACO Decision did not impose obligations on Eircom with respect to access to its notional NGA FACO (wholesale Managed VoIP). 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.<sup>485</sup>
- 5.38 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.

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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.

<sup>484</sup> Using the terminology in this Consultation, 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.

<sup>485</sup> 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.



## Are Low-Level FACO and High-Level FACO separate focal products?

- 5.39 The 2015 FACO Decision concluded that it was appropriate to define separate High-Level and Low-Level FACO markets. This Consultation considers whether that distinction continues to be valid. The Low-Level Fixed Access (hereafter, '**LL-FA**') component of the focal product consists of the provision of WLR over PSTN or ISDN BRA. The High-Level Fixed Access (hereafter, '**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**'). Eircom SB-WLR facilitates the delivery of both the LL-FACO and HL-FACO focal products.
- 5.40 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, and that ComReg should review this in its analysis.
- 5.41 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 for 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.
- 5.42 These differences were reflected by ComReg 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);
  - (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.
- 5.43 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.
- 5.44 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 (hereafter, '**LL-RFVA**') and ISDN FRA and ISDN PRA on the other (hereafter, '**HL-RFVA**'). This distinction arises due, amongst other things, to differing functional characteristics, resulting in the absence of a common pricing constraint. In addition, ComReg considered that there were different conditions of supply present in the above markets.

- 5.45 This delineation of two separate LL-RFVA markets, as well as a HL-RFVA market is reflected at the wholesale level, where Eircom's SB-WLR products encompass the same range of FNA services.
- 5.46 Eircom provides different SB-WLR products that are, in turn, used by Access Seekers to distinguish their RFTS offerings. These SB-WLR products essentially differ according to whether the underlining WLR component is based on PSTN, ISDN BRA, ISDN FRA, or ISDN PRA.
- 5.47 To determine whether LL-FACO and HL-FACO form part of the same product market, or whether they constitute separate markets in their own right, ComReg considers whether LL-FACO and HL-FACO are substitutes for one another.
- 5.48 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 by the LL-FACO SP (and vice-versa). Whether the break in the chain of demand-side and supply-side 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?

- 5.49 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.

##### **Product characteristics**

- 5.50 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.
- 5.51 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 in HL-FACO, Access Seekers purchasing HL-FACO to be delivered as 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.



- 5.52 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**

- 5.53 Table 28 below shows Eircom's wholesale pricing for PSTN and ISDN access (in the presence of regulation). The data suggest that, on a per channel basis, 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<sup>486</sup>**

Product	Access channels	Connection charge	Monthly rental		Total cost over 3 years	
			Total	Per channel	Total	Per channel
PSTN	1	€0	€16.82	€16.82	€605.52	€605.52
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

- 5.54 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,<sup>487</sup> compared with a single PSTN line rental price of €16.82. 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%.

<sup>486</sup> Prices available in Service Schedule 401, Table 2 of Eircom's Reference Interconnect Offer Price List, as at 7 April 2020 [https://www.openeir.ie/Reference\\_Offers/](https://www.openeir.ie/Reference_Offers/).

<sup>487</sup> €143 / 16 access channels = €8.95 per access channel, per month.

- 5.55 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 observable distinction between LLVA and HLVA pricing, as set out at Table 29 below:

**Table 29: Eircom Pricing for RFVA (ex-VAT)<sup>488</sup>**

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	€ 32.51	€ 16.26	€ 1,372.83	€ 686.42
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**

- 5.56 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).
- 5.57 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.

### **Are LL-FACO and HL-FACO supply-side substitutes?**

- 5.58 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.

<sup>488</sup> Prices available at 'Your Telephone Line', as at 8 June 2020 <https://www.eir.ie/opencms/export/sites/default/group/pricing/phoneline/>.

- 5.59 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 the provision of HL-FACO.
- 5.60 Having regard to the above, ComReg proposes that LL-FACO provided over PSTN and ISDN BRA should fall within a LL-FACO focal product market. Given functional and pricing differences, as well as demand-side and supply-side considerations, ComReg proposes that HL-FACO products provided over ISDN FRA and ISDN PRA fall within a HL-FACO focal product market. ComReg considers that LL-FACO and HL-FACO are likely to constitute separate and distinct product markets, and notes that all SP respondents to the April 2019 IIRs concur with this view.

### Does White Label Voice (WLV) fall within the FACO Focal Product?

- 5.61 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 consumers without the need to develop its own interconnection infrastructure. WLV services are provided by Eircom.<sup>489</sup>
- 5.62 In effect, WLV is a bundle that includes FA, FVCO, and transit.<sup>490</sup> 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 VoB would likely render such infrastructure obsolete.
- 5.63 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 be required 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.<sup>491</sup>

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<sup>489</sup> [https://www.openeir.ie/Products/MNS/White\\_Label\\_Voice/](https://www.openeir.ie/Products/MNS/White_Label_Voice/)

<sup>490</sup> Where Eircom is interconnected with an SP, its WLV service will deliver voice calls without the need for transit. If Eircom was not interconnected with a particular SP, then it could purchase a transit service from a transit provider (or interconnect with that particular SP directly).

<sup>491</sup> 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.

- 5.64 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.
- 5.65 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. As noted at paragraph 5.13 above, sales of WLV have increased substantially since the publication of the 2015 FACO Decision as sales of CPS and SB-WLR have declined. However, ComReg notes that WLV uses upstream FACO (SB-WLR) and other wholesale inputs, which themselves fall within the FACO markets.

### Overall Preliminary View on the FACO Focal Product

- 5.66 ComReg proposes to define 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 5.22 to 5.27 above, ComReg now proposes to remove Eircom self-supply by means of Managed VoB from the focal products and, instead, to consider same at the direct constraint stage of analysis.
- 5.67 The candidate 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.

#### 5.1.2 Assessment of Direct Constraints

- 5.68 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 5.70 to 5.78 below);
- (b) Potential demand-side substitution (paragraphs 5.79 to 5.113 below); and
- (c) Potential supply-side substitution, including the self-supply of vertically-integrated SPs (see paragraphs 5.114 to 5.170 below).

5.69 ComReg's overall preliminary conclusions on the assessment of direct constraints are set out at paragraphs 5.171 to 5.172 below.

### Network coverage and effectiveness of direct and indirect constraints

5.70 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. If a candidate product does not meet Access Seeker expectations, it follows that it is unlikely to be an effective (direct or indirect) constraint, and will not be included in the relevant product market.

5.71 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, it should be borne in mind that, at the time of the 2015 FACO Decision, ComReg was in possession of insufficient evidence of Access Seekers either purchasing network access from multiple sources or providing Managed VoIP to their own RFTS end users on a self-supply basis.

5.72 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).

5.73 In support of this proposition, [redacted] noted 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.

5.74 Similarly, [redacted] <sup>492</sup> noted in its response to the IIR that:

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<sup>492</sup> [redacted]

[redacted]

[REDACTED]

[REDACTED]

[REDACTED] 493

- 5.75 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, it may be that Access Seekers are 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,<sup>494</sup> and that [REDACTED] [REDACTED] for supply of its White Label VoIP product delivered over these networks.<sup>495</sup> 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 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.
- 5.76 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.
- 5.77 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, on its own, any product with insufficient *geographic* coverage is unlikely to fall within the relevant *product* market.

<sup>493</sup> [REDACTED] [REDACTED] April 2019 IIR response to Q.19, at p.14.

<sup>494</sup> As of Q4 2019, 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.

<sup>495</sup> Eircom FTTx network coverage stood at 80% of premises as of Q4 2019, while SIRO network coverage will extend to c.21% of premises, and, as of Q4 2019, extended to [REDACTED] [REDACTED] of premises.



- 5.78 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. Accordingly, unlike the analysis set out by ComReg in the 2015 FACO Decision, ComReg is now of the preliminary 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. Accordingly, ComReg now considers that, in principle, a network which is not ubiquitous is nevertheless capable of acting as an effective constraint.

### Demand-Side Substitution

- 5.79 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 preliminary 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 coaxial access network.”<sup>496</sup>*

- 5.80 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,<sup>497</sup> and DOCSIS 3.0 CATV.
- 5.81 As set out at paragraph 4.195 above, ComReg considers on a preliminary basis 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)<sup>498</sup> 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 their CPE (e.g. modem). Each voice channel requires a bandwidth of approximately 100kbps in the uplink and downlink direction. As a result, one of the lowest NG profiles (7Mbps download, 1Mbps upload) could support up to 10 VoIP channels simultaneously, thereby supporting a Managed VoB service.

<sup>496</sup> COMMISSION RECOMMENDATION of 20 September 2010 on regulated access to Next Generation Access Networks (NGA) (Text with EEA relevance) (2010/572/EU).

<sup>497</sup> VDSL is the underlying technology in FTTC. Thus, exchange-based VDSL (eVDSL) is included within FTTC.

<sup>498</sup> Customer Premises Equipment ('CPE').



- 5.82 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 (hereafter, '**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.
- 5.83 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 [§< [REDACTED] §<]. 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.
- 5.84 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.
- 5.85 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,<sup>499</sup> 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.
- 5.86 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.

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<sup>499</sup> As set out at paragraph 7.130 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.

- 5.87 Barriers to entry to providing a VoIP platform are, in ComReg's preliminary view, relatively low in circumstances where a wholesale NG broadband service is available for the FA component. 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.
- 5.88 Migrating an existing SB-WLR customer to FACO delivered by means of Managed VoIP is a relatively straightforward process. The pre-requisite 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. There are 3 actors involved for every migration from SB-WLR:
- (a) Eircom (freeing SB-WLR number for migration, providing standalone NGA service in some cases);
  - (b) SP (provisioning Managed VoIP and, in some cases, broadband); and
  - (c) Porting XS (number porting/migration in all cases).
- 5.89 Broadband provided on the Eircom network will require a PNS<sup>500</sup> 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 telephone service). Broadband provided by the SP network will require installation prior to instigation of number porting/migration. Once broadband is present, the existing number portability process via Porting XS<sup>501</sup> is used to port/migrate the number off the Eircom network to the recipient SP network.
- 5.90 The recipient SP then needs to coordinate the 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 be able to re-use their existing POTS phone, or may require a VoIP handset.

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<sup>500</sup> 'Provide NGA Soft Migration', or 'PNS', is an order type which allows for the provision of a Standalone NGA subscription 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') (v15.0, dated 22 Jan 2020).

<sup>501</sup> Porting XS is the industry platform used to facilitate Fixed Number Portability (hereafter, 'FNP') in the State.

5.91 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 IMS 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 integrating it into its OSS and BSS systems, but much more flexibility in the product offerings which can be developed, as well as lower OPEX costs going forward.

5.92 BT<sup>502</sup> indicated that [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 to develop a bespoke VoIP platform in-house.

5.93 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 2019, 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:

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<sup>502</sup> Email from BT to ComReg, 2 September 2019.

**Table 30: Retail Managed VoB subscriptions, Q3 2015 – Q4 2019 [REDACTED]**

	Q3 2015	Q4 2019	Change
<b>Virgin Media</b>	[REDACTED] <sup>503</sup>	[REDACTED] <sup>504</sup>	[REDACTED] <sup>505</sup>
<b>Eircom</b>	[REDACTED] <sup>506</sup>	[REDACTED] <sup>507</sup>	[REDACTED] <sup>508</sup>
<b>Access Seekers</b>	[REDACTED] <sup>509</sup>	[REDACTED] <sup>510</sup>	[REDACTED] <sup>511</sup>
<b>Total</b>	[REDACTED] <sup>512</sup>	[REDACTED] <sup>513</sup>	[REDACTED] <sup>514</sup>

### Is White Label VoIP a potential Demand-Side Substitute?

- 5.94 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 WLW (which is excluded from the relevant market definition), than SB-WLR (which is the focal product). It is therefore necessary, and appropriate, to detail why ComReg is of the preliminary view that WLW falls outside the relevant product market, but White Label VoIP may fall to be included in the relevant market, even though both are end-to-end products consisting of access and origination components.
- 5.95 As set out at paragraphs 5.61 to 5.65 above, WLW is excluded from the relevant market 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 WLW 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 WLW, which suggests that WLW is positioned downstream from the Relevant FACO Markets (but upstream from RFTS).

<sup>503</sup> In the range of 350,000-375,000.

<sup>504</sup> In the range of 325,000-350,000.

<sup>505</sup> In the range of 0-25,000.

<sup>506</sup> In the range of 0-25,000.

<sup>507</sup> In the range of 50,000-75,000.

<sup>508</sup> In the range of 50,000-75,000.

<sup>509</sup> In the range of 25,000-50,000.

<sup>510</sup> In the range of 75,000-100,000.

<sup>511</sup> In the range of 50,000-75,000.

<sup>512</sup> In the range of 375,000-400,000.

<sup>513</sup> In the range of 475,000-500,000.

<sup>514</sup> In the range of 100,000-125,000.

- 5.96 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. Accordingly, there is no ‘either/or’ choice to make between White Label VoIP and such a standalone wholesale Managed VoIP FACO product delivered over NG broadband, since the latter product does not exist. The absence of such a product also implies that there is no scope to describe such a product as existing separately from, and upstream of, a downstream White Label VoIP product/market, to which it is an input.
- 5.97 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.
- 5.98 For these reasons, ComReg considers that, in the absence of a standalone wholesale Managed VoIP FACO product delivered over NG broadband, it is appropriate, from a product characteristics perspective, to conclude on a preliminary basis 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

- 5.99 According to its response to the April 2019 IIR, BT launched its White Label VoIP product in January 2019, [redacted]<sup>515</sup>  
[redacted]  
[redacted]. 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 ComReg<sup>516</sup> that its White Label VoIP can be supplied for both FTTC and FTTP platform orders.

<sup>515</sup> As of 30 September 2019, [redacted]

[redacted].

<sup>516</sup> SP responses to ComReg QKDR Q2 2019 queries - VoB wholesale and retail.

- 5.100 At this stage, it is important to note that the SSNIP test is not applied in the context of whether *any* switching would occur; rather, it is applied in the context of whether *sufficient* switching would occur, to render the SSNIP unprofitable. Subject to widespread availability, and considering any switching costs, BT is likely, on a preliminary and 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.
- 5.101 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, and should therefore be included in ComReg's assessment of BT White Label VoIP.

### Eircom White Label VoIP

- 5.102 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,<sup>517</sup> as well as a Managed VoIP product (eir SIP Voice) to its business retail customers.<sup>518</sup>
- 5.103 In the case of Managed VoB, the underlying FA element is a broadband service, 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] [REDACTED] Like BT White Label VoIP, the Eircom product is an end-to-end White Label VoIP service, rather than a FACO-only service.
- 5.104 As of Q4 2019, 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 Eircom's retail arm.<sup>522</sup>

<sup>517</sup> See <https://www.eir.ie/eirbroadbandtalk/>

<sup>518</sup> See <https://business.eir.ie/sipvoice/>

<sup>519</sup> Between 50,000 and 75,000.

<sup>520</sup> Between 0 and 25,000.

<sup>521</sup> Between 90% and 100%.

<sup>522</sup> Data contained in [REDACTED] [REDACTED], and in commercially sensitive data submitted by Eircom to ComReg.







- 5.111 White Label VoIP may be provided over both FTTC and FTTP. ComReg accordingly concludes on a preliminary basis 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 at least 80%<sup>524</sup> of premises in the State, as of Q4 2019. 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 (and on the assumption that Access Seekers buy wholesale NG broadband from NBI).
- 5.112 On the basis of intended functionality, and the extent of current and planned geographic coverage, ComReg has formed the preliminary view that the White Label VoIP products offered by BT<sup>525</sup> and Eircom are likely to act as demand-side substitutes to the focal product. For the reasons set out at paragraphs 5.100 and 5.107 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.
- 5.113 Finally, based on its extremely limited rollout and activity in this space, ComReg proposes to exclude enet White Label VoIP from the relevant markets.

### Supply-Side Substitution

- 5.114 ComReg must also consider whether any alternative products could represent an effective supply-side substitute to the focal product and the direct demand-side constraint products identified above. Supply-side substitution measures how potential (rather than actual) competitors 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.
- 5.115 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:

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<sup>524</sup> Based on Eircom network data set out at paragraph 5.220 below, and conservatively assuming 100% overlap between SIRO and Eircom networks.

<sup>525</sup> 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.

*“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.**”*

- 5.116 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.
- 5.117 Aside from the demand-side substitution possibility identified at paragraph 5.111 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

- 5.118 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.

- 5.119 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 (hereafter, 'UG')<sup>526</sup> 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.<sup>527</sup>
- 5.120 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.<sup>528</sup>
- 5.121 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 is already active in offering Managed VoIP RFTS.

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<sup>526</sup> 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.

<sup>527</sup> [https://www.openeir.ie/support/Unified\\_gateway/](https://www.openeir.ie/support/Unified_gateway/)

<sup>528</sup> The retail Customer Data Records (hereafter, 'CDRs') should correspond to the relevant wholesale invoices of the upstream wholesale SPs.

- 5.122 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]
- 5.123 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 calling platform to its existing provision of wholesale NG broadband access (WLA and/or WCA):
    - (i) Wholesale-only OAO FTTP SPs (discussed in paragraphs 5.126 to 5.134 below); and
    - (ii) SIP Trunking or Hosted PBX over leased lines (discussed in paragraphs 5.135 to 5.142 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 5.143 to 5.150 below);
    - (ii) FWA (discussed in paragraphs 5.151 to 5.157 below);
    - (iii) Very localised vertically-integrated OAO FTTP (discussed in paragraphs 5.158 to 5.164 below);
    - (iv) Mobile telephony (discussed in paragraphs 5.165 to 5.166 below); and
    - (v) RFTS SPs active in the self-supply of Managed VoB using wholesale inputs (discussed in paragraphs 5.167 to 5.170 below).

### 'Top-down' supply-side substitution using wholesale NG broadband inputs

- 5.124 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,<sup>529</sup> and, if so, whether this would act as a sufficiently effective supply-side constraint to warrant inclusion in the relevant markets.
- 5.125 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**

- 5.126 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 3.92 above, **SIRO** is currently rolling out its FTTP network to 51 locations nationwide, and, as of April 2020, had passed 320,000 premises, and accrued [redacted]<sup>530</sup> customers.<sup>531</sup> **NBI** has been awarded the contract to roll out an FTTP network within the NBP IA. 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.
- 5.127 SIRO is focussed on the rollout of its network to 51 towns nationwide, while the NBP IA is predominantly rural, and spread 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.
- 5.128 Before carrying out a detailed supply-side substitution analysis, ComReg notes that SIRO has confirmed<sup>532</sup> 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.

<sup>529</sup> It is not feasible to offer Managed VoIP over FNA, due to bandwidth, speed, capacity constraints and lack of QoS guarantees, as noted by [redacted] in its response to the April 2019 IIR.

<sup>530</sup> In the range of 25,000-50,000.

<sup>531</sup> [www.siro.ie](http://www.siro.ie). Data in ComReg's position suggest that the number of premises passed by SIRO as of Q4 2019 was [redacted].

<sup>532</sup> By means of email dated 23 April 2019.

- 5.129 As of May 2020, NBI had not yet commenced network rollout, although surveying work is underway.<sup>533</sup> 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 (hereafter, 'PIM') issued by the Department of Communications, Energy and Natural Resources,<sup>534</sup> 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 there being 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.
- 5.130 ComReg therefore forms the preliminary 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. 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).
- 5.131 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 VoIP services<sup>535</sup> 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 limited rollout of SIRO (with NBI's network rollout not yet having 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.<sup>536</sup> 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).

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<sup>533</sup> <https://nbi.ie/news/latest/2020/05/18/first-phase-of-national-broadband-plan-nbp-well-underway/>

<sup>534</sup> 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>

<sup>535</sup> Noting that Managed VoIP includes RFTS delivered in the form of Managed VoB, Hosted PBX, or SIP Trunking.

<sup>536</sup> 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/](https://www.gigaset.com/hq_en/gigaset-a540-ip-anthracite/).



- 5.132 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 5.100 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.
- 5.133 In principle, ComReg considers that the provision of FACO over SIRO (or, prospectively, 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 only part of the candidate FACO product.
- 5.134 ComReg is, therefore, of the preliminary 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 Managed VoIP-based FACO products, or, in the alternative, by SPs to self-supply Managed VoIP-based RFTS products.

**FACO delivered over Leased Line SIP Trunking and Hosted PBX**

- 5.135 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 in particular (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.<sup>537</sup> 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.

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<sup>537</sup> 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 identified as a separate wholesale market (Market 4) in the 2014 Recommendation and are currently subject to regulation by ComReg.



- 5.136 Leased lines are technically capable of supporting a range of wholesale and retail services, including RFTS and - potentially - FACO. RFTS can be provided in a product bundle over a leased line<sup>538</sup> 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 5.240.
- 5.137 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.
- 5.138 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.
- 5.139 An SP already active in the provision of RFTS by means of SIP Trunking over leased lines could potentially do so by shifting 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 would, in principle, be suitable to the needs of corporate customers with heavy data usage and RFTS requirements.
- 5.140 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 services provided over leased lines are likely, within the short to medium term, to pose an effective direct competitive constraint on the provision of HL-FACO.

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<sup>538</sup> 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').

- 5.141 This preliminary 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 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 preliminary view that insufficient switching to leased lines would occur, to render that SSNIP unprofitable:

**Table 31: Comparative cost of HL-FACO and Ethernet<sup>539</sup> leased lines, Q4 2019**

Product	Number of 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

- 5.142 Accordingly, ComReg is of the preliminary 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**

- 5.143 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.

<sup>539</sup> 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.

- 5.144 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.
- 5.145 Before carrying out a detailed supply-side substitution analysis, ComReg notes that it is not aware of plans by SPs currently active on the RFTS market offering Managed VoIP 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**

- 5.146 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.
- 5.147 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 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.
- 5.148 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.
- 5.149 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 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.

5.150 Virgin Media also stated in its April 2019 IIR Response that [REDACTED]  
[REDACTED] [REDACTED]

5.151 ComReg considers that some of these assertions are open to question, in view of the fact that none of Eircom FTTx, SIRO, or – on a forward-looking basis, NBI – have ubiquitous nationwide coverage. Thus, ComReg is not convinced that Access Seekers would be unwilling to purchase from Virgin Media on the grounds of limited network rollout alone.

5.152 ComReg’s preliminary view is, rather, 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.

5.153 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 5.255 to 5.262 below.

### **FWA**

5.154 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,<sup>540</sup> Digiweb and Imagine offer Managed VoB-based RFTS as an ‘add-on’ to their FWA broadband service.<sup>541</sup> As of Q4 2019, data provided to ComReg indicate that [REDACTED]<sup>542</sup> Managed VoB subscriptions were delivered over FWA.

5.155 Neither Imagine nor Digiweb currently offer FACO. With respect to the potential for supply-side substitution on FWA networks, ComReg notes that:

<sup>540</sup> See paragraphs 3.22 to 3.28 above.

<sup>541</sup> In addition to using FWA to provide RFTS and broadband, Imagine and Digiweb also purchase other wholesale inputs, and use these inputs to offer RFTS and retail broadband.

<sup>542</sup> In the range of 25,000 to 50,000.

- (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);
- (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 2019 stood at 51,668 subscribers.<sup>543</sup> 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 Q1 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,<sup>544</sup> and, as of April 2020, had announced the launch of this service at 195 locations nationwide.<sup>545</sup> 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 delivered over FWA would deliver RFTS by means of Managed VoB. Access Seekers would be likely to incur costs when switching to a Managed VoB-based FACO SP, as described at paragraph 5.148 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.<sup>546</sup>

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<sup>543</sup> FWA broadband subscriptions peaked at 123,456 in Q1 2008, indicating a decline of 62% since then.

<sup>544</sup> <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.

<sup>545</sup> "With 195 high-speed broadband locations already live today covering more than 800,000 homes and businesses across 32,000 townlands, communities across rural Ireland can now connect to the broadband speed they need." <https://www.imagine.ie/> accessed on 5 April 2020. This suggests total coverage of approximately 52%, given 61,098 townlands in the State.

<sup>546</sup> As set out at paragraphs 4.8, 9.8, and 9.9 of the 2018 WLA/WCA Decision.

- 5.156 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 ineffective indirect constraint at paragraphs 5.277 to 5.278 below.
- 5.157 ComReg's preliminary view is that there is unlikely to be sufficient demand from Access Seekers for an FWA-based FACO product. 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**

- 5.158 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.<sup>547</sup> Magnet offers 'Bespoke Fibre' FTTP to its business customers only, and also intends to offer retail services delivered over SIRO's network in Dublin, Galway, Limerick, Cork, Drogheda and Dundalk.<sup>548</sup> The total coverage of very localised vertically-integrated OAO FTTP networks and the take-up<sup>549</sup> 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 2019, total FTTP broadband retail subscriptions increased by over 1,000%. However, [REDACTED] currently account for 82% of these subscriptions, while [REDACTED] [REDACTED]
- 5.159 ComReg understands that no very localised vertically-integrated OAO FTTP SP 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.

<sup>547</sup> <https://digiweb.ie/gigabit-broadband-ftth/>

<sup>548</sup> <https://www.magnetnetworks.com/business/products/business-fibre/> and <https://www.techcentral.ie/magnet-networks-to-offer-fibre-broadband-in-dublin-cork-limerick-louth/>

<sup>549</sup> 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 FTTP.





- 5.163 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 the provision of RFTS by very localised vertically-integrated OAO FTTP (using self-supplied FACO inputs) amounts to an ineffective indirect constraint on the focal product at paragraphs 5.275 to 5.276 below.
- 5.164 Accordingly, ComReg's preliminary view is 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 direct constraint by means of supply-side substitution.

### **Mobile networks**

- 5.165 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,<sup>551</sup> ComReg acknowledged that, 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.
- 5.166 ComReg's preliminary view 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,<sup>552</sup> 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, WLW, 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.

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<sup>551</sup> See paragraphs 3.79 to 3.84 above.

<sup>552</sup> 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**

- 5.167 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 developed or purchased by the same RFTS SP.
- 5.168 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.
- 5.169 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.
- 5.170 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.

**Summary of Overall Preliminary Conclusions on Direct Constraints**

- 5.171 In paragraphs 5.79 to 5.166 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.

5.172 ComReg notes that Eircom and BT offer demand-side substitutes to the FACO focal product, in the form of White Label VoIP products which deliver FACO. In respect of direct supply-side substitutes, ComReg is of the preliminary 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.

### 5.1.3 Assessment of Indirect Constraints

5.173 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 supplier of third-party wholesale inputs, could potentially fall within either of the candidate Relevant FACO Markets if the SP's presence in the retail 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.

5.174 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,<sup>553</sup> 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 indirect constraints assessment therefore examines the end user's most likely response to the pass-through<sup>554</sup> of an increase in the price of FACO by Access Seekers into RFTS prices.

5.175 ComReg assesses the magnitude of possible indirect retail constraints emanating from platforms that are considered to form part of the retail 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 preliminary view in Section 4<sup>555</sup> 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.

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<sup>553</sup> 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.

<sup>554</sup> 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.

<sup>555</sup> See paragraphs 4.242 to 4.289 above.

- 5.176 In line with EC guidance<sup>556</sup> on the assessment of indirect retail substitution effects arising from a SSNIP by a HM at wholesale level, 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,<sup>557</sup> 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 5.179 to 5.201 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 5.202 to 5.277 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 5.279 to 5.286 below).
- 5.177 ComReg summarises the preliminary conclusions of its assessment of indirect retail substitution effects at paragraphs 5.288 to 5.290 below.
- 5.178 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 captured and considered.<sup>558</sup>

### **Criterion (a): How would a SSNIP of FACO likely impact the RFTS market?**

- 5.179 The assessment of indirect constraints is concerned with determining the likely impact of a 5% to 10% SSNIP of FACO on the downstream retail price 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.

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<sup>556</sup> See p.47-48 of the 2014 Explanatory Note, and cases NL/2005/281, UK/2007/0733, ES/2008/805, PT/2008/85.

<sup>557</sup> This is the wholesale price as a proportion of the overall retail price.

<sup>558</sup> 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.

- 5.180 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 retail 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 to a competitor. Alternatively, if an SP decided to absorb the FACO price increase, this would represent a cost to the SP.
- 5.181 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 Seekers 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.
- 5.182 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.<sup>559</sup> This is because an Access Seeker active on a less than fully competitive market is likely to be earning supernormal profits, and would be therefore able to absorb increased input costs, while still earning a (smaller) profit. In such circumstances, the strength of the indirect constraint may be less potent, 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.

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<sup>559</sup> 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.

- 5.183 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 in paragraph 5.176 above for assessing indirect constraints.
- 5.184 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

- 5.185 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.
- 5.186 Where SPs only offer RFTS as part of a bundle, it may not be possible to be definitive about the retail 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.



- 5.187 As noted in Section 3, the 2019 Residential Market Research and SME Market Research indicated that households and businesses appear to have low levels of awareness of costs, but are nonetheless primarily concerned with the overall cost of the package or bundle which includes RFTS, rather than the prices of the individual components.<sup>560</sup> End users are more likely to be aware of, and to alter their behaviour in response to, an increase in their overall bill, rather than to changes in individual components, such as the price of RFTS. Accordingly, to predict the impact of a SSNIP of FACO on RFTS demand, ComReg has estimated the percentage change in the price of an average RFTS package or bundle resulting from a SSNIP of LL-FACO or HL-FACO.
- 5.188 ComReg calculates the margin between the wholesale prices of LL-FACO and HL-FACO, and downstream RFTS prices, based on the following proxy values:
- (a) A notional **retail price** based on an estimated average monthly spend for a package or bundle which includes RFTS<sup>561</sup> (which may also contain other services, such as broadband, TV, or mobile telephony); and
  - (b) A notional estimate of the **FACO costs** that would be incurred by an SP to provide the average RFTS package or bundle (given that only FACO costs would be included in the hypothetical SSNIP). In this respect, the FACO price is made up of two components:
    - (i) The variable FVCO price related to the call origination element of SB-WLR being, for the purpose of this analysis, an average weighted per-minute call price multiplied by the average number of call minutes purchased by the retail end user, plus a per-call set-up fee, where appropriate; and
    - (ii) The fixed monthly WLR price related to the line rental element of SB-WLR that is associated with LL-FACO (PSTN or ISDN BRA) and HL-FACO (ISDN FRA or ISDN PRA).

<sup>560</sup> 2019 Residential Market Research slides 32 to 44 and 2019 SME Market Research slides 37 to 51.

<sup>561</sup> As noted in paragraphs 3.99 to 3.103, RFTS is increasingly sold as part of a broader bundle. As at Q4 2019, 17.7% of RFTS purchases were on a standalone basis, and RFTS purchased as part of a bundle accounted for the remaining 82.3%. For the purpose of calculating a notional retail price, ComReg estimates a notional average monthly spend based on the prices published for a range of RFTS bundles and packages offered by [redacted]. [redacted] predominantly sell RFTS as part of a bundle of services, rather than on a standalone basis. In this respect, based on Q4 2019 data, the proportion of RFTS subscriptions on a standalone basis, and on dual and triple play bundles for [redacted] were 1%, 11% and 89%, and 31%, 61%, and 8% respectively. The tendency for end users to purchase RFTS as part of a bundle suggests that the notional retail price should be weighted towards the price of a bundled, rather than a standalone, RFTS product.



- 5.189 ComReg uses the regulated prices for FVCO and WLR as a proxy for cost in a competitive market outcome.<sup>562</sup> 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:<sup>563</sup>

**Table 33: Eircom FVCO Charges, November 2019**

Charging Level	Cent Per Minute			Cent Per Call		
	Peak	Off-Peak	Weekend	Peak	Off-Peak	Weekend
<b>Primary</b>	0.2344	0.1301	0.1144	0.6660	0.3689	0.3231
<b>Tandem</b>	0.3398	0.1877	0.1645	0.7362	0.4073	0.3565
<b>Double-Tandem</b>	0.4194	0.2320	0.2030	0.7694	0.4255	0.3727

- 5.190 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.
- 5.191 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, April 2020**

WLR Service	Monthly Wholesale Rental Charge
<b>PSTN</b>	€16.59 to June 2020
<b>PSTN</b>	€16.82 from July 2020
<b>ISDN BRA</b>	€27.95
<b>ISDN FRA</b>	€143.18
<b>ISDN PRA</b>	€238.25

- 5.192 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 the weighted average price for the WLR elements of LL-FACO is **€17.61** per month to June 2020, and **€17.82** thereafter.<sup>564</sup>

<sup>562</sup> 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 preliminary view, likely be above cost.

<sup>563</sup> These rates have been taken from [Eircom's RIO Price List](#), version 14.0, dated 9 March 2020.

<sup>564</sup> 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  $(€16.82 * 91\%) + (€27.95 * 9\%) = €17.82$  from July 2020.

- 5.193 Based on Q4 2019 data, typical residential users are estimated to purchase 76 call minutes per month.<sup>565</sup> 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).<sup>566</sup> Taking this weighted average FVCO price,<sup>567</sup> the 76 call minutes purchased by the typical residential end user would result in a notional FVCO charge of €0.30.
- 5.194 Combining the above two LL-FACO elements would result in an average notional LL-FACO monthly cost for SB-WLR of €17.91 to June 2020, rising to €18.12 thereafter. According to ComReg's 2017 *Ireland Communicates* consumer survey,<sup>568</sup> 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 27.55%, rising to 27.88%.<sup>569</sup>
- 5.195 Purchasing HL-FACO normally involves the rental of a wholesale ISDN FRA or ISDN PRA line (priced 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 **€14.48** per month.<sup>570</sup>

<sup>565</sup> Per Figure 2.3.3 in ComReg's Quarterly Key Data Report for Q4 2019.

<sup>566</sup> 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](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.

<sup>567</sup> 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.

<sup>568</sup> Ireland Communicates Consumer Survey 2017 (ComReg 18/23), slide 17. Available online at <https://www.comreg.ie/publication/ireland-communicates-survey-sme-consumer/>

<sup>569</sup> Calculated as €17.91/€65, rising to €18.12/€65.

<sup>570</sup> 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 2019: (€143.18 \* 25%) + (€238.25 \* 75%) = €214.48.

- 5.196 Based on Q4 2019 data from the Quarterly Key Data Report, typical business users are estimated to consume 513 call minutes per month.<sup>571</sup> Taking the same weighted average FVCO price of 0.4c per minute identified above,<sup>572</sup> the 513 call minutes would result in a notional FVCO charge of €2.05.
- 5.197 Combining the above two elements would result in an average HL-FACO monthly cost for SB-WLR of €216.53. Based on the data available to ComReg,<sup>573</sup> 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 54.27%.<sup>574</sup>
- 5.198 The HL Price-Cost Ratio (54.27%) and LL Price-Cost Ratio (27.55%, rising to 28.89%) 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 retail prices that would occur in response to the pass-through of a SSNIP in FACO.
- 5.199 In this respect, the approximate dilution effects for LL-FACO and HL-FACO are set out in Table 35 below. ComReg estimates that:
- (a) A SSNIP in LL-FACO would translate into approximate retail price increases of between 1% to 4% for a SSNIP of 5% and 10% SSNIP respectively; and
  - (b) A SSNIP in HL-FACO would translate into approximate retail price increases of between 2.5% to 5% for a SSNIP of 5% and 10% respectively:

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<sup>571</sup> Per Figure 2.3.2 in ComReg's Quarterly Key Data Report for Q4 2019.

<sup>572</sup> 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.

<sup>573</sup> 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.

<sup>574</sup> Calculated as  $(€216.53/€398.98)*100$ .

**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 € <sup>575</sup>	% Retail Price Increase
LL-FACO	€17.91	5%	€0.90	27.55%	€65	€1.09	1.69%
		10%	€1.79			€2.20	3.39%
LL-FACO	€18.12	5%	€0.91	28.89%	€65	€1.11	1.71%
		10%	€1.81			€2.23	3.43%
HL-FACO	€216.53	5%	€10.83	54.27%	€398.98	€10.83	2.71%
		10%	€21.65			€21.65	5.43%

- 5.200 As noted in paragraphs 5.180 to 5.183 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 makes the assumption 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 FACO Markets arising from the pass-through of a FACO price increase into RFTS.
- 5.201 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?**

- 5.202 The EC's *second criterion* notes the need to establish whether there would be sufficient demand substitution at the retail level to render a wholesale SSNIP by a HM unprofitable.

<sup>575</sup> ComReg has applied a VAT rate of 23% to the pass-through of the wholesale price increase to LL-FACO only, although it is recognised that 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 only likely to be utilised by businesses which can be 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.

- 5.203 The threshold at which changes in retail demand may undermine the profitability of a SSNIP is calculated using the Critical Loss Test (hereafter, '**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 (hereafter, '**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 is greater than the CLV, then that product may be considered to belong to the same relevant market.
- 5.204 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 Consultation, is by no means determinative in and of itself, and is considered by ComReg alongside other evidence.
- 5.205 ComReg has estimated CLVs associated with SSNIP amounts of 5% and 10% for Eircom LL-FACO and HL-FACO in Annex: 7 of this Consultation. The CLT estimates that:
- (a) At a 5% SSNIP of FACO, the CLV is likely to be c.11-12% for WLR; and
  - (b) At a 10% SSNIP of FACO, the CLV is likely to be c.18-22% for WLR.
- 5.206 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.
- 5.207 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 5.183 above.
- 5.208 As set out at paragraph 5.200 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 5.183 and Table 35 above suggest that wholesale price increases result in a proportionately lower price increase at the retail level.

- 5.209 As set out at paragraph 5.198, the HL-FACO Price-Cost Ratio is calculated as 54.27%, and the LL-FACO Price-Cost Ratio is calculated as 27.55%, rising to 28.89%. 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%.
- 5.210 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 2019, 526,115 RFTS access paths were provided on the basis of FACO access paths (both Eircom SB-WLR and WLV, which itself uses SB-WLR as an input).<sup>576</sup> This accounts for approximately 43% 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.
- 5.211 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,<sup>577</sup> and preferences around other aspects of an RFTS package or bundle that cause inertia (for example, regarding choice of broadband provider).<sup>578</sup>
- 5.212 As discussed in Section 3,<sup>579</sup> respondents to the 2019 Market Research reported low awareness of specific call costs, but greater awareness of the overall cost of RFTS packages or bundles.<sup>580</sup> This is likely to shape the potential response of consumers to price changes resulting from a SSNIP of FACO.

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<sup>576</sup> See Table 49 below.

<sup>577</sup> 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.

<sup>578</sup> The factors affecting sensitivity to changes in RFTS prices are noted at paragraphs 4.80 to 4.90 above.

<sup>579</sup> 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 preliminary 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.

<sup>580</sup> However, respondents also ranked the cost of making calls, or in 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.



- 5.213 The 2019 Residential Market Research reported that there is a relatively low incidence of churn between RFTS SPs, with 10%<sup>581</sup> 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 consumers (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).
- 5.214 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, respondents' reported behavioural changes in response to €2 and €4 price increases remain informative to the indirect constraints assessment.
- 5.215 The most frequently-reported residential consumer 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.
- 5.216 The most frequently-reported residential consumer 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.
- 5.217 Having regard to the above responses and other relevant 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.

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<sup>581</sup> 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.



### RFTS provided using wholesale NG broadband inputs

- 5.218 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 FVCO component. This sub-section 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.
- 5.219 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;<sup>582</sup>
  - (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 prospective and forward-looking basis - NBI) on their own networks.

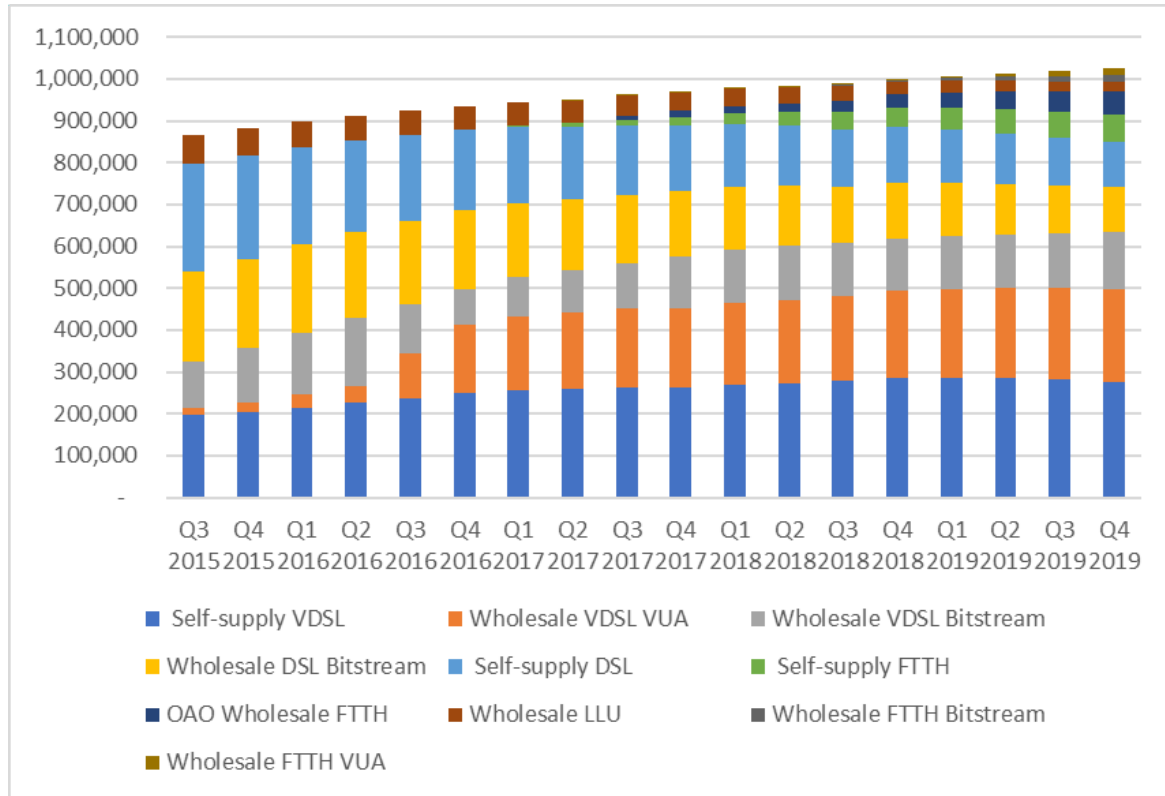
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<sup>582</sup> ComReg Decision D10/18: Market Review - Wholesale Local Access (WLA) provided at a Fixed Location Wholesale Central Access (WCA) provided at a Fixed Location for Mass Market Products - Response to Consultation and Decision (the '2018 WLA/WCA Decision').

**Eircom FTTx inputs**

5.220 By Q1 2020, Eircom had rolled out its FTTx network to 1.9 million premises. Thus, Eircom FTTx capable of delivering Managed VoIP passed 80% of premises in the State in Q1 2020.<sup>583</sup> 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 2019, the total number of Eircom wholesale broadband lines was 489,032.<sup>584</sup> 357,135, or 73%, of these lines are FTTx, split between WLA VUA (62%) and WCA Bitstream Plus (38%). 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 37 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:

**Figure 37: Eircom wholesale and self-supply lines, Q3 2015 – Q4 2019**



<sup>583</sup>

[https://www.eir.ie/opencms/export/sites/default/.content/pdf/IR/news/eir\\_Q3\\_FY20\\_Results\\_Press\\_Release.pdf](https://www.eir.ie/opencms/export/sites/default/.content/pdf/IR/news/eir_Q3_FY20_Results_Press_Release.pdf)

<sup>584</sup> Calculated as sum of Wholesale DSL Bitstream Lines, Total LLU lines, Wholesale VDSL Bitstream lines, and VULA lines reported in QKDR.

- 5.221 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 6% 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.<sup>585</sup>
- 5.222 Overall, purchases by Access Seekers of indirect access paths (WLV, CPS and SB-WLR) from Eircom have been trending downwards, and have fallen 9% since their Q2 2016 peak, compared to Q4 2019. 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 181% since the 2015 FACO Decision, largely due to strong growth in VUA.
- 5.223 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.
- 5.224 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***

- 5.225 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.<sup>586</sup> 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.

<sup>585</sup> These data are presented at Table 2, Table 8, Table 9, Table 10, Table 30, Table 36, Table 37, and Table 42, and Figure 3, Figure 10, Figure 11, Figure 20, Figure 21, Figure 22, Figure 28, Figure 29, Figure 36, and Figure 37.

<sup>586</sup> 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.

- 5.226 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.
- 5.227 QKDR data indicates that Eircom (standalone and POTS-based) VUA has grown from [REDACTED] lines in Q3 2015, to [REDACTED] by Q4 2019 (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 the growth in merchant market POTS-based and standalone VUA since the 2015 FACO Decision:

**Table 36: Eircom Wholesale VUA Lines, Q3 2015 – Q4 2019 [REDACTED]**

	Standalone	POTS-based	Total
<b>September 2015</b>	[REDACTED] <sup>587</sup>	[REDACTED] <sup>588</sup>	[REDACTED] <sup>589</sup>
<b>December 2019</b>	[REDACTED] <sup>590</sup>	[REDACTED] <sup>591</sup>	[REDACTED] <sup>592</sup>

- 5.228 Growth in VUA has been significant over the time period in question, although, in the case of standalone VUA, [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.<sup>593</sup>
- 5.229 In respect of Bitstream Plus, Eircom WCA Bitstream Plus rose from [REDACTED] lines, as of September 2015, to [REDACTED] by December 2019. 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 a standalone retail broadband connection 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 2019:

<sup>587</sup> In the range of 0-25,000.

<sup>588</sup> In the range of 0-25,000.

<sup>589</sup> In the range of 0-25,000.

<sup>590</sup> In the range of 75,000-100,000.

<sup>591</sup> In the range of 125,000-150,000.

<sup>592</sup> In the range of 225,000-250,000.

<sup>593</sup> These data are based on SP returns provided confidentially to ComReg.

**Table 37: Eircom Wholesale NGA Bitstream Lines, December 2019 [REDACTED]**

	Standalone	POTS-based	Total
September 2015	[REDACTED] <sup>594</sup>	[REDACTED] <sup>595</sup>	[REDACTED] <sup>596</sup>
September 2019	[REDACTED] <sup>597</sup>	[REDACTED] <sup>598</sup>	[REDACTED] <sup>599</sup>
% change	[REDACTED] <sup>600</sup>	[REDACTED] <sup>601</sup>	[REDACTED] <sup>602</sup>

- 5.230 Compared to VUA, growth in Bitstream Plus has been much more modest, and both standalone and POTS-based VUA have now outstripped their Bitstream counterparts. Standalone Bitstream (including FTTP) now stands at 93% of POTS-based Bitstream Plus lines.
- 5.231 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.<sup>603</sup> 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 Collaborate<sup>604</sup> (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 quality<sup>605</sup> to support the provision of RFTS by means of Managed VoIP, which is, in principle, capable of exercising an indirect retail constraint on the focal product.
- 5.232 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.

<sup>594</sup> In the range of 0-50,000.

<sup>595</sup> In the range of 50,000-75,000.

<sup>596</sup> In the range of 100,000-125,000.

<sup>597</sup> In the range of 75,000-100,000.

<sup>598</sup> In the range of 75,000-100,000.

<sup>599</sup> In the range of 150,000-175,000.

<sup>600</sup> In the range of 60-70%.

<sup>601</sup> In the range of 20-30%.

<sup>602</sup> In the range of 30-40%.

<sup>603</sup> As set out in further detail in the 2018 WLA/WCA Decision.

<sup>604</sup> [https://business.eir.ie/media/eir\\_Collaborate\\_Schedule\\_to\\_Master\\_Terms.pdf](https://business.eir.ie/media/eir_Collaborate_Schedule_to_Master_Terms.pdf)

<sup>605</sup> This includes bandwidth, QoS, jitter, latency etc.

***SIRO and NBI FTTP inputs***

- 5.233 SIRO has indicated that, over the course of this market review period, its FTTP network will eventually pass 450,000 premises<sup>606</sup> (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 540,000 premises.<sup>607</sup> 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.
- 5.234 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 of this constraint is likely to be contingent on the coverage of SIRO and NBI networks.
- 5.235 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.
- 5.236 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.

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<sup>606</sup>

[https://www.oireachtas.ie/ga/debates/debate/joint\\_committee\\_on\\_communications\\_climate\\_action\\_and\\_environment/2019-06-26/2/](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 June 2020, the revised 450,000 premises target has not yet been reached - <https://www.dccae.gov.ie/documents/DCCAE%20Brochure%206pg%20DL%20NBP%20What%20is%20WEB.pdf>

<sup>607</sup> <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**

- 5.237 Data from ComReg's QKDR record 499,813 Managed VoIP subscriptions as of Q4 2019, an increase of 28% from the equivalent figure at the time of the 2015 FACO Decision. Managed VoIP subscriptions now account for approximately 35% 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 9 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.
- 5.238 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.
- 5.239 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. No information is yet available on retail packages to be offered by SPs using the NBI network. However, 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 Co. Wexford).<sup>608</sup> 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.

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<sup>608</sup> Sky, Vodafone, Digiweb, Carnsore Broadband, Kerry Broadband, Pure Telecom, Rocket Broadband, Westnet, Airwire, Magnet, Nova, Viatel and BlackKnight.



### RFTS delivered over Leased Lines by means of SIP Trunking or Hosted PBX

- 5.240 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 (hereafter, 'PRI') or analogue line.
- 5.241 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.
- 5.242 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.
- 5.243 [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.
- 5.244 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.

- 5.245 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.<sup>609</sup> 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.
- 5.246 This suggests that, in response to a SSNIP of ISDN FRA or ISDN 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 associated with those services.
- 5.247 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 is capable of being delivered over leased lines) switching to HL-FACO.
- 5.248 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.

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<sup>609</sup> 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.

**Barriers to, and disincentives to, switching**

- 5.249 Furthermore, switching between leased lines and ISDN FRA and ISDN PRA is likely to be inhibited for a number of reasons.
- 5.250 **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.
- 5.251 **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 5.243 above.
- 5.252 **Thirdly**, the provision of higher capacity, NG Ethernet leased lines is growing, but the provision of lower capacity CG 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.
- 5.253 **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.
- 5.254 Accordingly, ComReg’s preliminary view 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**

- 5.255 In Section 4,<sup>610</sup> 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 steady over the lifetime of the current FACO market review, at approximately 24% of all RFTS subscriptions, as at Q4 2019.

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<sup>610</sup> See paragraphs 4.195 to 4.239.

- 5.256 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.
- 5.257 The magnitude of any competitive constraint posed by CATV in the RFTS market will be diluted on the FACO Markets, as discussed at paragraph 5.183 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.
- 5.258 **Firstly**, as noted previously,<sup>611</sup> as of Q4 2019, Virgin Media's CATV network is capable of providing RFTS to approximately 39% of premises in Ireland (939,900 premises),<sup>612</sup> largely in urban areas. Accordingly, a significant proportion of RFTS end users affected by a SSNIP of FACO 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 is not present to act as a potential indirect retail constraint at those locations.
- 5.259 **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 bundle<sup>613</sup> is substantially more expensive than equivalent standalone RFTS products provided by Eircom or Access Seekers on the basis of FACO inputs.<sup>614</sup> 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 18% in the period Q3 2015 to Q4 2019, it remains non-trivial, but is likely, over the lifetime of this market review, to continue to decline.

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<sup>611</sup> See paragraph 3.54 above.

<sup>612</sup> Liberty Global Q4 2019 Fixed Income Release, at p.15.

<sup>613</sup> Naked 250Mb + World Talk Home Phone, at €59 per month after promotional period, as of 6 April 2020.

<sup>614</sup> For example, eir's Anytime Landline, at €49.98 per month, as of 20 May 2020. Over a 12-month period, the Virgin Media package is 13.05% more expensive than the Eircom standalone product.

- 5.260 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 (82% as of Q4 2019) who could potentially be willing to switch to a bundle including RFTS provided over Virgin Media, in response to the pass-through of a FACO SSNIP, 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.
- 5.261 **Thirdly**, Virgin Media's network coverage is primarily residential. It provides RFTS predominantly to residential end users, with minimal provision of RFTS to businesses.<sup>615</sup>
- 5.262 ComReg's preliminary view 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 proposes to include the self-supply of Virgin Media CATV-based RFTS within the candidate LL-FACO market, given its likely potential to exert a sufficient degree of indirect constraint on products identified as falling into the LL-FACO market. On the contrary, ComReg proposes to exclude the self-supply of Virgin Media CATV-based RFTS from the candidate HL-FACO market, given that Virgin Media has a minimal presence on this market, and that it is focussed substantially on its residential business.
- 5.263 Accordingly, ComReg's preliminary view 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.

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<sup>615</sup> This is borne out by Virgin Media's response to the April 2019 IIR, in which it states that [redacted] [redacted].

## Mobile Telephony Services

- 5.264 In Section 4,<sup>616</sup> in the context of its retail market assessment, ComReg set out its preliminary view 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.
- 5.265 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, therefore, WLR, and also RFVC and, therefore, FVCO.
- 5.266 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.
- 5.267 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 RFVC – and, therefore, FVCO - demand could potentially be off-set by the extra profitability of the SSNIP in the WLR element.
- 5.268 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.
- 5.269 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,<sup>617</sup> particularly in response to a retail price increase of between 2.5% and 5%.

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<sup>616</sup> See paragraphs 4.242 to 4.289.

<sup>617</sup> For example, it does not appear possible, as of 09 June 2020, to purchase a broadband and TV only bundle from Virgin Media, with no RFTS component.



- 5.270 As noted above at paragraph 4.249, 2018 Eurobarometer data indicated that 55% of households retained RFTS, with 94% of households having a MTS.
- 5.271 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.<sup>618</sup>
- 5.272 Respondents to the 2019 Residential Market Research<sup>619</sup> were asked to consider how they would respond to a €2 or €4 increase in their RFTS, with 41% of respondents stating that they would or reduce usage of RFTS, and instead use their mobile phone more frequently to make calls or send text messages.
- 5.273 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 5.205 above.
- 5.274 ComReg's preliminary view is that retail MTS is not likely to exert a sufficiently effective indirect constraint, such that it warrants inclusion in the FACO Markets.

#### **RFTS delivered over very localised FTTP networks**

- 5.275 ComReg's preliminary view – set out at paragraph 5.164 above – was 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.
- 5.276 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 candidate 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 on a preliminary basis 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.

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<sup>618</sup> 2019 SME Market Research, slide 8.

<sup>619</sup> At slide 98.



## RFTS delivered over FWA

- 5.277 In Section 4<sup>620</sup> ComReg considered whether RFTS provided over FWA would be likely to fall within the RFTS market and set out its preliminary view that it would not. The coverage and use of RFTS provided over FWA is substantially less than coverage over other networks. 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 preliminary conclusion with respect to RFTS provided over FWA.
- 5.278 Moreover, demand for broadband has remained largely unchanged since Q3 2014, as set out at paragraph 3.22 above, and at Q4 2019, FWA accounted for less than 3% of business or residential broadband subscriptions. As a platform for the potential delivery of RFTS, FWA appears to service a very small proportion of overall RFTS demand, and this is likely to dampen demand for RFTS and, therefore, demand for FACO provided over FWA.

### Criterion (c): Would the strength of indirect constraints be weakened by RFTS end users switching to Eircom's own retail arm?

- 5.279 ComReg now considers the EC's *third criterion*, as identified in paragraph 5.176, 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.
- 5.280 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.
- 5.281 Having regard to the Modified Greenfield Approach ('**MGA**'), absent regulation, a vertically-integrated HM supplier of FACO over a widespread or ubiquitous network would likely have incentives to at least hold its own RFTS prices constant<sup>621</sup> to attract as many retail end users as possible who switch away from Access Seekers whose services are based on SB-WLR, following a SSNIP.

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<sup>620</sup> See paragraphs 4.195 to 4.201 above.

<sup>621</sup> Although it is possible that it could increase prices for less price sensitive customers and decrease prices for more price sensitive customers.

5.282 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 inputs.

5.283 Even in the presence of SB-WLR regulation, as of Q4 2019, according to the QKDR, Eircom's RFTS market share is 39%, while Virgin Media's is 24.3%. The provision of RFTS by Vodafone, Sky, Pure, Digiweb, and BT (to large retail customers only) involves a mixture of FNA and NG broadband inputs. Accordingly, if a hypothetical monopolist 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 hypothetical monopolist. 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 purchasing RFTS on a bundled or standalone basis.

5.284 Section 5.1.4 below considers 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.

- 5.285 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,<sup>622</sup> 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.
- 5.286 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.<sup>623</sup> 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.
- 5.287 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

- 5.288 In paragraphs 5.173 to 5.287 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, as well as MTS. ComReg is of the preliminary 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.

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<sup>622</sup> 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.

<sup>623</sup> ComReg notes that some costs associated with the provision of FACO would no longer be incurred, while some additional retail costs would be incurred.

- 5.289 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.
- 5.290 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.

#### 5.1.4 Access Seeker alternatives to FACO

- 5.291 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?

- 5.292 According to the Q4 2019 QKDR, Eircom merchant market FACO (that is, SB-WLR, and WLV, to which SB-WLR is an upstream input) accounts for **43%** 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 **57%** (with CPS accounting for the remaining <1%). According to the QKDR, as of Q4 2019, Eircom sold 267,278 SB-WLR access paths, and 258,837 WLV access paths, totalling 526,115 access paths.
- 5.293 Data available to ComReg indicate that **over 99.5%** 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 **0.5%** of merchant market FACO sales occur on the **HL-FACO market**.<sup>624</sup>

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<sup>624</sup> While ComReg's QKDR reports access path statistics, other relevant market data provided to ComReg on a confidential and commercially sensitive basis provides figures based on the lines per SP, not access paths.

## SB-WLR

- 5.294 As set out below, Table 38 and Table 39 outline, as at January 2020, the primary purchasers of SB-WLR from Eircom (measured by lines, rather than access paths) on the candidate 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.
- 5.295 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]:

**Table 38: Purchases of SB-WLR lines (LL-FACO), January 2020 [X PARTIALLY REDACTED X]**

	SB-WLR	
	LL-FACO	VoIP Capability (if any)
<b>Number of lines</b>	[X █████ X] <sup>625</sup>	
<b>BT</b>	[X █████ X] <sup>626</sup>	White Label VoIP
<b>Magnet</b>	[X █████ X] <sup>627</sup>	Managed VoIP to businesses
<b>Digiweb</b>	[X █████ X] <sup>628</sup>	Virtual PBX to business end users
<b>OAOs</b>	[X █████ X] <sup>629</sup>	N/A

<sup>625</sup> In the range of 90-100%.

<sup>626</sup> In the range of 90-100%.

<sup>627</sup> In the range of 0-10%.

<sup>628</sup> In the range of 0-10%.

<sup>629</sup> In the range of 0-10%.

**Table 39: Purchases of SB-WLR (HL-FACO), January 2020 [PARTIALLY REDACTED]**

	SB-WLR	
	HL-FACO	VoIP Capability (if any)
<b>Number of lines</b>	[REDACTED] <sup>630</sup>	
<b>BT</b>	[REDACTED] <sup>631</sup>	White Label VoIP
<b>Magnet</b>	[REDACTED] <sup>632</sup>	Managed VoIP to business end users
<b>Digiweb</b>	[REDACTED] <sup>633</sup>	Virtual PBX to business end users
<b>Virgin Media</b>	[REDACTED] <sup>634</sup>	Self-supplies Managed VoB RFTS to residential end users, and SIP Trunking over leased lines to business users
<b>Telcom</b>	[REDACTED] <sup>635</sup>	Managed VoIP & SIP Trunking to businesses
<b>Vodafone</b>	[REDACTED] <sup>636</sup>	Managed VoIP RFTS on own FVCO platform
<b>OAOs</b>	[REDACTED] <sup>637</sup>	N/A

### White Label Voice (WLV)

5.296 As set out below, Table 40 and Table 41 outline WLV purchasers from Eircom, as at January 2020. Vodafone accounts for the majority of WLV purchases, which it uses as an input to its delivery of RFTS to its own subscribers:

<sup>630</sup> In the range of 0-10%.

<sup>631</sup> In the range of 40-50%.

<sup>632</sup> In the range of 20-30%.

<sup>633</sup> In the range of 0-10%

<sup>634</sup> In the range of 0-10%.

<sup>635</sup> In the range of 0-10%.

<sup>636</sup> In the range of 0-10%.

<sup>637</sup> In the range of 0-10%.

**Table 40: Purchases of White Label Voice (Low-Level), January 2020 [REDACTED]**

White Label Voice (Low-Level)		
	Low-Level	VoIP Capability (if any)
Number of lines	[REDACTED]	[REDACTED] <sup>638</sup>
Vodafone	[REDACTED] <sup>639</sup>	Offers Managed VoB RFTS on its own FVCO platform
Pure Telecom	[REDACTED] <sup>640</sup>	Offers Managed VoIP based on wholesale inputs
Three	[REDACTED] <sup>641</sup>	Managed VoIP to business customers by agreement with Blueface
IFA Telecom	[REDACTED] <sup>642</sup>	[REDACTED]
MinuteBuyer	[REDACTED] <sup>643</sup>	N/A

**Table 41: Purchases of White Label Voice (High-Level), January 2020 [REDACTED]**

White Label Voice		
	High-Level	VoIP Capability (if any)
Number of lines	[REDACTED]	[REDACTED] <sup>644</sup>
Vodafone	[REDACTED] <sup>645</sup>	Offers Managed VoB RFTS on its own FVCO platform
Pure Telecom	[REDACTED] <sup>646</sup>	Offers Managed VoIP based on wholesale inputs
Three	[REDACTED] <sup>647</sup>	Managed VoIP to business customers by agreement with Blueface
OAOs	[REDACTED] <sup>648</sup>	N/A

5.297 Vodafone accounts for slightly 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 slightly over [REDACTED] of purchases on both markets.

<sup>638</sup> In the range of 90-100%.

<sup>639</sup> In the range of 60-70%.

<sup>640</sup> In the range of 20-30%.

<sup>641</sup> In the range of 10-20%.

<sup>642</sup> In the range of 0-10%.

<sup>643</sup> In the range of 0-10%.

<sup>644</sup> In the range of 0-10%.

<sup>645</sup> In the range of 60-70%.

<sup>646</sup> In the range of 0-10%.

<sup>647</sup> In the range of 20-30%.

<sup>648</sup> In the range of 0-10%.



5.298 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 - 88% of purchases of lines on the LL-FACO market (which itself accounts for 99.5% of FACO purchases) are accounted for by three Access Seekers - BT, at [X ██████████ X], Vodafone, at [X ██████████ X], and Pure Telecom, at [X ██████████ X]. Similarly, 77% of purchases of lines on the HL-FACO market (which accounts for 0.5% of FACO purchases) are accounted for by three Access Seekers - BT, at [X ██████████ X], Vodafone, at [X ██████████ X], and Three, at [X ██████████ X].

### What alternatives are available to FACO Access Seekers?

5.299 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
  - (ii) secure FA by purchasing merchant market WLA<sup>649</sup> or WCA.<sup>650</sup>

5.300 Virgin Media does not, and is unlikely to over the lifetime of this market review, provide merchant market FA, while, as of May 2020, NBI is engaged in surveying work, but has not yet commenced installing infrastructure.<sup>651</sup> 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.

<sup>649</sup> Including, as set out in the 2018 WLA/WCA Decision, LLU, Sub-loop unbundling, Line Share and VUA.

<sup>650</sup> Including, as set out in the 2018 WLA/WCA Decision, Current Generation and Next Generation Bitstream.

<sup>651</sup> <https://nbi.ie/news/latest/2020/05/18/first-phase-of-national-broadband-plan-nbp-well-underway/>

- 5.301 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.
- 5.302 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. The Decision concluded that, on the Urban WCA Market, sufficient competitive constraints existed to render regulation unnecessary.
- 5.303 Accordingly, in response to the withdrawal of, or a SSNIP of, FACO, an Access Seeker could seek to procure FA (VUA or Bitstream Plus) together with its own FVCO platform, or procure 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.
- 5.304 In most of the scenarios set out above, it will only be possible to purchase FA or White Label VoIP where NG broadband is present. Eircom NG broadband capable of delivering Managed VoIP, which delivers Eircom and BT wholesale services, passed approximately 80% of premises in 1,159 EAs (at any level of coverage) as of Q4 2019, while as at Q4 2019, SIRO is present in 120 EAs.

- 5.305 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.
- 5.306 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 2019**

	2015 Q3	2019 Q4	% change
LLU lines	68,262	22,861	-67%
VUA lines (excl. FTTP VUA)	17,170	222,706	1,197%
<b>WLA lines (LLU and VUA)</b>	<b>85,432</b>	<b>245,567</b>	<b>187%</b>
CG Bitstream	216,941	109,036	-50%
Bitstream Plus (excl. FTTP)	110,106	134,429	22%
<b>WCA lines</b>	<b>327,047</b>	<b>243,465</b>	<b>-26%</b>
<b>CG as % of WLA</b>	80%	9%	-88%
<b>CG as % of WCA</b>	66%	45%	-32%

- 5.307 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.
- 5.308 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.
- 5.309 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

- 5.310 Eircom has recently launched a White Label VoIP product. ComReg concludes on a preliminary basis that this product 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.
- 5.311 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.
- 5.312 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 Eircom White Label VoIP. 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 it would be likely that Eircom would also withdraw provision of White Label VoIP as, otherwise, Access Seekers would continue to have FA over which RFTS would be provided.
- 5.313 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 provides White Label VoIP, and its incentives to do so may be contingent on what other outside options are available to Access Seekers.
- 5.314 However, this is of largely academic interest, given that, as of Q1 2020, Eircom supply of White Label VoIP to [REDACTED] [REDACTED]<sup>652</sup>

### Which Access Seekers are capable of procuring alternative FACO inputs?

- 5.315 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.

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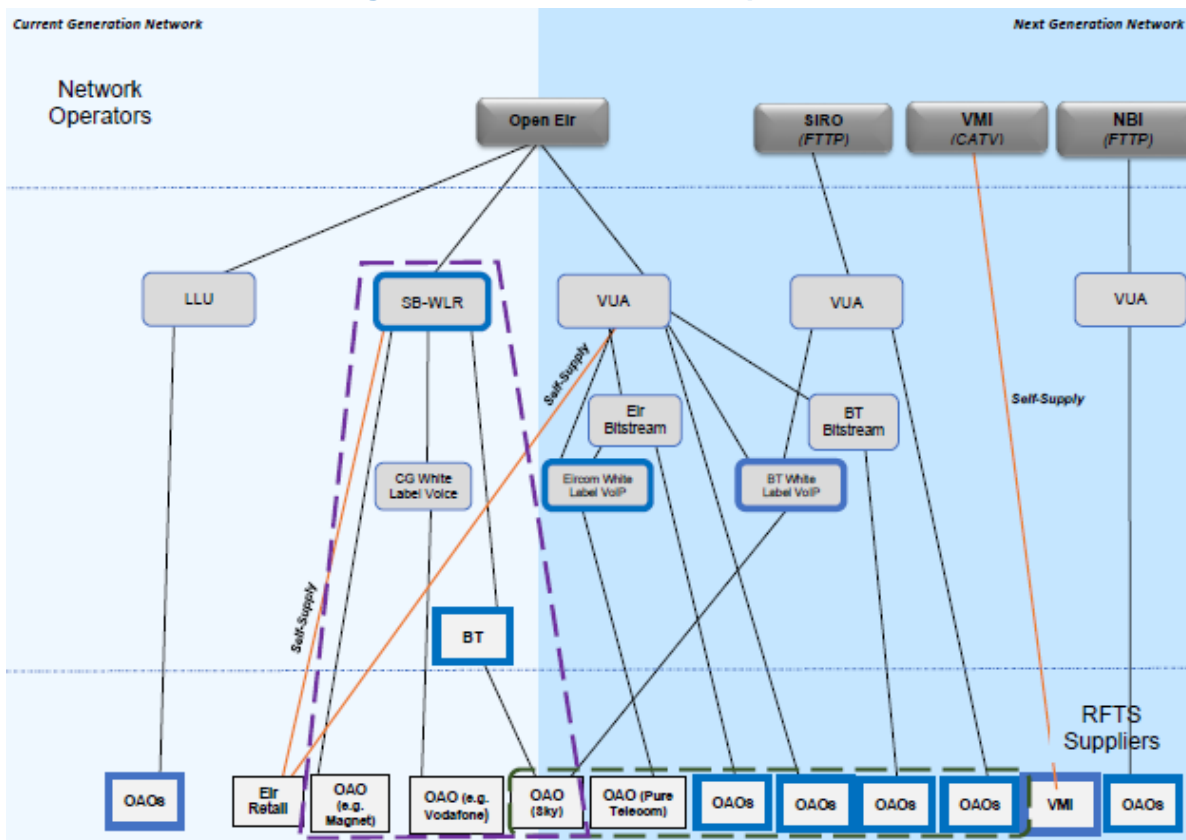
<sup>652</sup> 0-10%.



- (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 as part of a bundle together with broadband, where the end user does not require broadband.

5.320 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 38 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 not yet commenced network rollout, as of May 2020. 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 38: RFTS wholesale inputs



- 5.321 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 on a preliminary basis 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 alternative FA infrastructure. 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.
- 5.322 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**

	<b>LL-FACO</b>	<b>HL-FACO</b>
<b>Focal Product</b>	<ul style="list-style-type: none"> <li>Eircom</li> </ul>	<ul style="list-style-type: none"> <li>Eircom</li> </ul>
<b>Demand-side substitute</b>	<ul style="list-style-type: none"> <li>Eircom White Label VoIP</li> <li>BT White Label VoIP</li> </ul>	<ul style="list-style-type: none"> <li>Eircom White Label VoIP</li> <li>BT White Label VoIP</li> </ul>
<b>Supply-side substitute</b>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>Indirect retail constraint</b>	<p><b>NGA Broadband platform (Eircom / SIRO)</b></p> <ul style="list-style-type: none"> <li>Vodafone</li> <li>Pure Telecom</li> <li>Digiweb</li> <li>IFA Telecom</li> </ul> <p><b>CATV broadband platform</b></p> <ul style="list-style-type: none"> <li>Virgin Media</li> </ul>	<p><b>NGA Broadband platform (Eircom / SIRO)</b></p> <ul style="list-style-type: none"> <li>Vodafone</li> <li>Pure Telecom</li> <li>Digiweb</li> <li>Three</li> <li>Minute Buyer</li> <li>Phone Pulse</li> <li>Verizon</li> <li>Colt</li> <li>AirSpeed</li> <li>In2Tel</li> <li>Telcom</li> <li>Magnet</li> <li>Ripplecom</li> <li>Blueface</li> <li>Nova Telecom</li> </ul>



Table 44: FACO outside options for SPs, April 2020 [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]

### 5.1.5 Overall Preliminary Conclusions on Relevant Product Markets

- 5.323 In paragraphs 5.7 to 5.290 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 preliminary view 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.
- 5.324 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.

5.325 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.

5.326 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).

5.327 For the avoidance of doubt, the LL-FACO Market also includes:

- (a) RFTS delivered as Managed VoB over a DOCSIS 3.0<sup>653</sup> CATV network.

5.328 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).

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<sup>653</sup> And future advanced variants of this.

- 5.329 As set out in detail above, ComReg’s preliminary view is that the FACO Markets do not include:
- (a) White Label Voice (WLV), although SB-WLR is an upstream input to WLV;
  - (b) 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

- 5.330 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.”<sup>654</sup>*

- 5.331 It further notes<sup>655</sup> that the EC:

*“....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”.*

- 5.332 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 (hereafter, the ‘**2014 BEREC Common Position**’).<sup>656</sup>

### 5.2.1 Context to geographic assessment

- 5.333 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 Q1 2020, pass 1.9 million premises at speeds capable of delivering Managed VoIP;

<sup>654</sup> Notice on Market Definition, paragraph 8.

<sup>655</sup> *Ibid*, at paragraph 28.

<sup>656</sup> BEREC ‘Common Position on Geographic Aspects of Market Analysis (definition and remedies)’, BoR (14) 73, June 2014.

- (c) Virgin Media's CATV network which, as of Q4 2019, passes 939,000 premises in the State, mainly in urban areas;<sup>657</sup>
- (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 320,000 premises as of April 2020;<sup>658</sup> and
- (e) On a forward-looking basis, NBI's FTTP network, which is scheduled to pass 537,000 premises in the IA over a seven-year rollout period.

5.334 ComReg is of the preliminary view that neither SIRO nor NBI fall into the Relevant FACO Product Markets in and of themselves. However, as set out at paragraphs 5.122 to 5.234 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.

5.335 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.

## 5.2.2 FACO geographic assessment criteria

5.336 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 criteria, including whether there are observable differences between duly-defined units of geographic disaggregation, measured by, *inter alia*, the number of competitors present, and the market shares of those competitors.

5.337 ComReg therefore assesses the geographic scope of the Relevant FACO Product Markets in accordance with the following criteria:

- (a) Geographic differences in entry conditions over time;
- (b) Variation in the number and size of potential competitors;
- (c) Distribution of market shares;

<sup>657</sup> As set out above, ComReg considers that Virgin Media should be included in the LL-FACO Product Market only.

<sup>658</sup> <https://siro.ie/news-and-insights/siro-broadband-fibre-connectivity-essential-services-covid-19/>

- (d) Evidence of differentiated pricing strategies or marketing; and
- (e) Geographic differences in demand characteristics.

- 5.338 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.
- 5.339 As set out in greater detail below, having carried out its assessment of each of the five criteria set out above, ComReg is of the preliminary view that market shares are unlikely to be 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

- 5.340 The 2014 Explanatory Note<sup>659</sup> 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.
- 5.341 The 2014 BEREC Common Position<sup>660</sup> 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;

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<sup>659</sup> At page 14.

<sup>660</sup> At paragraph 86.

- (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.

- 5.342 ComReg considers that the appropriate relevant geographic unit for the FACO geographic market assessment is Eircom's Exchange Area ('EA').<sup>661</sup> 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. Eircom's 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 make use of EAs as the relevant geographic unit.<sup>662</sup> 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.<sup>663</sup>
- 5.343 Having set out the context for its geographic assessment, and having identified the Eircom EA as the appropriate unit of geographic assessment, ComReg now considers the five geographic criteria set out at paragraph 5.337 above.

### 5.2.3 Geographic differences in entry conditions over time

- 5.344 In this sub-section, ComReg assesses geographic differences in entry conditions in the Relevant FACO Product Markets over time.

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<sup>661</sup> 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 1,203 exchanges located nationwide. Generally, EAs tend to cover larger geographic areas where population density is lower, and smaller geographic areas where population density is higher.

<sup>662</sup> For further details, please see Annex 5 of the 2018 WLA/WCA Decision.

<sup>663</sup> Further details of this exercise are set out in Annex 8 below.

- 5.345 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.<sup>664</sup> 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 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 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 on a preliminary basis 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.
- 5.346 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 Q1 2020, 80% of premises are passed by Eircom FTTx.<sup>665</sup>
- 5.347 Eircom provides FACO by means of:
- (a) FNA; and
  - (b) White Label VoIP over standalone VUA and standalone Bitstream Plus.
- 5.348 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 [X ██████████ X] and which is delivered over wholesale NG broadband inputs purchased from Eircom and SIRO. BT has indicated to ComReg that, as of Q3 2019, it had sold [X ██████████ ██████████ X].

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<sup>664</sup> 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.

<sup>665</sup>

[https://www.eir.ie/opencms/export/sites/default/content/pdf/IR/news/eir\\_Q3\\_FY20\\_Results\\_Press\\_Release.pdf](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.



- 5.349 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 April 2020, SIRO's website reported that its network has passed 320,000 premises and by completion of Phase 1, 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.<sup>666</sup>
- 5.350 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 2019, the Virgin Media network is geographically limited, and passed 939,900 premises, where the population density has made the rollout of a CATV network economically viable. Of these premises, 46% are actively connected to Virgin Media's CATV network.
- 5.351 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 the successful NBP bidder – 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. However, as of May 2020, NBI has not actually commenced rollout, although it has engaged in surveying work.
- 5.352 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,<sup>667</sup> and - on a forward-looking basis over the lifetime of this market review - NBI, in areas where those networks are rolled out.
- 5.353 Having regard to the definition of the Relevant FACO Product Markets, ComReg is of the preliminary 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.

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<sup>666</sup> As set out at paragraph 4.175 of the 2018 WLA/WCA Decision.

<sup>667</sup> Where the rollout of Eircom FTTx allows Access Seekers to purchase White Label VoIP, VUA or Bitstream to offer wholesale or retail Managed VoIP which competes with Eircom supply of FACO and RFTS.

## 5.2.4 Variation in the number and size of potential competitors

- 5.354 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.
- 5.355 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.<sup>668</sup>
- 5.356 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 wholesale NG broadband inputs available – 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.
- 5.357 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 [REDACTED] 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.

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<sup>668</sup> 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.

- 5.358 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.<sup>669</sup>
- 5.359 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.<sup>670</sup>
- 5.360 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 335,100 RFTS subscribers as of Q4 2019,<sup>671</sup> all of whom purchase RFTS on a bundled basis together with 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.<sup>672</sup> Virgin Media does not offer merchant market access to Access Seekers on the LL-FACO market.
- 5.361 ComReg concludes on a preliminary and 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.

<sup>669</sup> As of Q4 2019, 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.

<sup>670</sup> <https://siro.ie/news-and-insights/pure-telecom-12-million-euro-deal-enet-siro-gigabit-broadband/>

<sup>671</sup> See Liberty Global Q4 2019 Fixed Income Release, at p.18.

<sup>672</sup> Virgin Media response to Question 2.

## 5.2.5 Distribution of market shares

5.362 As set out at paragraph 5.331 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.”*

5.363 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.

5.364 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].<sup>673</sup>

5.365 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.

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<sup>673</sup> Between 90% and 100%.

## Market share distribution in the presence of regulation

### Market share data on a national basis

5.366 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%<sup>674</sup> 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 2019**

	2015		2016		2017		2018		2019	
	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q4	
<b>Eircom</b>	40%	39%	39%	38%	38%	38%	39%	39%	39%	
<b>Virgin Media</b>	25%	25%	24%	24%	24%	24%	24%	24%	24%	
<b>Vodafone</b>	15%	15%	16%	15%	15%	14%	14%	14%	14%	
<b>Digiweb</b>	4%	4%	4%	3%	3%	3%	2% <sup>675</sup>	-	-	
<b>Sky</b>	9%	10%	11%	12%	12%	13%	13%	13%	14%	
<b>Pure</b>	2%	2%	3%	3%	3%	3%	3%	4%	4%	
<b>OAOs</b>	5%	5%	4%	5%	4%	5%	4%	6%	6%	

5.367 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 5.366 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:

<sup>674</sup> Calculated by subtracting Eircom's 39% and Virgin Media's 24% market shares, both of which are on a fully self-supply basis, from 100%.

<sup>675</sup> 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 2019<sup>676</sup>**

	2015		2016		2017		2018		2019	
	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q4	
<b>Eircom</b>	46%	45%	45%	44%	42%	42%	41%	41%	40%	
<b>Virgin Media</b>	14%	15%	15%	15%	16%	16%	16%	17%	17%	
<b>Vodafone</b>	13%	13%	12%	14%	14%	13%	14%	13%	14%	
<b>BT</b>	6%	6%	6%	5%	5%	5%	5%	5%	4%	
<b>Verizon</b>	2%	2%	2%	2%	-	-	-	-	-	
<b>Sky</b>	4%	4%	5%	5%	6%	6%	6%	7%	7%	
<b>AT&amp;T</b>	2%	2%	-	2%	2%	2%	2%	2%	3%	
<b>Digiweb</b>	2%	2%	-	-	-	-	-	-	-	
<b>Magnet</b>	-	-	3%	-	-	-	-	-	-	
<b>EU Networks</b>	-	-	-	-	-	-	-	-	2%	
<b>OAOs</b>	11%	11%	13%	13%	16%	16%	17%	16%	14%	

- 5.368 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, as it includes premises passed by ubiquitous Eircom FNA, 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.
- 5.369 In respect of the provision of RFTS specifically by means of Managed VoB, ComReg data indicate that, overall, RFTS subscriptions have declined by 3% between Q3 2015 and Q4 2019. Over the same time period, the proportion of RFTS subscriptions accounted for by Managed VoB has risen from 24% to 35%.

<sup>676</sup> 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.

5.370 Of the approximately 25 SPs who have offered Managed VoB RFTS over this time period, Virgin Media, Vodafone and Eircom together account for over 90% of Managed VoB subscriptions. At Q3 2015, Virgin Media accounted for [REDACTED] [REDACTED] %<sup>677</sup> of Managed VoB subscriptions, with no other SP having a market share greater than 2%. By Q4 2019, Virgin Media's share of Managed VoB subscriptions had fallen to [REDACTED] [REDACTED] %, <sup>678</sup> due largely to the increase in Vodafone's share of Managed VoB subscriptions from [REDACTED] [REDACTED] %, <sup>679</sup> and the increase in Eircom's share of Managed VoB subscriptions from [REDACTED] [REDACTED] %.<sup>680</sup> Accordingly, while Virgin Media still holds the vast majority of Managed VoB subscriptions, [REDACTED] [REDACTED] %<sup>681</sup> of growth in Managed VoB subscriptions arises from Vodafone and Eircom:

**Table 47: Managed VoB RFTS subscription shares, Q3 2015 and Q4 2019**  
[REDACTED]

	Q3 2015	Q4 2019	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]
<b>Total</b>	[REDACTED]	[REDACTED]	[REDACTED]

5.371 Again, given that both Eircom and Virgin Media 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.

<sup>677</sup> Between 90% and 100%.

<sup>678</sup> Between 60% and 70%.

<sup>679</sup> Between 0% and 10%.

<sup>680</sup> Between 10% and 20%.

<sup>681</sup> Between 80% and 90%.



**Distribution of merchant market purchases of Eircom SB-WLR and WLV**

5.372 ComReg now considers purchases of merchant market Eircom SB-WLR and WLV (which makes use of SB-WLR inputs). In an 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 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, Sept 2015 – Jan 2020** [PARTIALLY REDACTED]

<b>SB-WLR + WLV</b>	<b>Sep-15</b>	<b>Sep-16</b>	<b>Sep-17</b>	<b>Sep-18</b>	<b>Sep-19</b>	<b>Jan-20</b>
BT	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
OAOs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Three	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Pure Telecom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Total</b>	<b>475,432</b>	<b>499,851</b>	<b>495,550</b>	<b>488,434</b>	<b>468,721</b>	<b>463,150</b>
<b>SB-WLR only</b>	<b>Sep-15</b>	<b>Sep-16</b>	<b>Sep-17</b>	<b>Sep-18</b>	<b>Sep-19</b>	<b>Jan-20</b>
BT	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Magnet	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
OAOs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Total</b>	<b>344,048</b>	<b>342,839</b>	<b>283,356</b>	<b>242,393</b>	<b>236,917</b>	<b>236,731</b>
<b>WLV only</b>	<b>Sep-15</b>	<b>Sep-16</b>	<b>Sep-17</b>	<b>Sep-18</b>	<b>Sep-19</b>	<b>Jan-20</b>
IFA Telecom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
MinuteBuyer	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Three	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Pure Telecom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Total</b>	<b>131,384</b>	<b>157,012</b>	<b>211,194</b>	<b>246,041</b>	<b>231,804</b>	<b>226,419</b>
<b>SB-WLR + WLV %</b>	<b>Sep-15</b>	<b>Sep-16</b>	<b>Sep-17</b>	<b>Sep-18</b>	<b>Sep-19</b>	<b>Jan-20</b>
BT	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
OAOs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Three	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Pure Telecom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



**Table 49: Eircom Direct and Indirect Access Paths, Q3 2015 – Q4 2019 [REDACTED]**

Access Paths	2015 Q3	2016 Q1	2017 Q1	2018 Q1	2019 Q1	2019 Q4
Eircom direct access paths	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total direct access paths	946,946	907,762	861,186	790,263	737,661	682,884
Carrier Pre-Select	20,159	18,106	14,467	11,607	8,582	6,414
SB-WLR	371,191	377,968	350,543	310,141	261,845	267,278
WLV	175,852	188,827	218,101	256,716	280,308	258,837
Total SB-WLR + WLV	547,043	566,795	568,644	566,857	542,153	526,115
Total Indirect access paths	1567,202	584,901	583,111	578,464	550,735	532,529
SB-WLR & WLV as % of Eircom Direct Access	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

**Market share data, split by candidate Urban and Regional FACO Markets**

5.375 ComReg now presents the data set out above split by candidate Urban FACO Markets and Regional FACO Markets, in the presence of regulation. Table 50 indicates that, on all four Relevant FACO Markets, Eircom self-supply accounts for a majority of FNA access 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 access paths 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 across the Relevant FACO Markets in Eircom market share.

**Table 50: FNA active line purchases % from Eircom, Q4 2019 [REDACTED]**

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%

5.376 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 66% and 80% 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**  
 [PARTIALLY REDACTED]

SP	Urban FACO Market		Regional FACO market	
	LL-FACO	HL-FACO	LL-FACO	HL-FACO
BT	█	█	█	█
Digiweb	█	█	█	█
Pure Telecom	█	█	█	█
Virgin Media	█	█	█	█
Vodafone	█	█	█	█
OAOs	█	█	█	█
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

### Market share distribution under the MGA, absent regulation

- 5.377 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 users. 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. Such SPs would include Virgin Media (on the LL-FACO Product Market only), which operates its own CATV network, or any SP which offered Managed VoIP-based RFTS delivered using SIRO WLA (and, prospectively, NBI). Accordingly, in an MGA, the values in all but rows one and two of Table 49 above fall to zero. The level of increase in Eircom direct access paths (row 1 above) 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.
- 5.378 It is important to note that the market dynamics described in the previous subsection – in the presence of FACO regulation - are unlikely to accurately 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.
- 5.379 For an Access Seeker 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.

- 5.380 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 468,721<sup>687</sup> indirect access lines delivered by Eircom over FNA in Q4 2019, only those access paths 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. 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.
- 5.381 As set out at Table 52 below, ComReg has estimated, based on the data available to it, how many SB-WLR or WLV lines do not have wholesale NG broadband available at the associated premises. In an 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, because they would be unable to migrate the end users to Managed VoIP because they are not passed by NG broadband.

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<sup>687</sup> As of Q4 2019, Access Seekers purchase 468,721 FNA lines from Eircom, but 532,529 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.

**Table 52: Premises served by SB-WLR/WLV & wholesale NG broadband, Q4 2019**

No. of Premises passed by FACO (SB-WLR/WLV) lines and NG broadband					
<i>Passed by:</i>	All SB-WLR / WLW	SB-WLR / WLW and NG Broadband	As % of All SB-WLR / WLW lines	SB-WLR / WLW only	As % of All SB-WLR/WLV lines
<b>Urban FACO Market</b>	360,899	345,769	<b>96%</b>	15,130	<b>4%</b>
<b>Regional FACO Market</b>	107,822	65,689	<b>61%</b>	42,133	<b>39%</b>
<b>Total FACO lines</b>	468,721	411,458	<b>88%</b>	57,263	<b>12%</b>

- 5.382 These data suggest that, on the Urban FACO Markets, 96% of active lines have wholesale NG broadband available. In a MGA, Access Seekers are therefore capable – in principle – of migrating their RFTS end users to Managed VoIP, due to the presence of the underlying NG broadband access path. Thus, Access Seekers serving only 4% of premises in the Urban FACO Markets by means of SB-WLR or WLW would be unable to migrate these end users to Managed VoIP, due to the absence of wholesale NG broadband. This accounts for 1% of all RFTS lines delivered over FNA or NG broadband in the Urban FACO Markets.
- 5.383 In comparison, on the Regional FACO Markets, only 61% of active lines have wholesale NG broadband available. Therefore, Access Seekers 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. This accounts for 14% of all RFTS lines delivered over FNA or NG broadband in the Regional FACO Markets.
- 5.384 Taking condition (b) above, where wholesale NG broadband is present at an EA, an SP which currently delivers RFTS using SB-WLR or WLW 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 [REDACTED] X] of SB-WLR and WLW purchases are accounted for by four SPs (BT, Vodafone, Three, and Pure Telecom), as of January 2020. Each of these SPs have demonstrated Managed VoIP capabilities:
- BT offers merchant market White Label VoIP, and [X [REDACTED] X] of BT RFTS subscriptions are delivered by means of Managed VoIP at Q4 2019;
  - Vodafone offers Managed VoB RFTS to its own end users, and [X [REDACTED] X] of Vodafone RFTS subscriptions were delivered by means of Managed VoIP at Q4 2019;
  - Three offers Managed VoIP RFTS to business end users, and [X [REDACTED] X] of Three RFTS subscriptions were delivered by means of Managed VoIP at Q4 2019; and
  - Pure Telecom purchases White Label VoIP from Eircom and has also concluded test purchases of White Label VoIP from BT, and [X [REDACTED] X] of Pure Telecom RFTS subscriptions were delivered by means of Managed VoIP at Q4 2019.

- 5.385 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, allowing for Eircom bulk migration capability,<sup>688</sup> would presumptively be able to migrate their end users to Managed VoIP in an MGA, where NG broadband was available.
- 5.386 In the MGA, market share distributions are accordingly likely to shift, as end users which are not passed by 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), 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.

**Table 53: FNA-only RFTS Market Shares, measured by FNA lines (%), Q4 2019**  
[XREDACTEDX]

	Urban FACO Market				Regional FACO Market			
	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	█	█	█	█	█	█	█	█
OAo	█	█	█	█	█	█	█	█
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

- 5.387 The data set out at Table 53 above indicate the share of FNA lines purchased by Eircom and by Access Seekers, which are used to supply RFTS end users. These purchase figures accordingly give a good representation of hypothetical RFTS market share figures, if Managed VoIP RFTS were excluded from the market. These data therefore isolate those wholesale purchases which are vulnerable to a MGA scenario where regulation in the FACO markets is not present. The percentage figures in the 'Absent Regulation' columns indicate whether (i) Eircom gains market share if it withdraws merchant-market supply of SB-WLR and WLV, and (ii) whether Access Seekers have the capacity to migrate their SB-WLR based RFTS end users to Managed VoIP, in a MGA.

<sup>688</sup> Bulk Migration allows an Access Seeker to have multiple migrations facilitated via a single request.



- 5.388 For example, [X ██████ X] Urban LL-FACO market share does not change in an absent regulation scenario, which indicates that it is capable of successfully migrating its customers to Managed VoIP. In contrast, on the Regional HL-FACO Market, [X ██████ X] market share declines substantially, which indicates that it has insufficient capability to migrate all of its customers to Managed VoIP.
- 5.389 As set out above, in an MGA scenario, Eircom increases its FNA-only RFTS market share on both the Urban FACO Markets and the Regional FACO Markets at the expense of other SPs. The change in market shares is set out below:

**Table 54: Change in FNA-only RFTS Market Shares on each Relevant FACO Market, absent regulation (%), Q4 2019**

SP	Urban LL-FACO	Urban HL-FACO	Regional LL-FACO	Regional HL-FACO
BT	0%	0.1%	-0.3%	0.1%
Digiweb	0%	0%	-0.2%	0%
Eircom retail	<b>5.2%</b>	<b>15.6%</b>	<b>9.5%</b>	<b>13.9%</b>
Pure Telecom	-0.1%	-2.8%	-2.8%	-2.5%
Virgin Media	0%	-0.1%	0%	-0.3%
Vodafone	0%	0.5%	-0.5%	-0.6%
OAOs	-5%	-13.3%	-5.8%	-10.7%

- 5.390 On the Urban LL-FACO Market, Eircom's RFTS market share increases by 5.2%, almost entirely at the expense of smaller OAOs (but subject to the caveat set out at paragraph 5.391 below). On the Urban HL-FACO Market, Eircom's RFTS market share increases by 15.6%, again largely at the expense of smaller OAOs. This suggests that larger SPs would be able to successfully migrate their end user base to Managed VoIP RFTS, in response to the withdrawal by Eircom of SB-WLR/WLV. The impact on larger SPs is therefore minimal, and Eircom increases its market share by 8%. A similar pattern emerges on the Regional FACO Markets, with Eircom again increasing market share, predominantly at the expense of OAOs and also Pure Telecom, but also with a greater (though still small) impact on larger SPs than was the case on the Urban FACO Markets.

- 5.391 However, this conclusion is subject to an important caveat. The changes in market shares reflect 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. The changes do not, therefore, 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.
- 5.392 Thus, the market share figures set out at Table 53 and Table 54 above reflect changes in market shares arising from migration away from Access Seekers using SB-WLR or WLV, but they do not reflect RFTS switching to Virgin Media, in areas where that network is rolled out.

### 5.2.6 Evidence of differentiated pricing or marketing strategies

- 5.393 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).<sup>689</sup> Furthermore, 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.
- 5.394 ComReg has already addressed differentiated pricing for RFTS at paragraphs 4.363 to 4.369 above, and concluded on a preliminary basis, 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.
- 5.395 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.

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<sup>689</sup> As noted by the European Commission in Case UK/2007/0733.

- 5.396 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).<sup>690</sup>
- 5.397 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.
- 5.398 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.
- 5.399 Accordingly, and on the basis of the evidence available to it, ComReg has insufficient evidence to conclude, on a preliminary basis, that the provision of FACO is characterised by differentiated pricing or marketing strategies across different sub-national geographic areas.

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<sup>690</sup> 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.

## 5.2.7 Geographic differences in demand characteristics

- 5.400 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.<sup>691</sup> 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.
- 5.401 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 are likely to want to provide RFTS with national, rather than regional scope. Accordingly, ComReg considers that demand from Access Seekers for FACO is likely to be national, rather than regional or local, in 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.
- 5.402 Accordingly, and on the basis of the evidence available to it, ComReg has insufficient evidence to conclude on a preliminary basis 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.

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<sup>691</sup> As of January 2020, Eircom's five largest SB-WLR customers are BT, Magnet, Digiweb/Smart Telecom, and Telcom, [REDACTED]. All of these SPs use FACO on a national basis to provide wholesale services and/or RFTS.

## 5.2.8 Are there sufficient grounds for geographic differentiation?

5.403 ComReg has assessed the five geographic assessment criteria considered above. Three of these criteria (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 on a preliminary basis 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).

- 5.404 Over the lifetime of this market review, ComReg expects NG broadband rollout to continue.<sup>692</sup> 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 5.30 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 may 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.
- 5.405 Having concluded on a preliminary basis that there may be 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 must now set out the criterion which it proposes to apply 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.
- 5.406 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.

### **5.2.9 How should geographic differences in competitive conditions on the Relevant FACO Product Markets be distinguished?**

- 5.407 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.

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<sup>692</sup> Eircom's FTTP rollout is likely to upgrade or replace existing FTTC and copper networks.



- 5.408 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.
- 5.409 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.).”<sup>693</sup>*

- 5.410 Having regard to the geographic assessment criteria above, particularly SP ability to self-supply FACO using wholesale NG broadband inputs, ComReg concludes on a preliminary basis 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.

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<sup>693</sup> At page 20.



- 5.411 ComReg proposes in the case of FACO to apply a single criterion, rather than a cumulative set of criteria. ComReg proposes to do so on the grounds 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 preliminary 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.
- 5.412 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.
- 5.413 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 on a preliminary basis were indicative of sufficient differences in competitive conditions between EAs.
- 5.414 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 the differences in competitive conditions between EAs identified in the analysis above.
- 5.415 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.

- 5.416 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 preliminary 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.

### Wholesale and self-supply NG broadband on the LL-FACO Market

- 5.417 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.<sup>694</sup> 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.
- 5.418 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.
- 5.419 Virgin Media is active on the LL-FACO Market on a self-supply basis only. Accordingly, ComReg considers on a preliminary basis 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.

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<sup>694</sup> 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.

5.420 While, as set out at the analysis of the five geographic criteria above, Virgin Media contributes to differences in competitive conditions on the LL-FACO market, its self-supply of FACO allows for the delivery of Managed VoB RFTS by 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 proposes 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. ComReg also notes that, where at least one wholesale NG broadband network is present at an EA, this significantly mitigates the duopoly risk in an MGA scenario. In such a case, if Eircom self-supplied only on its FNA network, and Virgin Media self-supplied only on its CATV network, a wholesale NG broadband network would be capable of facilitating the presence of at least one additional SP at that EA.

### Applying the 80% coverage criterion

5.421 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;
- (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 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.

5.422 Where the coverage of NG broadband networks overlaps, the analysis avoids double-counting premises which benefit from the coverage overlap.

5.423 While ComReg includes Virgin Media's presence in the geographic market assessment (given 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.

#### **Preliminary conclusion on network coverage criterion**

5.424 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.

5.425 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 carried out this assessment, the results of which are set out at Annex: 9 and Annex: 10 of this Consultation.

### **5.2.10 Preliminary Conclusion on Geographic Definition of FACO Markets**

5.426 ComReg's preliminary view is that it is appropriate to define separate sub-national geographic FACO Markets. The relevant geographic market characterised by more competitive conditions is referred to as the Urban FACO Market, while the relevant geographic market characterised by less competitive conditions is called the Regional FACO Market. ComReg has applied the criterion it proposes to apply to determine whether an EA falls into the Urban FACO Market or the Regional FACO Market. Given that two separate FACO product markets have been defined, this implies the presence of four relevant FACO markets in total.

5.427 On the basis of this assessment, ComReg concludes on a preliminary basis that:

- (a) The Urban FACO Market consists of the 459 EAs listed at Annex: 10 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 744 EAs listed at Annex: 10 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.

5.428 As set out below, the Urban FACO Markets consist of just 38% of EAs, but 76% 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 2019**

FACO Market	EAs		Premises		RFTS lines		FACO (SB-WLR/WLV) lines	
	n	%	n	%	n	%	n	%
Urban	459	38%	1,652,480	74%	1,174,426	80%	360,899	77%
Regional	744	62%	586,907	26%	299,981	20%	107,822	23%
<b>Total</b>	<b>1,203</b>	<b>100%</b>	<b>2,239,387</b>	<b>100%</b>	<b>1,474,407</b>	<b>100%</b>	<b>468,721</b>	<b>100%</b>

### 5.3 Overall Preliminary Conclusions on Definition of the FACO Markets

- 5.429 In paragraphs 4.18 to 5.329, ComReg analysed the FACO Markets from a product perspective and set out its preliminary 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.
- 5.430 In paragraphs 5.330 to 5.426, ComReg analysed the FACO Markets from a geographic perspective and set out its preliminary view that there are grounds for distinguishing two separate geographic markets, the Urban FACO Market, and the Regional FACO Market.
- 5.431 The LL-FACO and HL-FACO Markets are, from product and geographic perspectives, referred to as the '**Relevant FACO Markets**'. ComReg accordingly proposes to define a total of four such Relevant FACO Markets:
- The Urban LL-FACO Market;
  - The Regional LL-FACO Market;
  - The Urban HL-FACO Market; and
  - The Regional HL-FACO Market.

- Q. 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.**
- Q. 5. Do you agree with ComReg's preliminary conclusions on the geographic 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.**

## 6 RFTS Competition Analysis – 3CT

### 6.1 Three Criteria Test for Relevant RFTS Markets

#### 6.1.1 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 2014 Explanatory Note, and reiterated at Article 67(1) of the EECC,<sup>695</sup> is the mechanism which allows for this assessment to be carried out in a structured and objective way.
- 6.2 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 6.10 to 6.80 below);
  - (b) a market structure which does not tend towards effective competition within the relevant time horizon (paragraphs 6.81 to 6.151 below); and
  - (c) the insufficiency of competition law alone to adequately address the market failure(s) concerned (paragraphs 6.152 to 6.163 below).
- 6.3 ComReg’s preliminary conclusions on the analysis of the Relevant RFTS Markets are discussed in paragraphs 6.164 to 6.167 below.
- 6.4 If the 3CT passes, that is to say, if all of the 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.
- 6.5 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 no longer required. In such instances, the market in question should be deregulated.
- 6.6 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.

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<sup>695</sup> DIRECTIVE (EU) 2018/1972 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2018 establishing the European Electronic Communications Code (the ‘**EECC**’).



- 6.7 Before considering the 3CT and the appropriateness of regulation in the Relevant RFTS Markets, ComReg notes that the MGA assumes no regulation in the market being assessed, but that any regulation in related markets is assumed to be in place. In the case of RFTS, ComReg assumes that regulation in the upstream FACO, WLA, and WCA markets is in place. However, as set out at Section 10 below, ComReg proposes to deregulate EAs in the Urban FACO Markets, such that FACO regulation will not apply on a national basis. ComReg therefore revisits the conclusions on the RFTS 3CT set out in this section again in Section 8, under the scenarios that have regard to ComReg's preliminary conclusions on any regulation in the Relevant FACO Markets.
- 6.8 However, for the purposes of assessing the downstream Relevant RFTS Markets, it is assumed that sufficient wholesale regulation is in place (Regional FACO Markets, WLA/WCA, depending on Exchange Area) or that no regulation is required, such that Access Seekers have a viable wholesale access product to provide RFTS, which in turn affects the competitive dynamic in the Relevant RFTS Markets. For example, if FACO is not available on a regulated basis in a given EA (although it may be available on a commercial basis), there will be at least one WLA/WCA product which permits an Access Seeker to provide Managed VoIP-based RFTS over NG broadband, in addition to White Label VoIP from Eircom and BT on a commercial basis.
- 6.9 As noted in paragraphs 4.328 to 4.385 above, ComReg considered the possibility of sub-geographic RFTS markets (Standalone LL-RFTS, Bundled RFTS and HL-RFTS, respectively), however, ComReg's preliminary view was 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 not likely to be ultimately material to the regulatory outcome for the Relevant RFTS Markets.

### 6.1.1 Criterion 1: The presence of high and non-transitory barriers to entry

- 6.10 The 2014 Explanatory Note identifies that high, non-transitory barriers to entry may be either structural, or legal and 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.
  - (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

- 6.11 Barriers to entry generally comprise any disadvantage that a new entrant faces when entering a market, when incumbents do not currently face such barriers. According to the Explanatory Note to the Recommendation:<sup>696</sup>

*“...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 costs.”*

- 6.12 ComReg assesses structural barriers to entry to the Relevant RFTS Markets (encompassing Standalone LL-RFTS, Bundled LL-RFTS and HL-RFTS, as defined above in paragraph 4.386) under four main headings:
- (a) Overall size of the incumbent and control of infrastructure that is not easily replicated (paragraphs 6.13 to 6.44);
  - (b) Sunk costs (paragraphs 6.45 to 6.58);
  - (c) Economies of scale, economies of scope and economies of density (paragraphs 6.59 to 6.67); and
  - (d) Vertical integration (paragraphs 6.68 to 6.73).

### Overall size of the incumbent and control of infrastructure that is not easily replicated

- 6.13 The SMP Guidelines cite control of infrastructure not easily duplicated as one key criterion for assessing whether SMP exists in a market.<sup>697</sup>
- 6.14 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.
- 6.15 Eircom controls a ubiquitous PSTN network that cannot be easily replicated by its retail competitors,<sup>698</sup> and it is the only SP with national coverage of RFTS on its own network. Eircom maintains a substantial subscriber base and offers a wide product portfolio (including RFTS, broadband, TV and mobile voice), which, when combined, allows Eircom to exploit greater economies of scale and scope in the provision of RFTS than could be replicated by a potential entrant.

<sup>696</sup> Explanatory Note to the 2014 EC Recommendation, page 9.

<sup>697</sup> Paragraph 58 of the SMP Guidelines.

<sup>698</sup> However, it is not strictly necessary to replicate Eircom's network in order to pose a potential competitive constraint in the Relevant RFTS Markets.

- 6.16 Eircom is the largest supplier of RFTS overall,<sup>699</sup> benefitting 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 services, including RFTS. In terms of market share, the market shares of the largest SPs in the three defined RFTS markets, as at Q4 2019, are as follows:
- (a) **Standalone LL-RFTS market:** Eircom holds a 60% market share, with Pure Telecom and Vodafone holding the next highest market shares (Table 58);
  - (b) **Bundled LL-RFTS market:** Eircom holds a 37% market share, facing competition from Sky, Virgin Media and Vodafone (Table 59); and
  - (c) **HL-RFTS market:** Eircom holds an 27% market share, facing competition from Goldfish (31%), Vodafone and Digiweb (Figure 43).
- 6.17 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.
- 6.18 Eircom is also the largest SP in the upstream FACO market, and provides close to 100% of upstream wholesale inputs (including SB-WLR, WLV, and White Label VoIP) for RFTS.
- 6.19 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; or
  - (c) Adapting an existing network to provide RFTS.
- 6.20 Undertaking any of the above would involve some 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.

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<sup>699</sup> As noted in Table 55, as at Q4 2019, there were [x] voice lines across all three duly-defined RFTS markets, of which Eircom retail holds [x] voice lines, or [x] of voice lines.

**LL-RFTS Markets**

- 6.21 In terms of LL-RFTS (that is, RFTS delivered over PSTN, ISDN BRA, and Managed VoB), 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 to facilitate the provision of services similar to RFTS via PSTN/ISDN, i.e. Managed VoIP. The revenue driver for deployment of these alternative networks, 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 RFTS.<sup>700</sup> 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 PSTN/ISDN network.
- 6.22 With wholesale FACO regulation (or indeed where it is found appropriate not to impose FACO regulation), it is possible for an SP to enter the standalone or bundled LL-RFTS markets without replicating Eircom's fixed network infrastructure. In particular, SPs wishing to enter or expand in the two LL-RFTS markets can do so by purchasing SB-WLR from Eircom and using it as an input to providing RFTS to end users. While the obligation placed on Eircom by means of the 2015 FACO Decision to offer SB-WLR goes some way to alleviating 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 and independence that comes with maintaining an independent network. Eircom also offers an end-to-end wholesale voice product – White Label Voice ('WLV') – which allows SPs to interconnect with Eircom further up the network than is required to purchase SB-WLR.

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<sup>700</sup> As indicated in ComReg's April 2019 IIRs.

- 6.23 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 could support the provision of both standalone and bundled LL-RFTS (through the delivery of Managed VoIP 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 profitability margins earned on standalone RFTS. Where the end user demands a bundle including broadband and RFTS components, 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 Eircom's associated exchanges/Aggregation Nodes.<sup>701</sup> As a result, SPs tend to interconnect at exchanges/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 exchanges/Aggregation Nodes.
- 6.24 In the alternative, SPs intent on providing RFTS could purchase services from BT. In the WCA market, the main SPs are Eircom (ubiquitous coverage) and BT (close to [X █████ X] coverage as at Q4 2019), with the latter purchasing WLA inputs from Eircom and SIRO to provide WCA. An Access Seeker could avoid the costs of interconnection at exchanges/Aggregation Nodes for the purpose of supplying WLA-based RFTS by purchasing WCA services from BT, (or indeed Eircom) which provides broadband, WLV and White Label VoIP. For example, Sky is present in the RFTS market by virtue of agreements with BT for broadband and voice services.
- 6.25 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 greater economies of scale and scope in the provision of services. However, since the publication of the 2014 RFVA Decision in Q3 2014, Eircom's market share has declined generally across the Relevant RFTS Markets, with the exception of its market share in the Bundled LL-RFTS market which has been steady, as illustrated in Table 56 below.

**Table 56: Eircom RFTS Market Shares Q3 2014 and Q4 2019<sup>702</sup>**

RFTS market	RFVA Decision Q3 2014	Q4 2019
Standalone LL-RFTS	█%	█%
Bundled LL-RFTS	█%	█%
HL-RFTS	█%	█%
<b>Overall RFTS</b>	<b>50%</b>	<b>39%</b>

<sup>701</sup> Aggregation Node or "AGG node" is the point of interconnection for the purposes of purchasing Eircom's wholesale broadband products including WLA and WCA.

<sup>702</sup> 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 6.85.

- 6.26 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 50% at the time of the 2014 RFVA Decision.<sup>703</sup> Market shares for Q4 2019 are in the presence of upstream FACO regulation; as noted in paragraph 6.7, ComReg proposes to deregulate the upstream Urban FACO Markets (as defined in Section 5, paragraphs 5.426 to 5.427) and this has implications for market shares in the downstream Relevant RFTS Markets. ComReg considers this point in paragraph 6.101 below.
- 6.27 For 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 or being used to provide Managed VoIP on a standalone basis, with SIRO providing wholesale FTTP to Access Seekers which can, in turn, support Managed VoIP. 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.
- 6.28 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 and broadband and other services.<sup>704</sup> 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 previously in Table 11, this segment of the market constitutes just 18% of total RFTS subscriptions as at Q4 2019.
- 6.29 ComReg notes that in July 2019, Eircom retail 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. As of June 2020, ComReg's preliminary views are outlined in paragraphs 10.84 to 10.88.

### **HL-RFTS Market**

- 6.30 As with the two Relevant LL-RFTS Markets, ComReg assesses whether entry and expansion in the Relevant HL-RFTS market (that is, ISDN FRA, ISDN PRA and Managed VoIP including SIP Trunk/Hosted PBX) 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 which might impact the behaviour of SPs within the Relevant HL-RFTS Market.

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<sup>703</sup> ComReg QKDR data.

<sup>704</sup> ComReg bilateral meetings with SPs, October 2018.



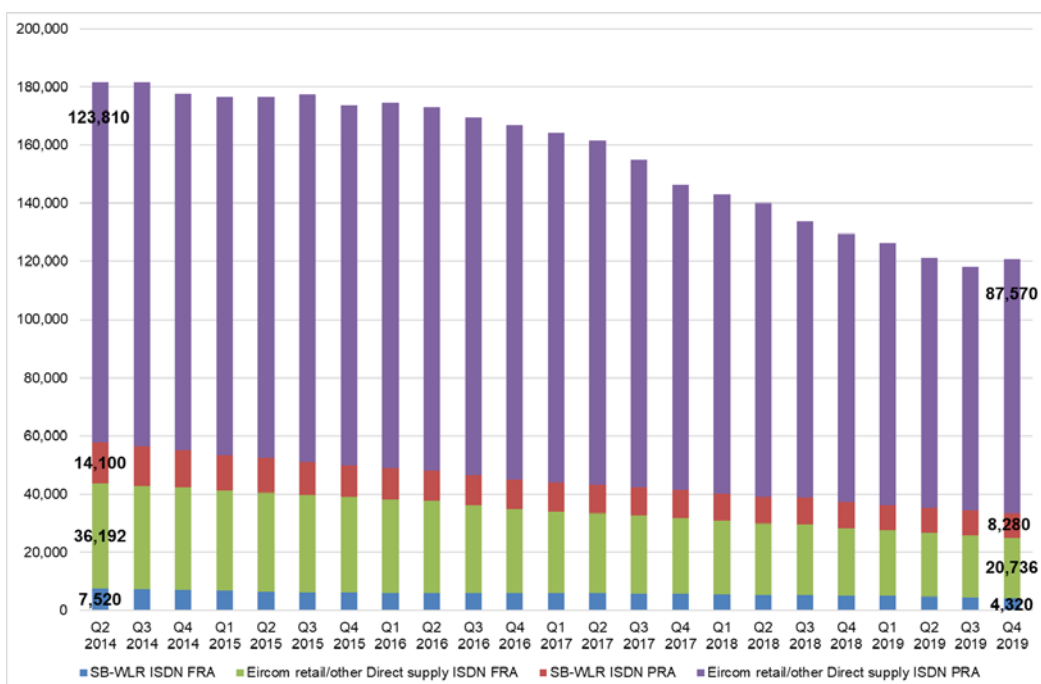
6.31 SB-WLR allows SPs to offer ISDN FRA and ISDN PRA without any significant physical investment, such as that involved in replicating Eircom’s network. However, SB-WLR does not offer competing SPs in the HL-RFTS market the same degree of commercial flexibility and independence that comes with maintaining an independent network. Regulated SB-WLR prices ensure that new entrants into the HL-RFTS market obtain the same price as Eircom’s own downstream retail arm, thereby providing a level playing field. It is evident that some SPs continue to rely on the wholesale SB-WLR input to operate in the HL-RFTS market, however the volumes of SB-WLR for ISDN are declining (Figure 40). As of Q4 2019, ISDN FRA and ISDN PRA delivered by 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 WLV, an unregulated product, 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 2019**

Q4 2019	Eircom retail /other Direct supply	SB-WLR	WLV	CPS	Total
ISDN FRA	56%	12%	30%	3%	37,216
ISDN PRA	76%	7%	15%	1%	114,540

6.32 Figure 39 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.

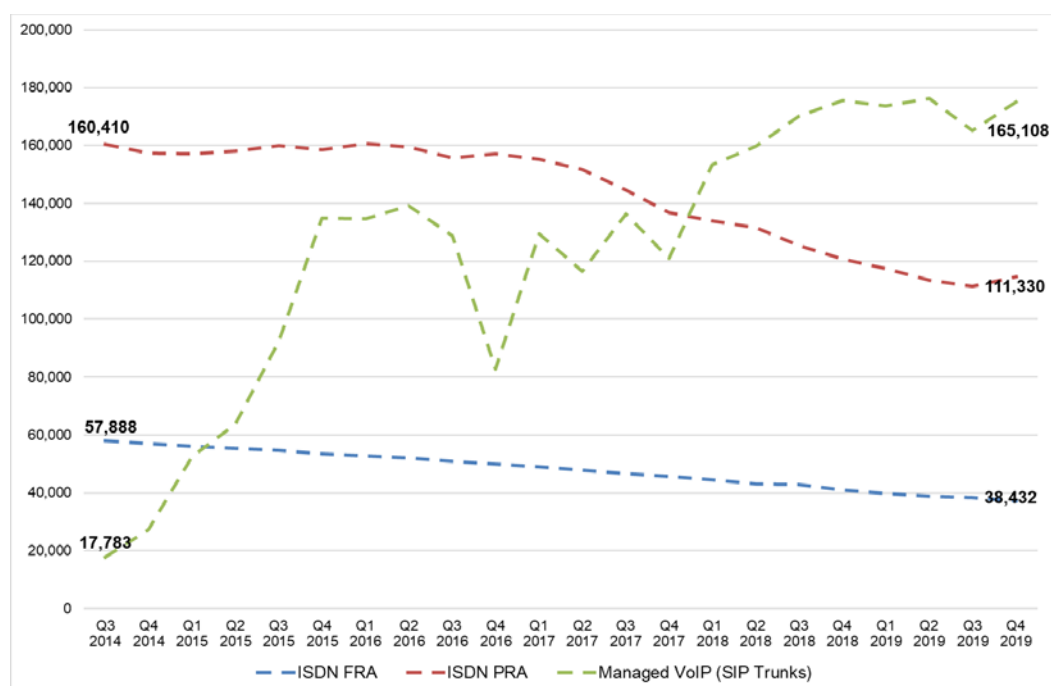
**Figure 39: ISDN FRA and ISDN PRA paths, Q3 2014 to Q4 2019**





- 6.33 Aside from SB-WLR for ISDN products, use of WLA/WCA broadband inputs allows SPs to provide Managed VoIP services (including SIP Trunk or Hosted PBX) comparable in terms of voice channels to ISDN products.
- 6.34 Although it may not be feasible – or desirable - for an SP supplying HL-RFTS to replicate Eircom’s ubiquitous network on any significant scale, it is of note that a proportion of the supply of HL-RFTS is over alternative infrastructure (i.e. Managed VoIP) independent of Eircom FACO, as illustrated in Figure 40 below.

**Figure 40: Number of Paths in HL-RFTS Market, Q3 2014 to Q4 2019<sup>705</sup>**



- 6.35 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 market for both ISDN FRA and PRA, particularly when contracts are due for renewal. SPs have indicated to ComReg that, in greenfield business locations, or where contracts are due for renewal, businesses may take the opportunity to invest in IP-based solutions (i.e. Managed VoIP) for RFTS.<sup>706</sup> Hence, entry to the HL-RFTS market could come from any of:
- Entry by SPs selling broadband and RFTS via Managed VoIP;
  - Entry by other infrastructure or technologies (e.g. other IP-based solutions such as fibre-based SIP Trunking or Hosted PBX); and
  - Entry of fixed-mobile integrated products and/or networks.

<sup>705</sup> ComReg QKDR data. ComReg began collecting data from Goldfish for QKDR purposes at the end of 2017.

<sup>706</sup> ComReg bilateral meetings with SPs, October 2018.

### Preliminary conclusion on overall size of Undertaking and control of infrastructure that is not easily replicated

- 6.36 ComReg's preliminary view is that, on balance, barriers to entry, in terms of size of Undertaking and control of infrastructure not easily replicated, in the provision of RFTS (on all three Relevant RFTS Markets) have gradually been eroded since the 2014 RFVA Decision.
- 6.37 For 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 VoIP. 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.
- 6.38 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 and broadband and other services.<sup>707</sup> 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.
- 6.39 For 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 VoIP. This suggests that, while Eircom is the largest SP in the RFTS market, and controls infrastructure not easily replicable in terms of network coverage, this is not necessarily an impediment to new entry.
- 6.40 In addition, Virgin Media's cable network also poses a direct constraint on Eircom in the provision of Bundled LL-RFTS, while SIRO's FTTP network is likely to facilitate some degree of demand-side constraint on Eircom in the provision of Bundled LL-RFTS through SPs that purchase wholesale services from SIRO.
- 6.41 For HL-RFTS, SPs can enter the market by purchasing:
- (a) SB-WLR or WLV for 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.
- 6.42 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 products.

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<sup>707</sup> ComReg bilateral meetings with SPs, October 2018.

- 6.43 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 impediment to new entry to the HL-RFTS market.
- 6.44 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 for LL-RFTS and HL-RFTS (see paragraph 7.22 in Section 7).

### Sunk costs

- 6.45 Sunk costs are costs incurred that cannot be recovered if an entrant decides, 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 will be involved in entering most markets, and the incumbent may also have had to pay a similar level of sunk cost before it entered the RFTS Market (or related markets).
- 6.46 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 associated with market entry discourage entry.<sup>708</sup>

### **LL-RFTS Markets**

- 6.47 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 at this point in time. In rolling out its FTTx network upgrade (which supports Managed VoIP), Eircom is likely to incur some additional sunk costs.
- 6.48 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 6.19 above.

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<sup>708</sup> OECD, Barriers to Entry, (DAF/COMP(2005)42), 2006, Paris.

**Building an independent network to provide RFTS**

- 6.49 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 it comes to 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**

- 6.50 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.
- 6.51 However, an entrant using an existing network would still be likely to 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**

- 6.52 To purchase wholesale FACO inputs including SB-WLR and WLV, SPs would incur some level of sunk costs, such as interconnection costs and establishing Operational Support Systems ('OSS') and/or Business Support Systems ('BSS').
- 6.53 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**

- 6.54 As with the LL-RFTS market, SPs can enter the HL-RFTS market by building independent networks, adapting existing networks and by using wholesale inputs. This would indicate 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 use of leased line inputs.

- 6.55 There are also costs associated with enabling ISDN FRA and ISDN PRA functionality, and Managed VoIP functionality, providing capacity to support the installed base of lines and undertaking OSS updates, etc. Thus, SPs face some level of sunk costs involved in entry to, and expansion by extending the network within, the footprint of the HL-RFTS market. Although these are likely to be lowered in those areas where NGA broadband (either own use or through the use of WLA/WCA) is available.

#### Preliminary conclusion on sunk costs

- 6.56 Overall, ComReg's preliminary view is that sunk costs are likely to undermine entry and/or expansion into the Relevant RFTS Markets for SPs that do not currently maintain a network, or have not invested in infrastructure for purchasing wholesale FACO/WLA/WCA 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, easing 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.
- 6.57 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 bundles of broadband and other services (including RFTS). Technically, entry is nonetheless possible. End user demand for Standalone LL-RFTS is also in decline and, as noted in paragraph 4.86, end users show a clear preference for bundled RFTS offerings. Thus, while entry barriers have been somewhat eroded through wholesale regulation (where appropriate), or indeed absent regulation, SPs have in recent years shifted their focus to offering bundles of broadband and other services, rather than Standalone LL-RFTS.
- 6.58 ComReg's preliminary view is that market entry (in those areas where NG broadband enables the provision of RFTS) may not be sufficiently deterred by barriers to entry in the form of sunk costs. The availability of wholesale inputs (including upstream FACO inputs where available, and WLA/WCA broadband inputs) mean that an SP does not need to replicate Eircom's narrowband and/or NG broadband network in order to enter the Relevant RFTS markets. This is the case for SPs that purchase WLW such as [X ██████████ X], where sunk costs are reduced for BSS/OSS systems.

### Economies of scale, economies of scope and economies of density

- 6.59 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.
- 6.60 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 more substantial customer base (comprised of its self-supply of RFTS to its retail arm and Access Seekers purchasing FACO services from its wholesale arm) than any other SP.
- 6.61 ComReg's preliminary view 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 costs of providing services, per subscriber, will fall 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/MPoP<sup>709</sup> (or equivalent). That also means that the ability of an SP to offer a viable service can often depend on its ability to acquire a large number of RFTS customers on a local and national level.
- 6.62 Economies of scope are evident in respect of Bundled LL-RFTS, where RFTS is used in the provision of a retail bundle of RFTS and broadband, as the access path is used for the provision of both voice and broadband. For a new entrant, the upfront investment in network coverage (either 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 bundles of RFTS and broadband, and potentially TV services. This also applies to rolling out a broadband network, in that the broadband access path can be used to provide RFTS (i.e. Managed VoIP). As discussed in paragraphs 4.58 to 4.86, there is an increasing trend towards the provision of RFTS as part of a bundle, but some 18% of end users continue to purchase RFTS over the Eircom network on a standalone basis.

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<sup>709</sup> Metropolitan Point of Presence ('MPoP') refers to the point of inter-connection between the access and core networks of an Undertaking.

- 6.63 ComReg notes that competitors to Eircom in the LL-RFTS markets such as Vodafone, Virgin Media, Sky and Pure Telecom (which account for 97% of RFTS subscriptions, as illustrated in Figure 42 below) offer a variety of retail services. Such SPs either have already, to one degree or another, or have the potential to, gain benefits 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 having regulated access to FACO and WLA/WCA products. The availability of SB-WLR lowers, to an extent, 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.
- 6.64 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 for businesses, economies of scope can be achieved if the RFVA component (i.e. broadband connection/IP) 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.<sup>710</sup>
- 6.65 SPs intending to compete with Eircom, Vodafone and other HL-RFTS SPs will likely have to offer these ancillary services in order to win large business contracts, which could impede market entry. ComReg's preliminary view is 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. In general, the 2019 SME Market Research reveals that few businesses purchase ISDN for access to RFTS (15%),<sup>711</sup> with ISDN BRA being the most prevalent at 54%.<sup>712</sup>

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<sup>710</sup> <https://business.eir.ie/product/voice-and-collaboration/>.

<https://n.vodafone.ie/business/products-and-solutions/unified-communications/one-net-business.html>.

<sup>711</sup> Slide 16 of the 2019 SME Market Research.

<sup>712</sup> Slide 18 of the 2019 SME Market Research.



6.66 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 3.91 and 3.92, the SIRO FTTP network and the Virgin Media CATV network have subnational footprints, predominately in areas with higher premises density. As noted in paragraphs 3.93 to 3.95, NBI is expected to provide high speed broadband to premises in rural areas 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 higher, thus the magnitude of the barrier to entry is likely to differ between urban and rural areas.

#### **Preliminary conclusion on economies of scale, economies of scope and economies of density**

6.67 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 with an incumbent SP such as Eircom. Eircom has benefited from its economies of scale, scope and density in the provision of RFTS, and these economies 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 may not discourage entry.

#### **Vertical Integration**

6.68 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 an entry barrier 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 possibilities for the integrated SP to foreclose competition at one or more levels in the value chain, the threat of which could, in turn, discourage new entry.

- 6.69 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 60%, 36% in the Bundled LL-RFTS market (see Table 59) and 27% in the HL-RFTS market (Figure 43). As a supplier in both LL-RFTS markets, Eircom has an incentive to push up the wholesale costs of its retail competitors (i.e. those retail competitors that are also wholesale customers of Eircom), and thereby foreclose its retail competitors from the Relevant RFTS Markets. However, this is prevented in practice by regulation of wholesale prices.
- 6.70 Virgin Media is also vertically-integrated in that it provides retail services using its own 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 in the various retail markets are, for the most part, not vertically-integrated. For example, Vodafone and Sky provide RFTS and broadband services 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. However, ComReg does not consider Eircom's vertically-integrated structure to pose a significant barrier to entry for LL-RFTS as Access Seekers can access regulated wholesale inputs (both upstream FACO and WLA/WCA broadband inputs) to provide LL-RFTS (see paragraph 6.7 above). In addition, were Eircom to leverage its vertically-integrated structure by reducing prices of standalone RFTS through cross-subsidisation with RFTS in bundles, ComReg's preliminary view is that, while this may somewhat deter entry to the Standalone LL-RFTS market, SPs appear to have limited incentives to enter the Standalone LL-RFTS market in any case.
- 6.71 In relation to the HL-RFTS market, some vertically-integrated providers of HL-RFTS operate independently of Eircom and are, therefore, less exposed to Eircom's wholesale pricing strategy. These include Goldfish, Colt<sup>713</sup> and Magnet,<sup>714</sup> which provide HL-RFTS via Managed VoIP (SIP Trunking and Hosted PBX). However, these providers are somewhat limited in scale and geographic reach compared to Eircom's network. As with the Standalone and Bundled LL-RFTS markets, there is potential for Eircom, as a vertically-integrated SP, to take measures upstream in the wholesale FACO market to harm competition in the downstream HL-RFTS market by engaging in anticompetitive cross-market tactics that harm entrants (e.g. margin squeeze). However, as noted above in paragraph 6.69, wholesale prices (including FACO/WLA/WCA where available on a regulated basis) are regulated by ComReg.

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<sup>713</sup> <https://www.colt.net/product/sip-trunking/>.

<sup>714</sup> <https://www.magnet.ie/business/business-type/enterprise/sip-trunking/>.

### Preliminary conclusion on vertical integration

- 6.72 Having regard to the above, ComReg's preliminary view is that Eircom's vertically-integrated structure could give it a favourable position in the Relevant RFTS Markets and potentially increase barriers to entry by, for example, requiring an entrant to enter multiple vertically-related markets concurrently.
- 6.73 However, the availability of regulated wholesale inputs in the Regional FACO, WLA, and Regional WCA markets (see paragraph 6.7) means that, for an SP to enter the Relevant RFTS Markets, vertical-integration is not a distinguishing factor that unduly raises barriers to entry in the Relevant RFTS Markets. 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 for wholesale inputs for Standalone and Bundled LL-RFTS and HL-RFTS (see paragraph 7.22 in Section 7).

### Legal, regulatory and administrative barriers to entry

- 6.74 Unlike the structural barriers to entry discussed above, legal, regulatory and administrative barriers to entry are derived not from economic conditions, but rather from state or EU interventions which have a direct impact on a firm's ability to enter a new market. Pursuant to the EC's 2014 Explanatory Note, which sets out the guidelines for the 3CT, the aforementioned barriers must be assessed in respect of the relevant market (in this case, the Relevant RFTS Markets), in a MGA scenario, in order to determine whether the specified market requires *ex ante* regulation.
- 6.75 In Section 7 below, ComReg assesses legal, regulatory and administrative barriers to entry in relation to the Relevant FACO Markets. As there is a significant overlap in the discussion, see paragraphs 7.115 to 7.134 for an exposition of these barriers to entry. ComReg's preliminary view is that legal, regulatory and administrative barriers to entry are broadly similar for the Relevant RFTS Markets and the Relevant FACO Markets. For example, the administrative barriers to entry for RFTS and upstream 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.

### Preliminary conclusions on barriers to entry

- 6.76 ComReg's preliminary view is that the Relevant RFTS Markets are, having regard to the proposed regulatory outcome on the Relevant FACO Markets in Section 7, not likely to be 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 has been through a combination of upstream regulation in the FACO, WLA and WCA markets, the latter two of which enable SPs to offer Managed VoIP-based RFTS, 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 does not appear that such economies have acted to the 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 for the Bundled LL-RFTS and HL-RFTS markets. Sunk costs associated with entry are likely to be mitigated for SPs with extensive wholesale NGA 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 suggest that this poses a barrier to entry as SPs provide RFTS via Managed VoIP to end users where NGA broadband networks are available, including through the use of upstream WLA/WCA inputs.

6.77 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 Blueface<sup>715</sup> and Goldfish,<sup>716</sup> as well as a number of other smaller SPs.

6.78 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 (e.g. RFTS with broadband, TV, or mobile voice). Thus, while entry barriers have been somewhat eroded through appropriate wholesale regulation, SPs have, in recent years, shifted their focus to the provision of bundles of broadband and other services, rather than Standalone LL-RFTS.

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<sup>715</sup> <https://www.blueface.com/voip/>.

<sup>716</sup> <https://www.goldfish.ie/6832/all/1/Business-VoIP-Packages.aspx>.

- 6.79 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 could see the number of end users in the Standalone LL-RFTS market decline (as it has previously – see Figure 23) and, in any event, the barrier to offering Standalone LL-RFTS (whether based on regulated access to FACO or otherwise) has fallen since the 2014 RFVA Decision. For the HL-RFTS market, incentives to enter are again likely driven by opportunities to provide business data/connectivity services alongside RFTS.
- 6.80 At least one of the three 3CT criteria must fail in order for the presumption in favour of *ex ante* regulation to be lifted.<sup>717</sup> Since ComReg’s preliminary analysis suggests that the first criterion has failed for the Relevant RFTS Markets, the presumption can be lifted, and ComReg’s analysis indicates that, 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 that complete the 3CT.

### 6.1.2 Criterion 2: Is the market tending towards effective competition within the relevant time horizon?

- 6.81 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.<sup>718</sup> By definition, it is necessary to carry out the assessment of the second criterion on a dynamic and forward-looking basis.
- 6.82 In this respect, ComReg has examined whether:
- (a) There are observable trends towards effective competition (see paragraphs 6.83 to 6.117 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 6.118 to 6.140 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 6.141 to 6.145 below).

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<sup>717</sup> See page 5 of the Explanatory Note to the 2014 EC Recommendation: “.....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.”

<sup>718</sup> 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.

## Whether there are observable trends towards effective competition

6.83 ComReg's assessment considers levels of existing competition in the context of assessing barriers to entry, noting that the 3CT contains many of the factors considered in an SMP analysis. In this subsection, ComReg considers the relative strength of any existing competitors, market shares, and pricing, in assessing levels of existing competition.

### Market shares

6.84 A number of SPs provide RFTS generally across all of the Relevant RFTS markets, with the market shares illustrated in Figure 8 in Section 3. Eircom is the only SP with a ubiquitous FNA network.

6.85 There are currently approximately 25 SPs providing RFTS in the Relevant LL-RFTS Markets, including five on independent networks<sup>719</sup> and 20 purchasing SB-WLR and WLV. The largest competitors to Eircom for RFTS customers are Virgin Media, Sky, Vodafone, Pure Telecom and Digiweb.

6.86 Eircom and Virgin Media operate independent networks, while BT (Sky) and Digiweb purchase SB-WLR, and Vodafone and Pure Telecom purchase WLV. There are about 13 other SPs that purchase SB-WLR and WLV in certain areas around the country and compete with the abovementioned SPs on a local basis, for example, IFA Telecom<sup>720</sup> and Telcom.<sup>721</sup>

6.87 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 in Section 3) and revenue. In the 2014 RFVA Decision, ComReg measured market shares in the then-Standalone and Bundled RFVA markets in subscriptions, noting that in each case, there may be small numbers of ISDN FRA and ISDN PRA included but that this did not materially affect the shares and consequent inferences.<sup>722</sup> For the HL-RFVA market, ComReg looked at access lines to assess market shares. Given data availability, ComReg below presents market shares based on subscriptions and access lines, both of which indicate similar trends.

6.88 The market shares presented below are in the presence of upstream FACO regulation. As noted in paragraph 6.7, ComReg proposes to deregulate the upstream Urban FACO market (as defined in paragraphs 5.426 to 5.427) and this has implications for the presentation of market shares in the downstream Relevant RFTS Markets. ComReg considers this point in paragraph 6.101 below.

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<sup>719</sup> Eircom, Virgin Media, Imagine, Airspeed, and Magnet.

<sup>720</sup> <https://ifamemberservices.ie/ifa-telecom/>

<sup>721</sup> <https://www.telcom.ie/>

<sup>722</sup> See Figures 7-9 of the 2014 RFVA Decision.



- 6.89 Table 58 below outlines the market shares in the Standalone LL-RFTS Market as measured by access lines (access lines over PSTN, ISDN BRA and any VoIP equivalent lines (predominantly Managed VoB)). While Eircom holds the highest market share at █%, this is followed by Vodafone, Pure Telecom and a number of smaller SPs.

**Table 58: Standalone LL-RFTS Market Shares (Number of PSTN and ISDN BRA access lines and VoIP equivalent lines) Q4 2019<sup>723</sup> [XREDACTEDX]**

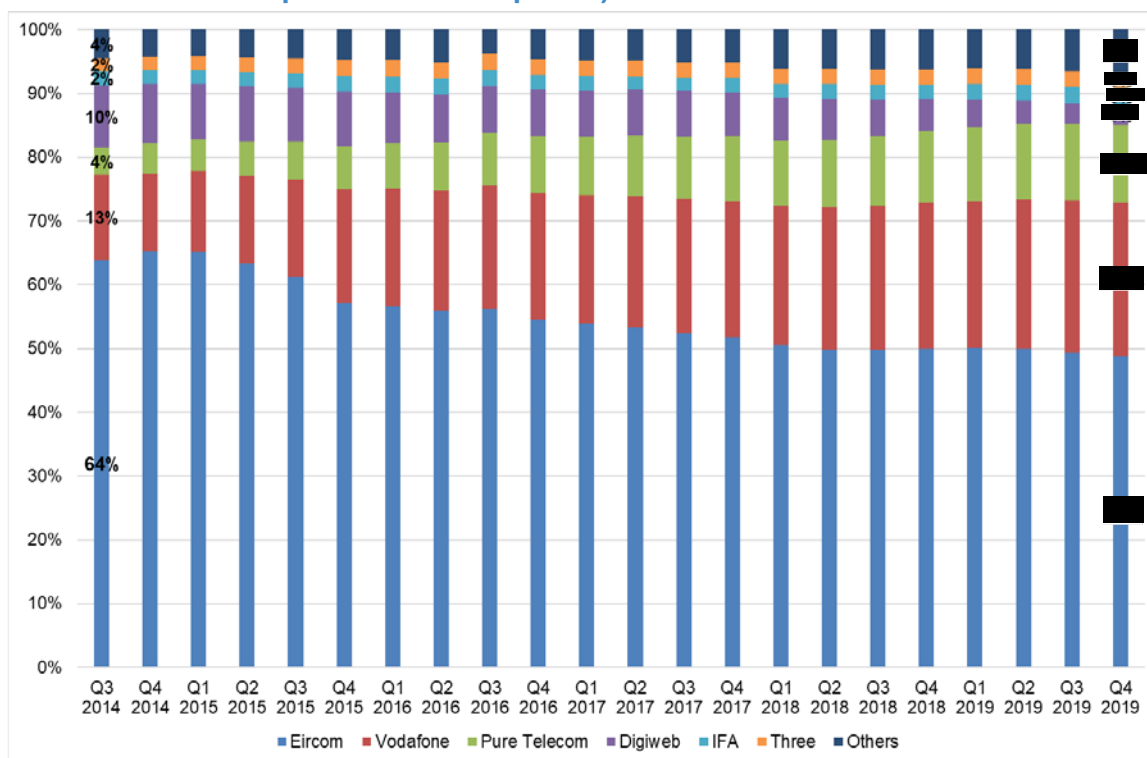
SP	Lines	% of Total
Eircom	█	█
Digiweb	█	█
Pure Telecom	█	█
Sky	█	█
Virgin Media	█	█
Vodafone	█	█
Other	█	█
<b>Total</b>	█	<b>100%</b>

- 6.90 Figure 41 below presents Standalone LL-RFTS market shares since the time of the 2014 RFVA Decision in terms of standalone RFTS subscriptions. ComReg notes, as with the 2014 RFVA Decision, and, discussed above in paragraph 6.87, that standalone fixed voice subscriptions data include subscribers purchasing ISDN FRA and PRA lines. However, as the number of these subscribers is relatively small, it therefore does not materially affect the analysis of market shares in the Standalone LLVA Market. Eircom's market share, using total standalone RFTS subscriptions (█) is estimated at █%.

<sup>723</sup> ComReg QKDR data.



**Figure 41: Standalone LL-RFTS Market Shares (Number of PSTN, ISDN BRA and VoIP equivalent subscriptions) Q3 2014 to Q4 2019<sup>724</sup>**



6.91 The number of standalone RFTS customers (across all SPs in the market) has dropped from the time of the 2014 RFVA Decision (Q3 2014) when there were 445,234 subscriptions (31% of the total fixed voice market) to 247,627 subscriptions (18% of the total RFTS market) in Q4 2019. At the time of the 2012 RFVA Consultation, 51% of RFTS subscriptions were on a standalone basis.

6.92 Secondly, the distribution of market shares has changed since the 2014 RFVA Decision. As illustrated in Table 56 Eircom’s market share in the Standalone LL-RFTS market is [redacted]%, compared with [redacted] in Q3 2014.

6.93 Table 59 below outlines the market shares in the Bundled LL-RFTS Market measured by access lines (access lines over PSTN, ISDN BRA and VoIP equivalent lines (predominantly Managed VoB)). While Eircom holds the highest market share at [redacted]%, this is followed by Sky, Virgin Media and Vodafone, as well as a number of smaller SPs.

<sup>724</sup> ComReg QKDR data.

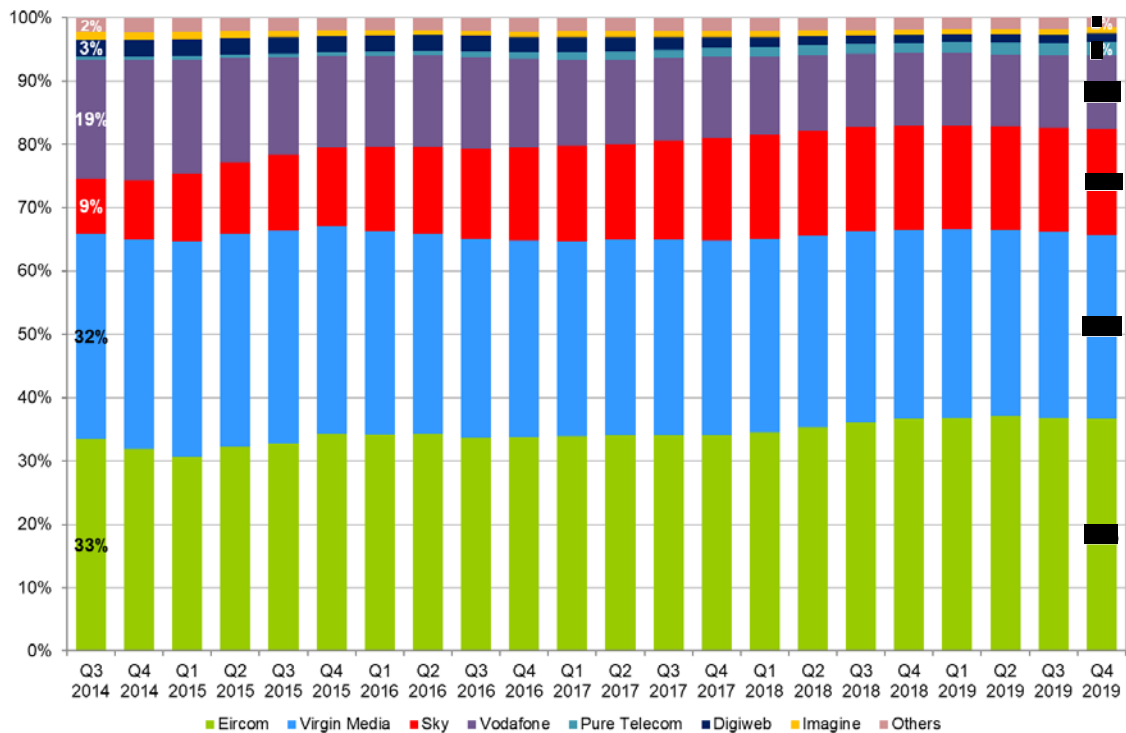
**Table 59: Bundled LL-RFTS Market Shares (Number of PSTN and ISDN BRA access lines and VoIP equivalent lines Q4 2019<sup>725</sup> [REDACTED])**

SP	Lines	% of Total
Eircom	[REDACTED]	[REDACTED]
Digiweb	[REDACTED]	[REDACTED]
Pure Telecom	[REDACTED]	[REDACTED]
Sky	[REDACTED]	[REDACTED]
Virgin Media	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]
Other	[REDACTED]	[REDACTED]
<b>Total</b>	[REDACTED]	<b>100%</b>

- 6.94 Figure 42 below presents Bundled LL-RFTS market shares since the time of the 2014 RFVA Decision in terms of bundled RFTS subscriptions. ComReg notes, as with the 2014 RFVA Decision and discussed above in paragraph 6.87 that bundled fixed voice subscriptions data may include a small number of subscribers purchasing ISDN FRA and ISDN PRA services. However, as the number of these subscribers is relatively small and therefore it does not affect materially the analysis of market shares in the Standalone RFTS Market. Eircom's market share, using total bundled RFTS subscriptions ([REDACTED]) is estimated at 37%.

<sup>725</sup> ComReg QKDR data.

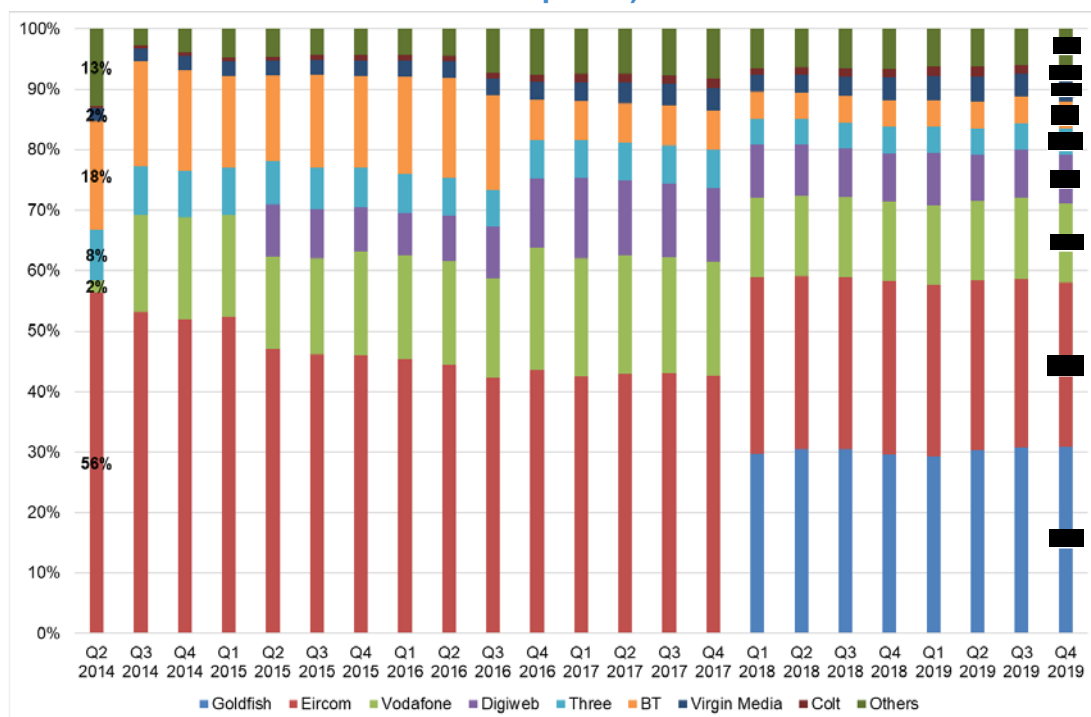
**Figure 42: Bundled LL-RFTS Market Shares (Number of PSTN, ISDN BRA and VoIP equivalent subscriptions) Q3 2014 to Q4 2019<sup>726</sup>**



6.95 Figure 43 below outlines the 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 with █% market share, followed by Vodafone, Eircom and Digiweb. ComReg began collecting Goldfish data for QKDR purposes at the end of 2017.

<sup>726</sup> ComReg QKDR data.

**Figure 43: HL-RFTS Market Shares (Number of ISDN FRA, PRA and VoIP equivalent subscriptions)<sup>727</sup>**



- 6.96 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 competing RFTS to any retail customer connected to Eircom’s network. SB-WLR has accordingly reduced the barriers to entry to the RFTS market 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.
- 6.97 As illustrated in Figure 22 (Section 4) there has been a migration of CPS customers to SB-WLR and SB-WLR customers to WLV since the 2014 RFVA Decision and the 2015 FACO Decision. 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%. By Q4 2019, the CPS and SB-WLR shares dropped to 2% and 50.2% respectively, and WLV increased to 48.6% (Figure 22). In practice, many end users that previously purchased RFVA (retail line rental) from Eircom but purchased RFVC (retail fixed calls) from another supplier have since switched to one supplier 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 through SB-WLR, as these retail customers buy RFTS from an SB-WLR Access Seeker.

<sup>727</sup> ComReg QKDR data. ComReg began collecting data from Goldfish for QKDR purposes at the end of 2017.

- 6.98 As set out in Section 4, Managed VoIP-based RFTS is considered a viable substitute for RFTS delivered over FNA, 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 32% delivered over FTTx (see Figure 29). Most of the recent growth in Managed VoIP (effectively growth in Managed VoB) has been over FTTx (see paragraph 4.194 and Figure 29).
- 6.99 There is a key difference between the retail product offerings of suppliers of Managed VoIP (e.g. Virgin Media) and those offerings of Eircom and SB-WLR resellers, in that Virgin Media does not sell standalone RFTS, nor does it sell RFVA and RFVC separately. Virgin Media customers can purchase bundled RFTS as an add-on to their broadband or TV service at an entry level cost of €59 per month for broadband and RFTS.<sup>728</sup> This compares to Eircom's standalone RFVA which costs €25.78 per month (with RFVC costs on a per minute basis),<sup>729</sup> independent of any broadband service. Eircom's basic standalone RFTS is €39.99 including line rental and (unlimited off-peak local and national) calls.<sup>730</sup> Virgin Media's Managed VoIP offering 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 a bundle of RFTS and broadband (i.e. Market 1b – Bundled LL-RFTS).
- 6.100 SPs have stated to ComReg that higher margins can be earned on bundles of services where broadband is the anchor product, and that RFTS generally has reached saturation point.<sup>731</sup>
- 6.101 Finally, ComReg notes that, absent upstream regulation in the Urban FACO Markets, there may be implications for downstream RFTS market shares, depending on whether SPs can self-supply RFTS absent FACO regulation. This is considered in Section 7 (paragraphs 7.141 to 7.174). Table 60 below presents the 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 (SA and Bundled) and HL-RFTS (this does not include Managed VoIP-based HL-RFTS). Market shares are calculated by assuming FACO lines in the Urban FACO Market are migrated to Managed VoIP where each SP has an ability to self-supply Managed VoIP by using WLA/WCA market inputs. The latter is based on having backhaul and interconnect facilities in place at each Exchange or associated Aggregation Node. The findings are broadly unchanged compared to the tables above, with Eircom having a slightly higher LL-RFTS market share in the Urban FACO Market compared to Table 59.

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<sup>728</sup> <https://www.virginmedia.ie/broadband/buy-a-broadband-package/250-mb-freedom-broadband-world-talk/> Accessed on 13 March 2020.

<sup>729</sup> <https://www.eir.ie/opencms/export/sites/default/.content/pdf/pricing/Pt1.1.pdf>

<sup>730</sup> <https://www.eir.ie/phone/> Accessed on 23 April 2020.

<sup>731</sup> 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]**

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				
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

## Pricing behaviour

### Retail prices

6.102 The development and extent of competition in a market over time may be evident in the pricing of RFTS products, services and facilities. Six SPs account for close to 95% of the RFTS markets. Table 61 below outlines a sample of RFTS packages offered by these SPs plus Digiweb and Imagine, with prices over time presented subsequently in Figure 46.<sup>732</sup> 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.

**Table 61: Residential and Non-Residential RFTS packages, Q4 2019**

Residential RFTS Packages			
SP	Product	No. of Bundles	Price Range incl. VAT p/m
Digiweb	Standalone Voice	4	€29.47 - €39.95
	Voice & Broadband Bundles	11	€34.95 - €59.95
Magnet	Voice & Broadband Bundles	6	€29.99 - €77.99
Imagine	Voice & Broadband Bundles	1	€59.99
Pure Telecom	Standalone Voice	3	€29.00 - €35.50
	Voice & Broadband Bundles	2	€55.00 - €75.00
Virgin Media	Voice & Broadband Bundles	9	€59.00 - €79.00
Vodafone	Voice & Broadband Bundles	3	€60.00 - €95.00
Eircom	Voice & Broadband Bundles	5	€59.99 - €85.99
Sky	Standalone Voice	2	€30.00 - €37.50
	Voice & Broadband Bundles	2	€84.50 - €94.50

<sup>732</sup> Annex: 3 outlines all RFTS packages available on the market as of Q4 2019. Imagine provides Managed VoIP based RFTS over its own FWA network.

Business RFTS Packages			
SP	Product	No. of Bundles	Price Range excl. VAT
Digiweb	Standalone Voice	4	€24.00 - €129.00
	Voice & Broadband Bundles	1	€55.00
Magnet	Standalone Voice	3	€9.95 - €28.95
	Voice & Broadband Bundles	1	*dependent on end user requirements <sup>733</sup>
Imagine	Voice & Broadband Bundles	1	€48.77 <sup>734</sup>
Virgin Media	Voice & Broadband Bundles	4	€45.00 - €75.00
Pure Telecom	Standalone Voice	3	€38.00 - €95.00
	Voice & Broadband		€65.00 - €122.00
Eircom	Standalone Voice	7	€66.07 - €334.63
	Voice & Broadband Bundles	10	€74.99 - €99.99
Vodafone	Standalone Voice	3	€32.00 - €65.00
	Voice & Broadband Bundles	3	€45.00 - €60.00

- 6.103 ComReg uses independently collated Strategy Analytics (Teligen) pricing data using OECD-approved methodologies to examine the relative prices of a number of specific RFTS usage baskets of national and international telecoms services for both residential and business users.<sup>735</sup> For national comparisons, the prices advertised by the largest SPs (in terms of number of subscribers to standalone RFTS services) during Q4 2019 were analysed for selected usage baskets. In this QKDR, standalone 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 presented 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.
- 6.104 Figure 44 compares tariffs advertised by standalone RFTS SPs for residential customers based on a basket of 60 calls.<sup>736</sup> Pure Telecom offers the cheapest tariff for this basket at €35.22, followed by Digiweb (€37.64) and Sky (€42.15).

<sup>733</sup> <https://www.magnetnetworks.com/>

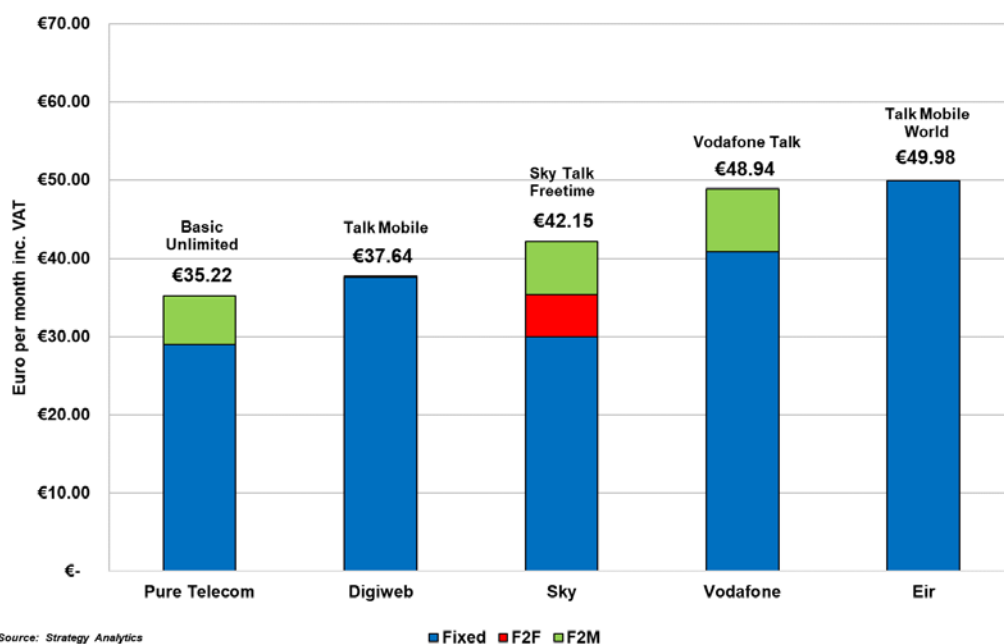
<sup>734</sup> <https://www.imagine.ie/business-broadband/>

<sup>735</sup> See ComReg QKDR Q4 2019, at page 26.

<sup>736</sup> Basket assumes usage of 135 fixed to fixed minutes and 45 fixed to mobile minutes.

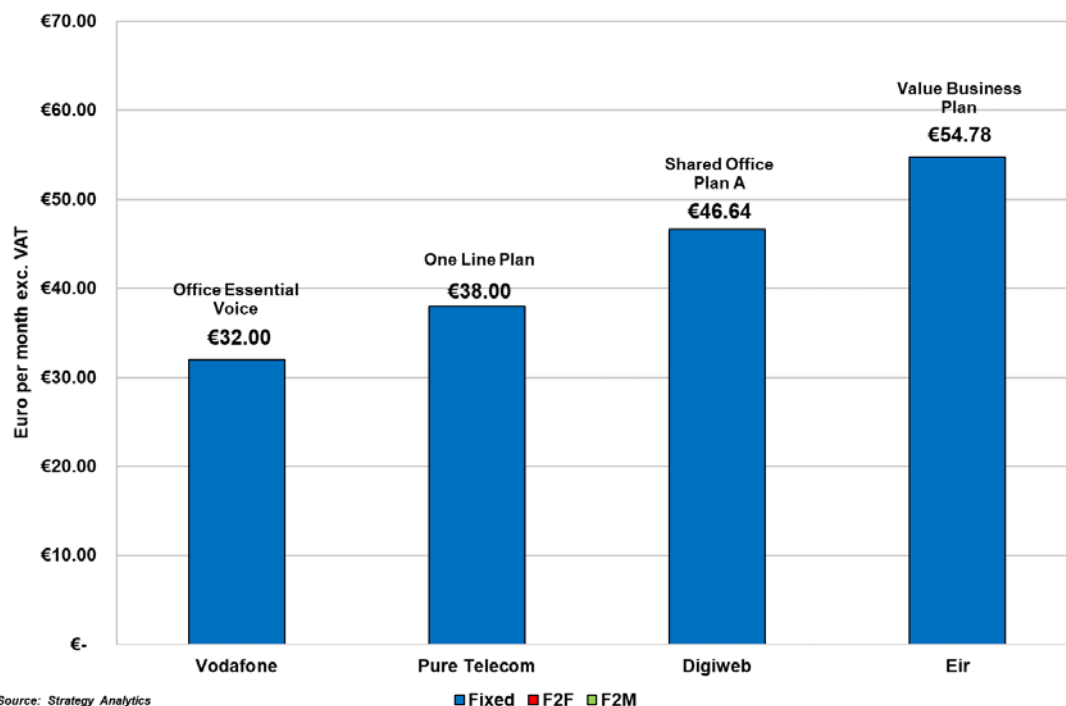


Figure 44: OECD Residential Standalone Fixed Voice 60 Calls Basket, Q4 2019<sup>737</sup>



6.105 Figure 45 compares tariffs advertised by standalone RFTS SPs for business customers based on a basket of 260 calls.<sup>738</sup> Presented prices exclude VAT charges. Vodafone offers the cheapest tariff for this particular basket at €32.

Figure 45: OECD Business Standalone Fixed Voice 260 Calls Basket, Q4 2019<sup>739</sup>



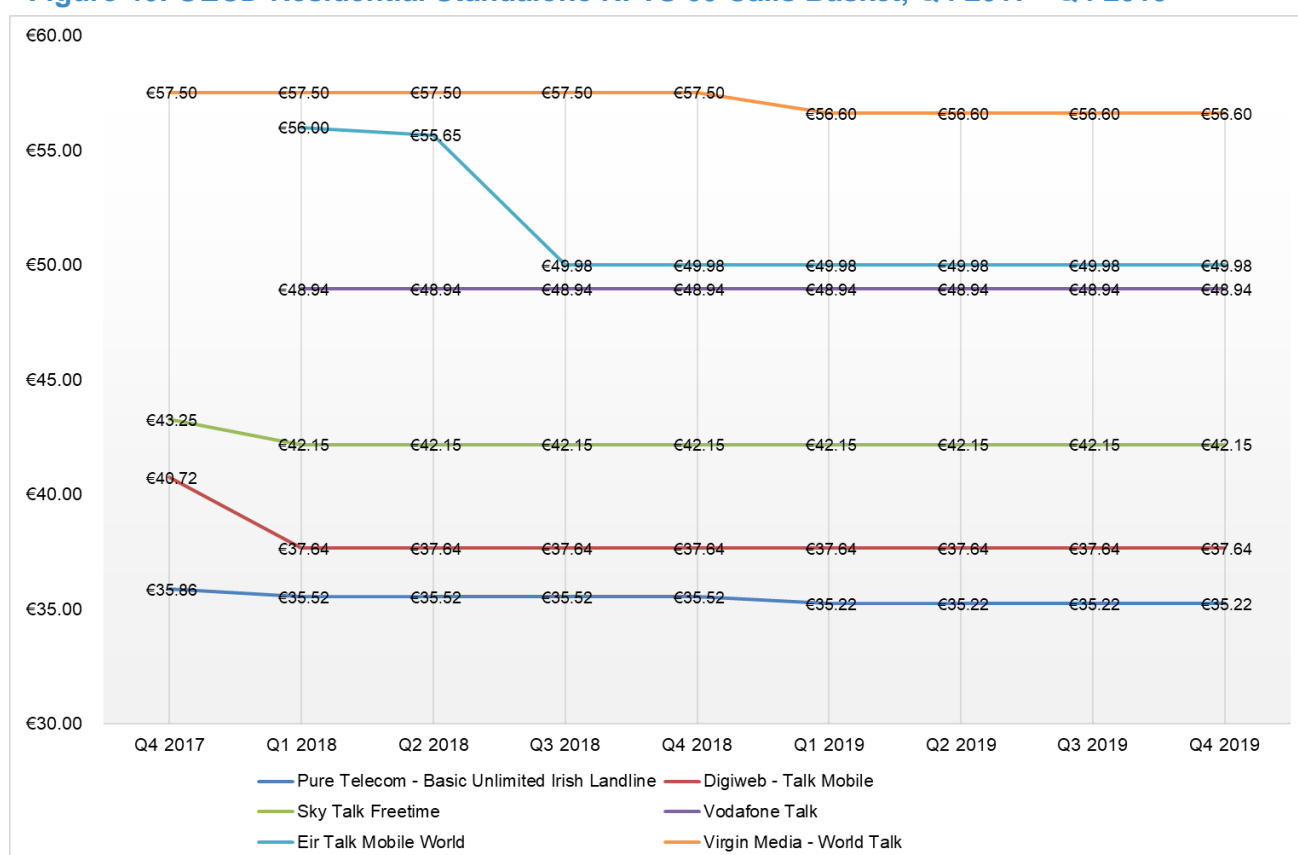
<sup>737</sup> ComReg QKDR data.

<sup>738</sup> Basket assumes usage of 370 fixed to fixed minutes and 190 fixed to mobile minutes.

<sup>739</sup> ComReg QKDR data.

6.106 Figure 46 below tracks a sample of residential standalone RFTS packages over the past nine quarters. In general, the prices of these packages have remained consistent, with minimal changes in price.

**Figure 46: OECD Residential Standalone RFTS 60 Calls Basket, Q4 2017 - Q4 2019<sup>740</sup>**



### **Universal Service Obligation**

6.107 ComReg notes that under the 2016 USO Decision, Eircom is required, where requested, to provide RFTS at a geographically averaged price ('GAP'). This somewhat 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.

6.108 In applying the MGA, ComReg assesses the Relevant RFTS Markets absent the Retail Price Cap ('RPC')<sup>741</sup> remedy imposed under the 2014 RFVA Decision, but in the presence of GAP under the USO.

<sup>740</sup> ComReg QKDR data.

<sup>741</sup> 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**

- 6.109 The extent to which competitors in the Relevant RFTS Markets are able to set prices independently of Eircom impacts on the degree of competitive constraint imposed by those SPs in those markets. Many of Eircom's competitors currently 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 this wholesale input – the two components of SB-WLR, namely FVCO and WLR, are subject to price controls. Prices for the FVCO component of Eircom's SB-WLR product are subject to a cost orientation obligation, calculated based on a Top Down Forward-Looking Long Run Average Incremental Cost-plus pricing ('**LRAIC+**') model. Additionally, PSTN WLR is subject to cost orientation based on a combination of Bottom-up LRAIC+ and Top-down Historical Cost Accounting ('**HCA**') costing methodologies.<sup>742</sup> ISDN WLR is subject to a maximum charging approach, i.e. no more than current prices under the 2016 Pricing Decision.<sup>743</sup>
- 6.110 Similarly, WLV (an end-to-end wholesale voice service offered by Eircom) is purchased by some SPs to provide RFTS, which amongst other things avoids the need for SPs to manage interconnection for their traffic. However, while the price of WLV is not regulated by ComReg, a number of the components that are necessary for this end-to-end service to be offered by SPs are subject to price control obligations (WLR, FVCO). 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.
- 6.111 For the most part, Eircom's wholesale customers purchase SB-WLR alongside WLA/WCA inputs to provide POTS-based RFTS and broadband bundles. As noted in paragraphs 5.227 to 5.228 (and Table 36 to Table 37), only 43% of Access Seeker purchases of wholesale NGA broadband inputs (FTTC or FTTP VUA or Bitstream) are on a standalone basis as of Q4 2019 (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 57% of wholesale NGA broadband inputs were purchased alongside POTS (which requires the Access Seeker to pay FACO charges to Eircom).

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<sup>742</sup> It should be noted that PSTN retail line rental charges are subject to a price cap pursuant to ComReg's 2014 RFVA Decision.

<sup>743</sup> 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**').

- 6.112 The 2018 Bundles Decision imposed an obligation on Eircom not to margin squeeze in the WLA Market and Regional WCA Market when it offers retail bundles for sale. This means Eircom is 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 21 in Section 4), but crucially, in relation to FACO, that the advent of 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 subscriptions ([§< [REDACTED] §>]) identified that for it at least that call packages included in a bundle are not the main driver behind customers' bundling preferences. This has been shown in the 2019 Residential Market Research.<sup>744</sup>
- 6.113 Overall, 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 underlying costs of Eircom compared with an equally efficient SP and what prices would prevail were prices oriented to cost.

#### **Fixed Number Porting**

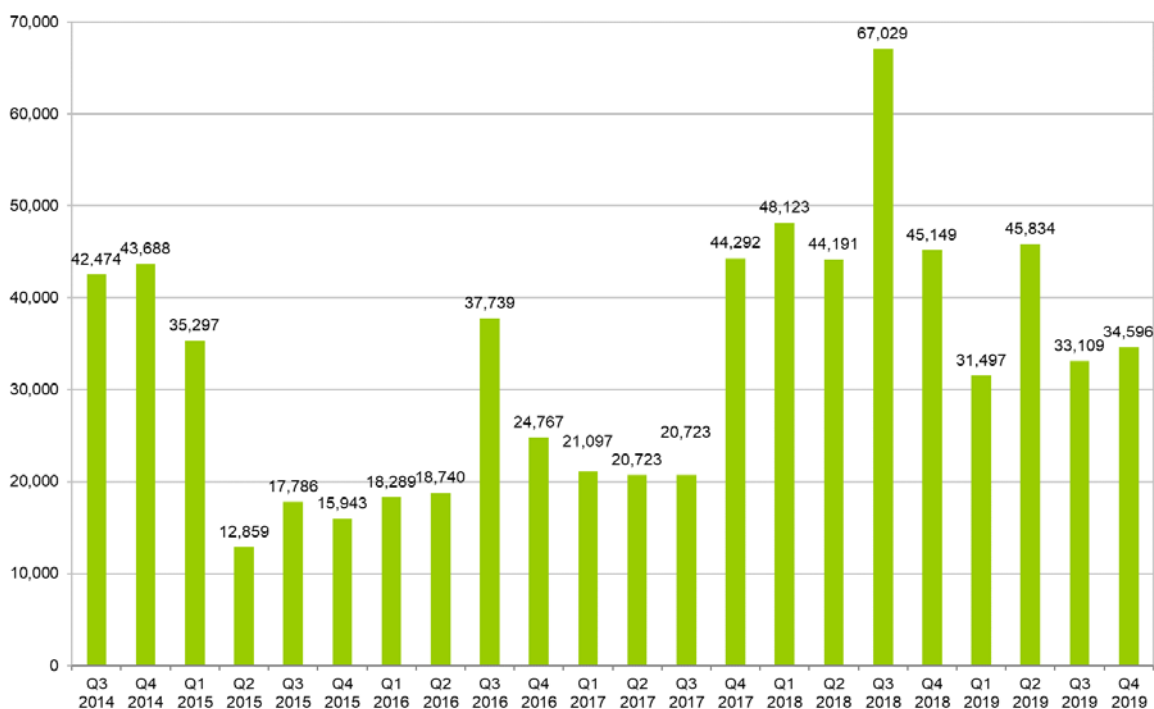
- 6.114 Figure 47 illustrates the number of (geographic and non-geographic) fixed numbers ported between RFTS SPs since Q3 2014. Fixed Number Portability (hereafter '**FNP**') allows consumers to switch RFTS SP while retaining their fixed number. In the Q4 2019, 33,109 numbers were ported between SPs (155,589 numbers in the preceding twelve months).<sup>745</sup> Over the last twelve months, an average of 38,897 numbers have been ported each quarter.
- 6.115 ComReg notes that the FNP database only records data on customers that retain their telephone number while switching between different RFTS SP's networks. Therefore, porting numbers presented in Figure 47 should not be considered as a full proxy for switching activity in the RFTS markets 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.

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<sup>744</sup> 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%).

<sup>745</sup> 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.

Figure 47: Fixed Numbers Ported Q3 2016 to Q4 2019<sup>746</sup>



Source: FNP database

**Preliminary conclusions on observable trends towards effective competition**

- 6.116 Having regard to the assessment in paragraphs 6.83 to 6.113 above, absent regulation in the Relevant RFTS Markets, ComReg’s preliminary view is that, on balance, Eircom, as the previously designated SMP SP would likely be sufficiently constrained by existing competition, suggesting a tendency towards effective competition.
- 6.117 In the Relevant RFTS Markets, ComReg’s preliminary view is that Eircom faces sufficient constraints from existing competition, having regard to the preliminary conclusions on the Relevant FACO Markets (paragraphs 7.300 to 7.303). 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.

**Potential Entry to the Relevant RFTS Markets**

- 6.118 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.

<sup>746</sup> ComReg QKDR data.

- 6.119 While Section 4 defined the Relevant RFTS Markets in terms of short to medium term constraints on the 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-term horizon.
- 6.120 In paragraph 6.19 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.
- 6.121 Below, ComReg considers the effectiveness of any competitive constraints arising from potential entry under each of these three scenarios. ComReg's preliminary view is that there is a likelihood of potential competition in the Bundled LL-RFTS market (Market 1b) and the HL-RFTS market (Market 1c) but that there is unlikely to be potential entry to the Standalone LL-RFTS (Market 1a). 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 incentives to enter the Bundled LL-RFTS market and offer such bundles. As noted in paragraph 6.62, economies of scope also arise in the provision of bundles comprising RFTS and broadband.

### **Building an independent network to provide RFTS**

- 6.122 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 Section 7, paragraphs 7.156 to 7.174.
- 6.123 As discussed at paragraph 6.49 above, there are a number of factors that may act as a barrier to this type of entry on the Relevant RFTS Markets:
- (a) The incumbent RFTS SP controls infrastructure that is difficult for a new entrant to replicate;
  - (b) The incumbent RFTS SP has a large customer base and diversified product range, and therefore benefits from significant economies of scale, scope and density;
  - (c) There are significant sunk costs that would be incurred when entering the Relevant RFTS Markets; and
  - (d) The incumbent RFTS SP benefits from a vertically-integrated structure.
- 6.124 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).
- 6.125 ComReg's preliminary view is that there is unlikely to be greenfield entry into the Relevant RFTS Markets.

- 6.126 Furthermore, it is ComReg's preliminary view that further 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 3.92, SIRO is rolling out an FTTP network, [REDACTED] [REDACTED]. However, NBI rollout is expected to take place over a seven-year period, commencing in 2020.<sup>747</sup> This may impact competition in the Relevant RFTS Markets as RFTS will be provided in bundles with broadband and NG broadband also facilitates HL-RFTS products such as Managed VoIP over SIP Trunk/Hosted PBX. Accordingly, in the short to medium term, a potential constraint on Eircom could emerge from additional RFTS SPs in these areas.

### Adapting an existing network to provide RFTS

- 6.127 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 summarised in paragraph 6.50, any 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 services.
- 6.128 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.
- 6.129 The Explanatory Note to the 2014 Recommendation 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.”<sup>748</sup>*
- 6.130 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.

<sup>747</sup> <https://www.dccae.gov.ie/en-ie/communications/topics/Broadband/national-broadband-plan/Pages/National-Broadband-Plan.aspx>

<https://nbi.ie/news/latest/2020/05/18/first-phase-of-national-broadband-plan-nbp-well-underway/>

<sup>748</sup> Explanatory Note to the 2014 EC Recommendation, page 23.



**Potential entry to the Standalone LL-RFTS Market (Market 1a)**

- 6.131 ComReg's preliminary view is 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. While SPs are unlikely to invest in building an independent network to provide RFTS, SPs are also unlikely to adapt an existing network to offer standalone RFTS, as there are higher margins to be earned on bundles of RFTS and broadband. Even where an SP maintains an FTTx broadband network, they are unlikely to offer standalone RFTS delivered over Managed VoIP, as the bulk of the cost stack is the broadband access component.<sup>749</sup> 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.<sup>750</sup>
- 6.132 Virgin Media provides bundles of RFTS (Managed VoIP) and broadband (and other services) but does not provide standalone 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 Managed VoIP.<sup>751</sup>

**Potential entry to the Bundled LL-RFTS Market (Market 1b)**

- 6.133 ComReg's preliminary view is that there is a likelihood of potential entry to the Bundled LL-RFTS market based on adapting an existing network to provide RFTS. SPs that currently maintain 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 either through Managed VoIP over broadband 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.

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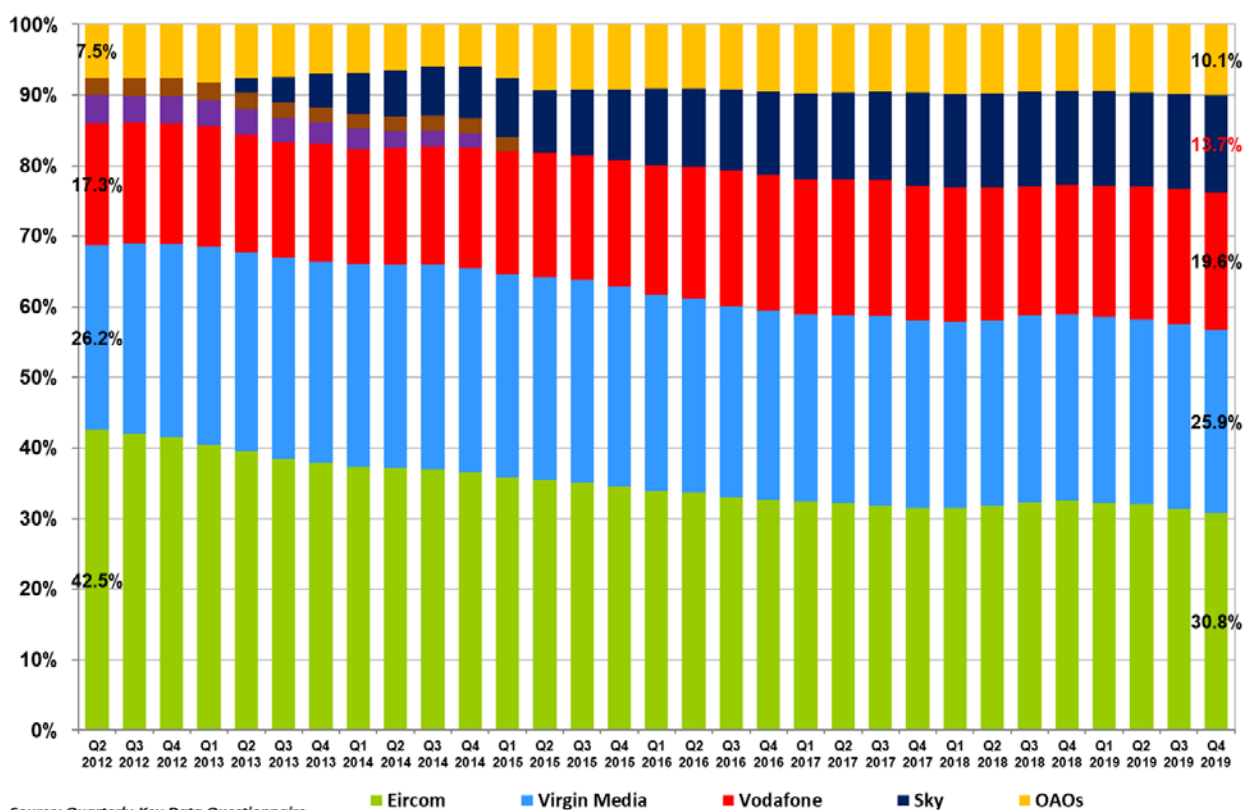
<sup>749</sup> For example, from an Access Seeker's perspective, the monthly rental on a standalone FTTP VUA line is €23.50 (150mbps) – see page 52 of Wholesale Bitstream Access Reference Offer ('**WBARO**'): [https://www.openeir.ie/Reference\\_Offers/](https://www.openeir.ie/Reference_Offers/). This 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.

<sup>750</sup> As of Q4 2019, Blueface had [X] RFTS subscriptions.

<sup>751</sup> Indicated to ComReg in bilateral meeting 12 October 2018.

- 6.134 In 2013, Sky entered the retail markets for broadband and RFTS, leveraging its considerable TV customer base and this was largely by virtue of access to wholesale services supplied by BT (which in turn relies on wholesale services purchased from Eircom). A number of smaller SPs are also making use of SIRO's FTTP rollout to offer broadband in regional areas around the country.<sup>752</sup> In late 2019, Pure Telecom announced its intention to offer high speed broadband using SIRO's network at various locations around the country.<sup>753</sup>
- 6.135 ComReg notes also that Eircom's retail market share in the market for fixed broadband (including both standalone broadband and bundles) has fallen considerably over the past five years, as illustrated below in Figure 48 (including on the basis of wholesale regulation). This would suggest that wholesale regulation has opened the market to a greater number of competitors and accordingly fostered greater competition, especially for broadband bundles.

Figure 48: Fixed Broadband Market Share (Subscriptions), Q2 2012 – Q4 2019



<sup>752</sup> SIRO has agreements in place with 19 retail partners, including Carnsore, Kerry Broadband, Nova Telecom, Rocket Broadband, and Westnet. <https://siro.ie/about-us/gigabit-hubs/>

<sup>753</sup> <https://www.irishtimes.com/business/technology/pure-telecom-to-bring-high-speed-broadband-to-rural-ireland-1.3670935>

**Potential entry to the HL-RFTS Market (Market 1c)**

6.136 ComReg's preliminary view is that there is some likelihood of entry to the HL-RFTS market for SPs that maintain their own network and for SPs that can 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 such business contracts for HL-RFTS tend to be of a sufficient scale to incentivise the use of broadband/IP networks to offer HL-RFTS. SIP Trunking and Hosted PBX services can be delivered through the use of 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 services, such that SPs with an existing broadband network could likely enter the HL-RFTS market and offer such bundles.

**Summary of preliminary conclusions on potential entry**

- 6.137 In paragraphs 6.131 to 6.136, 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 previously designated SMP SP in the Relevant RFTS Markets. Overall, ComReg's preliminary view is that, absent regulation in the Relevant RFTS Markets, it is likely that Eircom would be sufficiently constrained by potential competition, from behaving like an SMP SP.
- 6.138 ComReg considers that there is a likelihood of potential competition in the Bundled LL-RFTS market (Market 1b) and the HL-RFTS market (Market 1c) but that there is unlikely to be potential entry to the Standalone LL-RFTS market (Market 1a), 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, thus there are incentives to enter the Bundled LL-RFTS Market and offer bundles with broadband. As noted in paragraph 6.62, there are also economies of scope in the provision of bundles of RFTS and broadband.
- 6.139 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/WCA markets, and could prospectively offer Bundled LL-RFTS and HL-RFTS.
- 6.140 For the Standalone LL-RFTS market, ComReg considers that the 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

- 6.141 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.
- 6.142 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, although no timelines have been yet agreed for this process.<sup>754</sup> 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.
- 6.143 However, Eircom has, more recently, 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. This proposal, if implemented, would have the effect of pushing further out the 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. ComReg's preliminary views on phasing out of ISDN BRA are outlined in paragraphs 10.84 to 10.88.
- 6.144 ComReg notes that this programme may impact on the Relevant RFTS Markets and on the Relevant FACO Markets in a number of ways, as outlined below in Section 7, paragraphs 7.176 to 7.177.
- 6.145 ComReg's preliminary view 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 Preliminary Conclusions on Tendency of Relevant RFTS Markets towards Effective Competition

- 6.146 In paragraphs 6.81 to 6.177, 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 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 effectively compete with Eircom; and

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<sup>754</sup> [https://www.comreg.ie/media/dlm\\_uploads/2017/01/ComReg-1705.pdf](https://www.comreg.ie/media/dlm_uploads/2017/01/ComReg-1705.pdf)

(c) any expected or foreseeable technological and economic developments that will impact on competition within the time period of the market review.

- 6.147 ComReg's preliminary view is that the Relevant RFTS Markets are currently moving 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 encouraged by the 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.
- 6.148 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 preliminary view is, therefore, that the Relevant RFTS Markets are likely to fail the second criterion of the 3CT.
- 6.149 The trends identified above suggest that the Bundled LL-RFTS Market is characterised by greater levels of competition generated by 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 VoIP, on the basis of purchases of WLA or WCA from Eircom, SIRO, or – on a forward-looking basis - NBI. Such enhanced NG broadband availability also allows for the provision of HL-RFTS products over SIP Trunk or Hosted PBX, thus reducing any reliance on Eircom HL-FACO products. For the Standalone LL-RFTS Market, despite wider dispersion of market shares since the 2014 RFVA Decision, ComReg's preliminary view is that it is likely to continue to decline in absolute size (in terms of the number of end users) and the barrier to offering Standalone LL-RFTS services has been lowered by availability of wholesale access products, including FACO in the Regional FACO Market and WLA/WCA products from Eircom, SIRO, or – on a forward-looking basis - NBI.
- 6.150 Accordingly, ComReg's preliminary view is that, within the relevant time horizon for this market review, the Relevant RFTS Markets are likely to tend towards effective competition, based on evolving consumer preferences and technological developments. On that basis, ComReg's preliminary view is that the second of the 3CT criteria likely fails in relation to the Relevant RFTS Markets.

6.151 At least one of the three 3CT criteria must fail in order for the presumption in favour of *ex ante* regulation to be lifted.<sup>755</sup> Since ComReg's preliminary analysis suggests that the first and second criteria have failed, the presumption can be lifted, and ComReg's analysis indicates that, in principle, there are grounds to withdraw *ex ante* regulation of the 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 remaining criterion that completes the 3CT.

### 6.1.3 Criterion 3: The insufficiency of competition law alone to adequately address the market failure(s) concerned

6.152 *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.

6.153 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.

6.154 *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.

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<sup>755</sup> See page 5 of the Explanatory Note to the 2014 EC Recommendation: ".....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."

- 6.155 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.
- 6.156 The length of time involved in remedying competition problems by means of *ex post* competition law would be likely to render it less effective. 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**). In order to apply effective sanctions, 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.
- 6.157 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 the first two criteria of the 3CT are not met, this does not alter ComReg's overall conclusions on the Relevant RFTS Markets.

### Preliminary conclusions on insufficiency of competition law

- 6.158 For the reasons set out above, ComReg is of the preliminary view that competition law alone would not be adequate to address market failures, should they arise on the Relevant RFTS Markets. Accordingly, the third criterion passes in relation to the Relevant RFTS Markets. However, given ComReg's preliminary view that criterion 1 (paragraphs 6.76 to 6.80) and criterion 2 (paragraphs 6.146 to 6.151) 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 conclusions on the Relevant RFTS Markets.



### 6.1.4 Other NRA approaches to the 3CT

6.159 ComReg notes that, as of June 2020, five (of thirty) NRAs<sup>756</sup> have assessed their national RFVA/RFTS markets and concluded that the markets passed the 3CT test (i.e. continue to regulate RFVA/RFTS).<sup>757</sup> 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 high market shares 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 62: NRAs that continue to regulate RFTS Market as at June 2020**

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 to 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.

6.160 Table 63 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 RFTS market should, in principle, continue to be subject to *ex ante* regulation, in respect of the **barriers to entry**, and the **effective competition** criteria.

<sup>756</sup> Austria, Croatia, France, Ireland, and Italy. There are 28 EU countries, plus Switzerland (single market) and 3 EEA countries (Iceland, Liechtenstein and Norway). ComReg looked at 30 NRAs - EU 28, Switzerland and Norway.

<sup>757</sup> Source: Cullen International.

**Table 63: NRA reasons for passing Criteria 1 and 2 to regulate RFTS 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		

- 6.161 In relation to 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.
- 6.162 In respect of the **competition law criterion**, five 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.
- 6.163 For the 25 NRAs that have deregulated the RFVA/RFTS markets, Table 64 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 64: NRA reasons for failing Criteria 1 and 2 to deregulate RFTS markets**

Country	Year of Market Analysis	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 barriers to entry that are not of a transitional nature to enter 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 accesses).
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	In addition, incumbent to continue offering CPS on commercial basis
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 comes to such conclusion on the basis 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, the increased fixed-mobile convergence, the transition from services based on PSTN networks to VoIP services <sup>8</sup> 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	
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### 6.1.5 Preliminary Conclusions on the 3CT

6.164 Accordingly, and on a preliminary basis, ComReg has formed the view that, in respect of the candidate 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 RFTS Markets, to determine whether any SP or SPs on those markets hold positions of SMP.

## 6.2 Overall Preliminary Conclusions on RFTS Market Analysis

- 6.165 Having defined the Relevant RFTS Markets in Section 4 and carried out an assessment of the 3CT for these markets in paragraphs 6.10 to 6.164 above, ComReg is of the preliminary view that none of the three Relevant RFTS Markets continue to warrant *ex ante* regulation.
- 6.166 Table 65 below gives a summary of the 3CT outcome for the Relevant RFTS markets, with ComReg's preliminary view that the 3CT fails for the Relevant RFTS Markets.

**Table 65: Summary of 3CT for Relevant RFTS Markets**

Criteria	Pass or Fail:
<b>Criterion 1 – Presence of high and non-transitory barriers to entry</b>	Fail
<b>Criterion 2 – Tendency towards effective competition within the relevant time horizon</b>	Fail
<b>Criterion 3 – Insufficiency of competition law alone to adequately address the market failures(s) concerned</b>	Pass
<b>Outcome</b>	Fail 3CT

- 6.167 ComReg's preliminary view 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 proposes to withdraw existing regulation from the Relevant RFTS Markets.
- 6.168 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 RFVA Markets

- 6.169 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 Regulations<sup>758</sup> allows ComReg to give reasonable notice to any parties which it considers to be affected by the withdrawal of such obligations.
- 6.170 As discussed above in paragraphs 6.10 to 6.167, ComReg's preliminary view is that the Relevant RFTS Markets are not susceptible to *ex ante* regulation:
- (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 SIP Trunk or Hosted PBX forms of Managed VoIP delivered over NGA broadband on a standalone basis or on a bundled basis together with any of broadband, television or mobile services.
- 6.171 In particular, ComReg's preliminary view 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. Where a market is effectively competitive, ComReg is required, pursuant to Regulation 27(3), to remove regulation from those markets.
- 6.172 ComReg accordingly proposes to withdraw existing regulatory obligations on Eircom, given its preliminary finding that the Relevant RFTS Markets are not susceptible to *ex ante* regulation. In this respect, ComReg proposes that all existing SMP obligations should be withdrawn from the Relevant RFTS Markets on the date at which ComReg's final Decision takes effect.
- 6.173 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 this avoidance of doubt, this remedy would be withdrawn under ComReg's proposals.

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<sup>758</sup> This provision is mirrored at Article 67 of the EECC.

- 6.174 As of Q4 2019, the total number of active (Eircom retail PSTN and ISDN BRA) lines availing of the RPC obligation amounted to [X [REDACTED] X], the majority of which were PSTN. Many of these end users are located in urban EAs where there are several competing SPs present and there is significant coverage of NG broadband. As noted in Section 4, paragraph 4.76, the number of Standalone LL-RFTS end users is in decline.
- 6.175 Withdrawal of the RPC remedy would be effective as at the date that ComReg's final Decision takes effect. ComReg's preliminary view is that it is not necessary to provide a sunset (withdrawal) period (i.e. give notice) in relation to the RPC remedy. ComReg's preliminary view is that withdrawal of the RPC remedy would not cause disruption to parties such as Access Seekers and such a withdrawal is not required to allow Access Seekers to make alternative arrangements for their end users, absent regulation. In particular, ComReg notes that, in the case of the RPC remedy, it applies only to Eircom's pricing of PSTN and ISDN BRA to its own retail arm, and as such, ComReg considers disruption to likely be minimal.
- 6.176 However, should any stakeholders have residual concerns in relation to the pricing of RFTS in the Standalone LL-RFTS market, ComReg notes that a USO in relation to RFTS is in place.
- 6.177 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.<sup>759</sup>
- 6.178 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.<sup>760</sup>
- 6.179 The 2016 USO Decision requires, *inter alia*, that "*the USP shall apply geographically averaged prices throughout the State for the Connections and PATS.*"<sup>761</sup> This relates to the designated services in accordance with Regulation 3, namely, a connection and PATS.<sup>762</sup>
- 6.180 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.

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<sup>759</sup> S.I. No. 337/2011 - European Communities (Electronic Communications Networks and Services) (Universal Service and Users' Rights) Regulations 2011.

<sup>760</sup> "Universal Service Requirements - Provision of access at a fixed location (AFL USO)", Decision D05/16, ComReg Document 16/65, 29 July 2016.

<sup>761</sup> '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.

<sup>762</sup> For the avoidance of doubt, this does not apply to bundled products.



- 6.181 Additionally, Regulation 8 of the Universal Service Regulations gives ComReg the power to monitor the evolution of 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 considered the existing RPC remedy in place (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 placed on the USP to charge according to GAP principles.
- 6.182 In respect of protecting retail consumer interests, ComReg intends to issue a public consultation on the USO which will, *inter alia*, address the appropriateness of end user affordability measures, in advance of the expiry of the existing USO on 30 June 2021.
- 6.183 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 was decided 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 i.e. margin squeeze/horizontal leverage.
- 6.184 In the current market review, ComReg notes that the size of the Standalone LL-RFTS market has fallen as end users in this market have taken up bundled products in 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 4.281, 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 6.149, ComReg does not foresee competition problems in the Standalone LL-RFTS market, particularly insofar as market shares have become more dispersed since the 2014 RFVA Decision.

**Q. 6. Do you agree with ComReg's preliminary conclusions on the 3CT for the Relevant RFTS 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.**



# 7 FACO Competition Analysis – 3CT and SMP

## 7.1 Three Criteria Test for Relevant FACO Markets

### 7.1.1 Overview

- 7.1 ComReg notes that the 2014 Recommendation does not include FACO (or FA or FVCO) 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, at national level, any of the four candidate FACO markets defined at Section 6 above continue to warrant regulation. The 3CT set out in the 2014 Explanatory Note, and reiterated at 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 in question should be deregulated.
- 7.5 The following sub-sections consider the 3CT criteria, 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 proposes to define four Relevant FACO Markets. The 3CT assessment which follows analyses the two Urban FACO Markets and two Regional FACO Markets.

## 7.1.2 Criterion 1: High and non-transitory barriers to entry

- 7.7 The 2014 Explanatory Note identifies that high, non-transitory barriers to entry may be either structural, or legal and 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.
  - (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

- 7.8 ComReg has examined the nature and extent of any barriers to firms both entering and, subsequently, expanding<sup>763</sup> in the Regional FACO Markets.
- 7.9 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 2014 Explanatory Note:<sup>764</sup>
- “...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.”*
- 7.10 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.
- 7.11 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.
- 7.12 A number of factors may act as structural barriers to entry in the Relevant FACO Markets:

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<sup>763</sup> 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.

<sup>764</sup>At page 9.

- (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.

7.13 ComReg notes that there appears to be a divergence in respect of how high and how 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.

#### **Eircom controls infrastructure that is difficult for a new entrant to replicate**

- 7.14 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 end users downstream across the footprints of both the Urban and the Regional FACO Markets. Eircom is currently upgrading its FNA network to FTTx. Its FTTx (VDSL + FTTP) network already passes 1.9 million (or 80%) 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 5.30 above, Eircom also proposes to modernise its PSTN (and ISDN FRA and ISDN IPRA) 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.
- 7.15 Eircom is, by far, the largest FACO supplier in the Regional FACO Markets (99% market share), and is also the largest supplier of RFTS in the retail footprint of the Regional FACO Markets, as set out at Table 60 above. Eircom controls an extensive access infrastructure that is not easily replicated by its competitors.<sup>765</sup> 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.

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<sup>765</sup> 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.

- 7.16 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, 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 also closely reflect LL-FACO market shares, in particular given that over 99.5% of SB-WLR and WLV lines are sold on the LL-FACO market.
- 7.17 To enter 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 attractive Regional FACO Markets, as Table 66 indicates:

**Table 66: Eircom, Virgin Media, SIRO, NBI network rollout, May 2020**

Network Operator	Rollout to date	Coverage date %	to Target rollout	Target coverage %
<b>Eircom FNA</b>	2.4 million	100%	2.4 million	100%
<b>Eircom FTTx (VDSL + FTTP)</b>	1.9 million <sup>766</sup>	80%	2.4 million	100%, by 2020
<b>Virgin Media (Q4 2019)</b>	939,900	39%	N/A	N/A
<b>SIRO</b>	320,000	13%	450,000	19%
<b>NBI</b>	0	0%	537,000 <sup>767</sup>	22%

<sup>766</sup>

[https://www.eir.ie/opencms/export/sites/default/content/pdf/IR/news/eir\\_Q3\\_FY20\\_Results\\_Press\\_Release.pdf](https://www.eir.ie/opencms/export/sites/default/content/pdf/IR/news/eir_Q3_FY20_Results_Press_Release.pdf)

<sup>767</sup> While the NBI rollout consists of c.537,000 premises, this amounts to only 440,000 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).

- 7.18 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 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.
- 7.19 ComReg examines FACO network replicability under the following headings:
- (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**

- 7.20 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.
- 7.21 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.

- 7.22 Nevertheless, while Eircom provides FACO on a national basis, ComReg's preliminary 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 5.289 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 – neither of which have national coverage – [REDACTED] [REDACTED]), 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).
- 7.23 FACO can be provided either by deploying new network infrastructure, or by purchasing upstream wholesale inputs (on either a regulated or non-regulated basis). 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 provide increased economies of scope for SPs, given that it can be used to deliver multiple services.
- 7.24 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 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**

- 7.25 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 as present in the footprint of the Regional FACO Markets, although ComReg acknowledges that the FTTP network to be rolled out by NBI in the IA on a non-commercial basis will, over time, assist in eroding such barriers.
- 7.26 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 VoB-based RFTS to their own end users. Table 66 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.
- 7.27 Eircom is the sole NG broadband network present at 680 EAs which fall into the footprint of the Regional FACO Markets. At least two NG broadband networks are interconnected at 171 EAs (37%) 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**

- 7.28 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 proposal set out at Section 11 below to carry out a mid-term assessment by re-applying the criterion used to designate EAs to either of the Urban or Regional FACO Markets and whether, accordingly, SMP remedies should be applied in those EAs (hereafter, the '**Mid-term Assessment**').
- 7.29 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.
- 7.30 SPs require access to infrastructure in order 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).
- 7.31 Each of the above approaches would encounter significant entry barriers, and the degree to which each would be potentially effective for replicating Eircom FACO would likely vary. In this respect, ComReg assesses below whether an SP's ability to enter the Regional FACO Markets by means of one of the above entry strategies outlined at paragraph 7.30 above would effectively constrain Eircom's behaviour in the Regional FACO Markets over the period of this review.
- 7.32 ComReg is of the preliminary view that, in the Regional FACO Markets, which typically encompass less densely-populated areas, a market entrant is unlikely to 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. i.e., additional networks may struggle to generate the necessary level of economies of scale, scope and density. The analysis set out at Section 6 above suggests that the Regional FACO Markets contain a large cohort of less-densely populated EAs.

- 7.33 In the Urban FACO Markets, which typically encompass more densely-populated areas, 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 NG broadband networks (pending NBI rollout). Furthermore, wholesale NG broadband inputs from Eircom or SIRO are not present to a sufficient extent in the Regional FACO Markets to allow SPs to compete with Eircom's focal FACO product.
- 7.34 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.

#### **Eircom benefits from significant economies of scale, scope and density**

- 7.35 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 are 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 given part of the network, e.g. an exchange.
- 7.36 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.

- 7.37 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.
- 7.38 ComReg notes that there are 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, on a preliminary basis, that current or potential retail<sup>768</sup> economies of scale and scope are sufficient to justify upstream entry into the Regional FACO Markets through the building of a network to provide FACO (noting that BT has launched a White Label VoIP FACO product without engaging in infrastructure investment).

### **Economies of Scale**

- 7.39 **Economies of scale** describe the cost advantages a firm benefits from as it increases its 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 in the delivery of FACO than other SPs.
- 7.40 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.

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<sup>768</sup> 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/>

(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).

7.41 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 provision of FACO by means of wholesale Managed VoIP, and which, as of Q1 2020, passed 80% of premises in the State. Eircom is, therefore, likely to face lower average and marginal costs of providing FACO, relative to other SPs.

7.42 BT appears to have achieved sufficient economies of scale to compete in the Relevant FACO Markets by providing White Label VoIP on the basis of its purchases of Eircom and SIRO WLA. ComReg is not aware of other SPs having achieved sufficient economies of scale to warrant the provision of FACO.

7.43 ComReg's preliminary 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 been characterised by 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 degree of replication of network infrastructure capable of delivering FACO to date indicates that other SPs have had limited success in achieving economies of scale commensurate with those achieved by Eircom.

### **Economies of Scope**

7.44 **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.

- 7.45 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 wholesale NG broadband access (on a merchant market or self-supply basis) of 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 rollout of NBI in the IA over the next seven years.
- 7.46 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 4 above, there is an increasing trend towards the provision of RFTS as part of broader product bundles, but 18% of RFTS subscriptions were purchased on a standalone basis as of Q4 2019. 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 potentially increasing the costs associated with entry.

### **Economies of Density**

- 7.47 **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.

- 7.48 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.<sup>769</sup>
- 7.49 Secondly, in April 2017, as set out in the Commitment Agreement between Eircom and the Department of Communications, Climate Action, and Energy,<sup>770</sup> 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 actively seek to roll services out to premises which it considered to be prospectively unprofitable to service.
- 7.50 ComReg therefore concludes, on a preliminary basis, 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.

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<sup>769</sup> 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.

<sup>770</sup> <https://www.dccae.gov.ie/documents/Commitment%20Agreement.pdf>

- 7.51 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.
- 7.52 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.
- 7.53 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 its economies of scale, scope and density in the provision of FACO products. These economies are likely to result in high barriers to entry for other SPs who may seek to enter the Regional FACO Markets.

**Preliminary conclusion on economies of scale, scope and density**

- 7.54 Overall, this suggests that Eircom's capacity to benefit from economies of scale, scope and density, compared to 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 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 an advantage over 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.
- 7.55 ComReg accordingly considers that there is sufficient evidence to suggest that economies of scale, scope, and density raise greater barriers to entry to the Regional FACO Markets, than to the Urban FACO Markets, as demonstrated by the presence of SPs (SIRO and Virgin Media) on the Urban FACO Markets.

**Entering the Relevant FACO Markets incurs considerable sunk costs**

- 7.56 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).



- 7.57 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.
- 7.58 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.
- 7.59 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.<sup>771</sup>
- 7.60 Sunk costs therefore raise the 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.
- 7.61 ComReg’s preliminary 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 portion of the sunk costs initially incurred by Eircom in rolling out FNA networks capable of delivering FACO are likely to already be amortised; and

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<sup>771</sup> OECD, Barriers to Entry, (DAF/COMP(2005)42), 2006, Paris.

- (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 certain degree of commercial risk for potential entrants because the likelihood of excess supply lowers the expected profits for entrants.

7.62 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 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**

7.63 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 FTTx<sup>772</sup> network, Eircom is also likely to incur additional sunk costs.<sup>773</sup> 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.

7.64 The level of sunk cost 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;
- (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.

7.65 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 being 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.

<sup>772</sup> Eircom provides retail and wholesale services over its FNA and broadband networks.

<sup>773</sup> Eircom's FTTx deployment re-utilises existing assets such as ducts, trenches, poles and exchanges.

- 7.66 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).
- 7.67 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 propose to 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?**

- 7.68 Network rollout is a resource-intensive exercise, which is 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.
- 7.69 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 broadband technology, 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.
- 7.70 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.

- 7.71 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.
- 7.72 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 a Managed VoIP platform, and investing in the necessary infrastructure to interconnect with third party networks.
- 7.73 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 preliminary 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 the FACO wholesale to Access Seekers, or both.
- 7.74 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 incur<sup>774</sup> 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 5.30 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 769 above, ComReg is of the preliminary 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.

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<sup>774</sup> Eircom's FTTx deployment utilises some existing assets, including ducts, trenches, and poles.

- 7.75 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.
- 7.76 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**

- 7.77 Building a new independent network requires very significant financial and time investment, as exemplified by, for instance, SIRO or, on a forward-looking basis, 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.
- 7.78 Building an independent network to provide FACO would require significant investment. The proportion of expenditure on, for example, trenches, ducts and over-ground/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 preliminary 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 other things 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 an increased risk of non-recovery of sunk costs.

- 7.79 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 preliminary 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.
- 7.80 Prospectively, Eircom will face a greater level of competition in the Regional FACO Markets as NBI rolls out to the IA. However, as noted earlier, ComReg's preliminary view is that, given that, as of June 2020, no rollout has yet occurred (although surveying work is ongoing),<sup>775</sup> 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. However, ComReg will keep this under review, including by means of the Mid-term Assessment detailed at Section 11 below.
- 7.81 ComReg is of the preliminary view that the sunk costs faced by a new entrant considering building an independent network to provide FACO would likely be far in excess of the sunk costs faced by Eircom, and would likely amount to a significant barrier to entry.
- 7.82 ComReg is further of the preliminary 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.
- 7.83 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 preliminary 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, in areas where it has rolled out, NBI has the potential to generate such a constraint at local level.

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<sup>775</sup> <https://nbi.ie/news/latest/2020/05/18/first-phase-of-national-broadband-plan-nbp-well-underway/>.

**Relevant FACO Market entry option 2: Adapt an existing network to provide FACO**

- 7.84 ComReg has considered the extent to which potential entry in the Regional FACO Markets by an existing vertically-integrated RFTS provider, or an existing network operator, would be likely to occur over the period of this market review to effectively constrain Eircom.
- 7.85 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.
- 7.86 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.
- 7.87 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 levels would also be a relevant factor for Virgin Media to consider when assessing its capacity to recover its sunk costs. As noted in paragraph 5.147, [REDACTED] though it may be technically feasible to do so.
- 7.88 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.<sup>776</sup> However, SIRO would also incur an unavoidable level of sunk costs associated with, *inter alia*, the provision of a wholesale FVCO platform.
- 7.89 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.

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<sup>776</sup> SIRO has not expressed any interest in entering the Relevant FACO Markets.



- 7.90 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.<sup>777</sup> 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.
- 7.91 ComReg is accordingly of the preliminary 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 on a preliminary basis that entry option 2 is unlikely to eventuate on either of Urban FACO Markets or the Regional FACO Markets.

**Relevant FACO Market entry option 3: Use wholesale NG broadband inputs**

- 7.92 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, NBI network rollout within the IA is scheduled to commence in 2020 in the footprint of the Regional FACO Markets, and will make available WLA products 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.
- 7.93 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.
- 7.94 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.
- 7.95 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.

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<sup>777</sup> 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.

- 7.96 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.
- 7.97 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.<sup>778</sup> 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 near or total absence of such NGA networks. In the absence of such networks, an Access Seeker cannot enter the Regional FACO Markets by purchasing wholesale NG broadband inputs (pending NBI rollout).
- 7.98 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.
- 7.99 ComReg is of the preliminary 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.

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<sup>778</sup> As of Q4 2019, there were 381,308 Managed VoIP lines in the footprint of the Urban FACO Markets, and 54,189 Managed VoIP lines in the footprint of the Regional FACO Markets, a split of 88% to 12%.

- 7.100 ComReg's preliminary 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.
- 7.101 Accordingly, ComReg's preliminary view is that entry to, and expansion in, the FACO Markets would involve considerable sunk costs for SPs that do not already own a network capable of delivering FACO. Sunk costs constitute 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 inputs from Eircom or SIRO, and could potentially launch a Managed VoIP platform using those inputs.
- 7.102 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 have been able to overcome the barriers to entry generated by sunk costs on those markets.

### Capacity Constraints

- 7.103 ComReg has also considered whether capacity constraints may act as a barrier to entry or expansion in the Relevant FACO Markets. Capacity constraints describes a situation 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.
- 7.104 ComReg understands that the delivery of voice traffic over broadband 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 100kbits/s.

- 7.105 For example, using the G.722 codec to deliver a Managed VoIP call, which requires average bandwidth of 80 Kbps,<sup>779</sup> 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.
- 7.106 ComReg accordingly considers that capacity constraints are, therefore, unlikely to act as a significant barrier to entry on a forward-looking basis on any of the four Relevant FACO Markets.

### **Eircom benefits from being vertically-integrated**

- 7.107 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 actually engage in such discriminatory behaviour; the threat of such behaviour occurring may suffice to act as a disincentive to new market entry.
- 7.108 Eircom retains at least 99% of FACO supply in the Regional FACO Markets, and 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.<sup>780</sup>

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<sup>779</sup> <https://www.avoxi.com/blog/how-much-bandwidth-is-needed-for-voip/>

<sup>780</sup> 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.

- 7.109 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.
- 7.110 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.
- 7.111 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.
- 7.112 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 2019 – 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.
- 7.113 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.

7.114 Accordingly, ComReg's preliminary 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.

## Legal, regulatory and administrative barriers to entry

### Introduction

- 7.115 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).
- 7.116 Unlike the structural barriers to entry discussed above, legal, regulatory and administrative barriers to entry are derived not from economic conditions, but rather 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, which sets 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.
- 7.117 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, therefore creating a legal monopoly where only one firm is authorised to operate. ComReg is of the preliminary view that legislation and case law now generally promote market entry, rather than erecting or maintaining barriers to entry.
- 7.118 ComReg also assesses whether regulations enforced by NRAs or the EC are capable of erecting regulatory barriers to entry to the Relevant FACO Markets. Examples of such terms would include regulation regarding the prices which SPs active at both the wholesale and retail levels can charge for their products and services, or conditions surrounding access to an incumbent's network to facilitate the entry of new firms.



7.119 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 or checks required of new entrants.

### Legal Barriers

7.120 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, based on all available evidence, ComReg is of the view that no substantial legal barriers to entry to the Relevant FACO Markets remain in place.

7.121 As outlined in the Framework Regulations, any ‘*Authorised Undertaking*’<sup>781</sup> 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...”*

7.122 Instead of 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.

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<sup>781</sup> 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.



- 7.123 Under section 53 of the Communications Regulation Act 2002<sup>782</sup> and section 254(1) of the Planning and Development Act 2000,<sup>783</sup> all Authorised Undertakings also 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.
- 7.124 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

- 7.125 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.<sup>784</sup> 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.
- 7.126 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,<sup>785</sup> ComReg is of the preliminary view that the delivery of wholesale NG broadband inputs, specifically WLA and WCA, may facilitate direct demand-side constraints on the Relevant FACO Markets, when packaged with a wholesale VoIP platform, or an indirect retail constraint on the Relevant FACO Markets, when packaged with a 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 NG WCA is predominantly confined to the footprint of the Urban FACO Markets. Accordingly, the potential constraints generated by NG WLA or NG WCA are, typically, not present on the Regional FACO Markets.

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<sup>782</sup> 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>

<sup>783</sup> Planning and Development Act 2000 (No. 30 of 2000).  
<http://www.irishstatutebook.ie/eli/2000/act/30/enacted/en/html>

<sup>784</sup> 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.

<sup>785</sup> See paragraphs 5.218 to 5.239.

- 7.127 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.
- 7.128 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 preliminary 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 NBI rollout in the IA), the remedies applied on the national WLA Market and the Regional WCA Market assure access to wholesale broadband offered over Eircom's FNA network. 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.
- 7.129 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

- 7.130 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/or
  - (c) Negotiation of interconnection with, or attainment of 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.

- 7.131 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 (hereafter, '**RMO**'), which acts as the sole agency dealing with the processing of road opening licences for all local authorities in the country, other than Dublin City Council (hereafter, '**DCC**') which still maintains its own separate licencing system.
- 7.132 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 region*", 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 (hereafter, '**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 scope<sup>786</sup> 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.
- 7.133 Planning submissions in this case are assessed in line with the normal procedures undertaken by each of the other planning authorities.
- 7.134 On a preliminary basis, ComReg concludes that the need to satisfy administrative criteria generates a barrier to entry, but that this barrier is not substantial. Moreover, the magnitude of this barrier to entry 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 much more substantial than the barriers arising from the associated administrative requirements.

### Preliminary conclusions on barriers to entry

- 7.135 ComReg has formed the preliminary view that:
- (a) The Regional FACO Markets are characterised by the presence of high and non-transitory structural barriers to entry;

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<sup>786</sup> 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.

- (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.

7.136 In respect of structural barriers to entry, ComReg is of the preliminary 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. 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 NBI), 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 a level of sunk costs, suggesting that these barriers to entry have been overcome, and are therefore not necessarily high and/or non-transitory;

- (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 four Relevant FACO Markets.

7.137 Accordingly, ComReg has formed the preliminary 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.

7.138 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, the first criterion has passed. The assessment now proceeds to the second and third criteria. In respect of the Urban FACO Markets, the first criterion 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.

### 7.1.3 Criterion 2: Is the market tending towards effective competition within the relevant time horizon?

7.139 The second criterion to be assessed is whether the Relevant FACO Markets are likely to tend towards effective competition over the lifetime of this market review.<sup>787</sup> By definition, it is necessary to carry out the assessment of the second criterion on a dynamic and forward-looking basis.

7.140 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 7.141 to 7.155 below);
- (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 effectively compete with the incumbent (see paragraphs 7.156 to 7.174 below); and

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<sup>787</sup> 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.

- (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 7.175 to 7.188 below).

### Whether there are observable trends towards effective competition

- 7.141 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).
- 7.142 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, taking account of market shares based on both FACO and RFTS volumes is a more accurate indicator of the extent of competition within the Relevant FACO Markets.

### Volume of FACO lines provided by each FACO SP

- 7.143 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 slightly by 4% to 526,115 access paths between the publication of the 2015 FACO Decision in Q3 2015, and Q4 2019. BT's White Label VoIP product was launched in January 2019, and, as of Q4 2019, [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 a number of SPs choose to self-supply FACO.
- 7.144 As of Q4 2019, as set out at Table 67 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 67: % purchase share of direct and indirect FNA lines in the presence of regulation, Q4 2019 [REDACTED]**

	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	████	████	████	████
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

7.145 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 68: % purchase share of direct and indirect merchant market FNA lines, Q4 2019 [REDACTED]**

	Urban FACO Market		Regional FACO Market	
	LL-FACO	HL-FACO	LL-FACO	HL-FACO
BT	████	████	████	████
Digiweb	████	████	████	████
Pure Telecom	████	████	████	████
Virgin Media	████	████	████	████
Vodafone	████	████	████	████
OAO & Other VoIP	████	████	████	████
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

### Volume of RFTS subscriptions provided by each RFTS SP to end users

7.146 As set out at Table 69 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 5%, no other SP experienced changes of greater than 2%. On a national basis, Eircom continues to be substantially the largest provider of RFTS:



**Table 69: RFTS market shares, Q3 2015 – Q4 2019**

	2015 Q3	2016 Q3	2017 Q3	2018 Q3	2019 Q4	Change
<b>Eircom</b>	40.4%	38.8%	37.9%	38.8%	38.8%	-1.6%
<b>Virgin Media</b>	24.7%	24.3%	24.4%	24.3%	23.9%	-0.8%
<b>Vodafone</b>	15.4%	15.6%	14.7%	13.7%	13.9%	-1.5%
<b>Digiweb</b>	4.2%	3.5%	3.0%	2.2%		-2.2% <sup>788</sup>
<b>Sky</b>	8.8%	10.9%	12.3%	13.3%	13.9%	+5.1%
<b>Pure Telecom</b>	2.1%	2.6%	3.2%	3.4%	3.9%	+1.8%
<b>OAOs</b>	4.6%	4.2%	4.4%	4.3%	5.6%	+1.0%

7.147 As set out at Table 53 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

7.148 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 70 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 70: Changes in QKDR Fixed voice metrics, Q3 2015 – Q4 2019**

Access Paths	2015 Q3	2019 Q4	Change
Total Direct Fixed access paths	946,946	682,884	-28%
Carrier Pre-Select access paths	20,159	6,414	-68%
Wholesale Line Rental access paths	371,191	267,278	-28%
White Label Voice access paths	175,852	258,837	47%
<i>Total Indirect Fixed Access Paths</i>	567,202	532,529	-6%
<b>Total Direct &amp; Indirect Access Paths</b>	<b>1,514,148</b>	<b>1,215,413</b>	<b>-20%</b>

<sup>788</sup> 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.

PSTN access paths	1,174,316	968,839	-17%
ISDN Basic access paths	125,328	94,818	-24%
ISDN Fractional access paths	54,544	37,216	-32%
ISDN Primary access paths	159,960	114,540	-28%
<i>Total ISDN Access Paths</i>	339,832	246,574	-27%
<b>Total PSTN and ISDN Access Paths</b>	<b>1,514,148</b>	<b>1,215,413</b>	<b>-20%</b>
Fixed Voice Retail Revenues (000's)	€160,666	€130,588	-19%
<b>Fixed Voice Traffic (000 Minutes)</b>	<b>2015 Q3</b>	<b>2019 Q4</b>	
Domestic Fixed to Fixed	553,518	265,896	-52%
Fixed International Outgoing	211,771	98,243	-54%
Domestic Fixed to Mobile	147,962	111,867	-24%
Fixed Other/Advanced	174,129	118,381	-32%
<b>Total Fixed Voice Minutes</b>	<b>1,087,380</b>	<b>594,387</b>	<b>-45%</b>
<b>Fixed Subscriptions</b>	<b>2015 Q3</b>	<b>2019 Q4</b>	
Voice-Over Broadband Subscriptions	387,581	499,813	29%
Fixed Voice Residential Subscriptions	1,279,158	1,190,753	-7%
Fixed Voice Business Subscriptions	172,416	210,568	22%
<b>Total Fixed Voice Subscriptions</b>	<b>1,451,574</b>	<b>1,401,321</b>	<b>-3%</b>

- 7.149 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.
- 7.150 Since Q3 2015, Managed VoB RFTS subscriptions have increased by 29% to almost 500,000 subscriptions, while over the same time period, total RFTS subscriptions delivered over FNA decreased by 2%. 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 35% as of Q4 2019.
- 7.151 Managed VoB lines account for approximately 99% of all Managed VoIP lines. Accordingly, Table 71 below provides a reasonably accurate approximation of total Managed VoIP lines across the Urban 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.

- 7.152 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 6% since the 2015 FACO Decision, while total Managed VoB subscriptions have increased by 29%. ComReg data indicate that 99% 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, [REDACTED] [REDACTED])
- 7.153 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 2%. Looking at the provision of Managed VoIP lines on the Urban FACO Markets and the Regional FACO Markets, as of Q4 2019, 12% of total Managed VoIP lines are provided in the footprint of the Regional FACO Markets, while 88% are provided in the footprint of the Urban FACO Market.

**Table 71: Managed VoIP lines by Geographic FACO Market, Q4 2019 [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]
<b>Total</b>	[REDACTED]	<b>100%</b>	[REDACTED]	<b>100%</b>

- 7.154 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 95% of Managed VoIP lines.

### Summary of preliminary conclusions on observable trends towards effective competition

- 7.155 Accordingly, 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 only, where alternative NGA infrastructure capable of carrying Managed VoIP traffic has been rolled out to a sufficient 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

- 7.156 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.
- 7.157 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 who are rolling out, or intend to roll out, network infrastructure, but who are not currently, and do not intend to become, active at the RFTS level (e.g. SIRO and NBI).

### Greenfield Entrant

- 7.158 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.
- 7.159 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 delivered by means of White Label VoIP. ComReg is of the preliminary 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, in particular, the need to generate sufficient traffic volumes to support the cost of infrastructure investment.

7.160 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

- 7.161 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 purchase 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.
- 7.162 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.
- 7.163 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.
- 7.164 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

- 7.165 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.
- 7.166 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.
- 7.167 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.
- 7.168 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.



7.169 **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 it has specifically ruled out, in correspondence with ComReg, offering FACO on its CATV network on a merchant market basis.

### Wholesale-only Network Operators

7.170 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.

7.171 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.

7.172 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 5.129 above, NBI is entitled, subject to certain restrictions, to offer wholesale fixed voice telephony products.

7.173 ComReg understands that neither SIRO nor NBI intends to offer wholesale Managed VoIP. ComReg is, therefore, of the preliminary view that wholesale-only network operators are unlikely to enter the Relevant FACO Markets.

### Summary of preliminary conclusions on potential entry

7.174 ComReg has considered the potential for different types of SP to enter the Relevant FACO Markets. ComReg's preliminary 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;





7.177 However, as set out at paragraph 5.30 above, Eircom has, more recently, 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.<sup>790</sup>

### Ongoing rollout of NG networks capable of delivering Managed VoIP

7.178 As set out in detail at paragraphs 7.17 to 7.18 above, Virgin Media, SIRO, and Eircom all continue to roll out their respective NG networks, while NBI is likely to commence rollout of its NG network in the footprint of the IA in 2020.

7.179 As set out at paragraphs 5.61 to 5.65 above, standalone FACO may not, in fact, 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 preliminary conclusions on expected or foreseeable technological and economic developments

7.180 Accordingly, ComReg considers, on a preliminary basis, 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 effective competition in the footprint of the Regional FACO Markets, however, this may change in due course, pending rollout of NBI in the IA. The presence of such competition arising *inter alia* from indirect retail constraints, is highly dependent on the sufficient presence of NG broadband networks at EAs.

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<sup>790</sup> See paragraphs 10.84 to 10.88 for further discussion on this point.

## Overall Preliminary Conclusions on Tendency of the Relevant FACO Markets towards Effective Competition

- 7.181 In paragraphs 7.139 to 7.180, 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) 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.
- 7.182 ComReg's provisional assessment is that the Urban FACO Markets are likely to be tending towards effective competition on a forward-looking basis. Eircom 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.
- 7.183 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 the (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.
- 7.184 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 preliminary view is that the Urban FACO Markets are likely to fail the second criterion of the 3CT on the basis that they are tending towards effective competition.
- 7.185 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.

- 7.186 In contrast, ComReg's provisional 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 since Q3 2015, Eircom sales of indirect access lines have declined by only 4% on the Regional FACO Markets, which indicates that demand for FACO is 'sticky' and does not respond immediately, or proportionately, to changes in demand for RFTS.
- 7.187 SP network rollout in the footprint of the Regional FACO Markets has been limited. Accordingly, it is unlikely that, on the basis of network coverage, effective competition will be provided by the provision of FACO or RFTS using wholesale NG broadband inputs, pending rollout of NBI in the IA.
- 7.188 Accordingly, ComReg's preliminary view is that, within the relevant time horizon for this market review, the candidate 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 preliminary view is, therefore, that the second 3CT criterion is likely to pass in relation to the Regional FACO Markets.

#### **7.1.4 Criterion 3: The insufficiency of competition law alone to adequately address the market failure(s) concerned**

- 7.189 *Ex ante* regulation should only be imposed where competition law remedies are likely to be insufficient to address identified competition problems. The 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.
- 7.190 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.
- 7.191 *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.

- 7.192 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.
- 7.193 Competition law requires the commission and detection of an anti-competitive act. A National Competition Authority (hereafter, '**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.
- 7.194 Accordingly, ComReg is of the preliminary view that competition law is unlikely to be sufficient to adequately address market failures on the Relevant FACO Markets.

### Preliminary conclusions on insufficiency of competition law

- 7.195 For the reasons set out above, ComReg is of the preliminary view that competition law alone would not be adequate to address market failures which may arise on the Relevant FACO Markets. Accordingly, the third criterion passes in relation to the Relevant FACO Markets.

### 7.1.5 Preliminary Conclusions on the 3CT

- 7.196 Accordingly, and on a preliminary basis, 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.

7.197 In contrast, ComReg has formed the preliminary 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

7.198 ComReg notes that, as of June 2020, nine NRAs<sup>791</sup> have assessed their national FACO or FVCO markets and found that the markets passed the 3CT test. All nine 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 72: 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

<sup>791</sup> FACO in Ireland, Croatia, the Netherlands, and Spain, and FVCO in the case of France, Germany, Greece, Italy, and the UK.



- 7.199 Table 72 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.
- 7.200 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.
- 7.201 In respect of the **competition law criterion**, six NRAs concluded that it passed because *ex post* competition law would be unable to address or rectify market failures in a sufficiently prompt and timely manner.

## 7.2 Framework for assessing SMP

- 7.202 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 preliminary 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.
- 7.203 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*:<sup>792</sup>

*“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.”*

- 7.204 Regulation 25(1) of the Framework Regulations<sup>793</sup> (and Article 63(2) of the EECC which replaces the Framework Directive) effectively mirrors this definition of dominance and states that:

*“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.”*

<sup>792</sup> Case 27/76 *United Brands v European Commission* [1978] ECR 207, paragraph 65, and paragraph 70 of the SMP Guidelines.

<sup>793</sup> Transposed by Regulation 25(1) of the Framework Regulations, which is mirrored at Article 63 of the EECC.



- 7.205 Arising from this definition, ComReg assesses whether any Undertaking has SMP in the Regional FACO Markets, in accordance with the EC framework.
- 7.206 The SMP Guidelines, of which ComReg is required to take utmost account,<sup>794</sup> 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.
- 7.207 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.”<sup>795</sup>*

- 7.208 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 7.210 below.

### 7.3 Approach to assessing SMP in the Regional FACO Markets

- 7.209 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,<sup>796</sup> and considers the range of factors that are of most relevance to these markets.

#### 7.3.1 Relevant SMP Criteria

- 7.210 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:<sup>797</sup>
- (a) Overall size of the SP;
  - (b) Control of infrastructure not easily duplicated;

<sup>794</sup> In accordance with Regulation 25(2) of the Framework Regulations, which is mirrored at Article 63 of the EECC.

<sup>795</sup> Paragraph 55 of the SMP Guidelines.

<sup>796</sup> 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”.

<sup>797</sup> Other factors identified in paragraph 7.212 which could be used to assess the existence of market power have been considered but, for the reasons set out in Annex: 8 are considered of no or less relevance for the purposes of the SMP assessment in these Regional FACO Markets.

- (c) Technological advantages or superiority;
- (d) Absence of, or low, countervailing buyer power (hereafter, ‘**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.

7.211 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:<sup>798</sup>

*“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.”*

7.212 ComReg also considers that factors such as historical and likely pricing behaviour are relevant considerations.

### 7.3.2 Approach to Existing Regulation

7.213 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 regulation<sup>799</sup> 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.

<sup>798</sup> Paragraph 58 of the SMP Guidelines.

<sup>799</sup> 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.

## 7.4 Assessment of SMP

7.214 Each of the relevant factors identified in paragraph 7.210 above are considered in detail below. ComReg proposes to combine 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 7.215 to 7.239);
- (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 7.240 to 7.249); and
- (c) **Strength of any CBP:** the impact posed by strong buyers of FACO on the competitive behaviour of the provider (paragraphs 7.250 to 7.299).

### 7.4.1 Existing competition on the Regional FACO Markets

7.215 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.

7.216 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

7.217 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 preliminary 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).

- 7.218 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.
- 7.219 Taking account of the MGA, in the case of LL-FACO, Table 53 above 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.
- 7.220 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.
- 7.221 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 [X ██████████ X], as set out at Table 53 above.<sup>800</sup> This figure includes switching to self-supply, where possible, for each SP.
- 7.222 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 53 above.

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<sup>800</sup> 60-70%.

- 7.223 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 [X ██████████ X], as set out at Table 53 above.<sup>801</sup>
- 7.224 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.
- 7.225 ComReg's preliminary 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.

### Indirect constraints

- 7.226 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.
- 7.227 However, ComReg's preliminary 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;<sup>802</sup> and

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<sup>801</sup> 80-90%.

<sup>802</sup> See paragraph 5.183.

- (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.<sup>803</sup>

7.228 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 preliminary 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.

### Pricing behaviour

- 7.229 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.
- 7.230 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 (hereafter, '**LRAIC+**') model. Additionally, WLR is subject to cost orientation based on a combination of Bottom-up LRAIC+ and Top-down Historical Cost Accounting (hereafter, '**HCA**') costing methodologies.<sup>804</sup>
- 7.231 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.
- 7.232 Table 73 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:

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<sup>803</sup> See paragraphs 5.279 to 5.287.

<sup>804</sup> Retail PSTN line rental charges are subject to a price cap pursuant to ComReg's 2014 RFVA Decision.



**Table 73: Eircom's published WLR monthly rental prices 2016-2020**

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
	€16.82	July 2020
ISDN BRA	€27.95	May 2008
ISDN FRA	€143.18	May 2008
ISDN PRA	€238.25	May 2008

- 7.233 The 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 WLR have remained unchanged since 2008.
- 7.234 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 7.230 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).<sup>805</sup>
- 7.235 Given the lack of effective existing competition in the Regional FACO Markets, it is ComReg's preliminary view that, absent regulation, Eircom would currently have both the ability and incentive<sup>806</sup> to increase prices charged to Access Seekers for FACO above the competitive level. ComReg's preliminary view 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.

<sup>805</sup> 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.

<sup>806</sup> These abilities and incentives are discussed in Section 9 dealing with competition problems.



7.236 Accordingly, ComReg concludes on a preliminary basis that there is no firm evidence to suggest that Eircom faces effective pricing constraints in the provision of FACO in the Regional FACO Markets.

### **Preliminary conclusions on existing competition**

7.237 Having regard to the assessment in paragraphs 7.215 to 7.236 above, ComReg's preliminary view 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.

7.238 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.

7.239 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.

### **7.4.2 Potential competition on the Regional FACO Markets**

7.240 Noting the absence of an effective competitive constraint posed by existing competition in the candidate 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.<sup>807</sup>

7.241 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.

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<sup>807</sup> See paragraph 74 of the SMP Guidelines.

## Barriers to Entry and Expansion

7.242 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 7.7 to 7.138 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

7.243 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.

7.244 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.

## Preliminary Conclusion on Potential Competition in the Regional FACO Markets

7.245 In paragraphs 7.240 to 7.244 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 preliminary view 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.

7.246 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.

- 7.247 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 preliminary view 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.
- 7.248 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 WLV (which makes use of SB-WLR inputs) while slowly beginning to decline, remains high. Given the lower incidence of NG broadband 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 constraint in the Regional FACO Markets over the lifetime of this market review.
- 7.249 Overall, ComReg's preliminary view 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.

### 7.4.3 Strength of any Countervailing Buyer Power ('CBP')

- 7.250 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 effective<sup>808</sup> 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.
- 7.251 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.

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<sup>808</sup> 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.

- 7.252 The concept of CBP is not absolute,<sup>809</sup> 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.
- 7.253 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

- 7.254 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 undertakings<sup>810</sup> (the '**2009 Enforcement Priorities**') are informative on CBP in competition assessments, noting<sup>811</sup> 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.”*

- 7.255 In its 2004 Horizontal Mergers Guidelines,<sup>812</sup> 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.”*

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<sup>809</sup> 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.

<sup>810</sup> 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>.

<sup>811</sup> Paragraph 18 of the 2009 Enforcement Priorities.

<sup>812</sup> 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**').

- 7.256 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.
- 7.257 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

- 7.258 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

- 7.259 The bargaining position of a FACO SMP SP will likely be weakened in negotiations with an Access Seekers 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.
- 7.260 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.

7.261 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

- 7.262 ComReg has imposed SMP obligations on Eircom on a number of other regulated markets.<sup>813</sup> 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.
- 7.263 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 telephony), and Vodafone (in respect of mobile telephony) are subject to SMP obligations pursuant to the 2019 Termination Decision, and the 2019 Termination Rates Decision.<sup>814</sup>

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<sup>813</sup> 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 proposed definition of the Relevant FACO Markets at Section 5 and the imposition of associated remedies discussed at Section 10.

<sup>814</sup> 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.



7.264 It is ComReg's preliminary view 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

- 7.265 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 on the bargaining dynamic between parties in FACO negotiations and CBP. Regulation 31<sup>815</sup> 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.
- 7.266 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.
- 7.267 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.

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<sup>815</sup> This transposes Article 20 of the Framework Directive. Articles 25 and 26 of the EECC, which is to be transposed into Irish law by December 2020, similarly endow NRAs with dispute resolution powers.



- 7.268 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.
- 7.269 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 decisions<sup>816</sup> highlight its 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.
- 7.270 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

- 7.271 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

- 7.272 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.

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<sup>816</sup> See, for example, Cases PL/2012/1280, PL/2012/1378 and IT/2016/1885.

7.273 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

7.274 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.

7.275 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.

7.276 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.

7.277 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.

7.278 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.

7.279 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.

7.280 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 74: FNA-only RFTS Market Shares, measured by FNA lines (%), Q4 2019**  
 [REDACTED]

	Regional FACO Market			
	Absent regulation		In presence of regulation	
	LL-FACO	HL-FACO	LL-FACO	HL-FACO
<b>BT</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Digiweb</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Eircom</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Pure Telecom</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Virgin Media</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Vodafone</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>OAO &amp; Other VoIP</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

7.281 Table 74 above shows the relative share of each Access Seekers' purchases of LL-FACO and HL-FACO SB-WLR and WLV, as of Q4 2019. 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.

7.282 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 is barely offered on the Regional FACO Markets.<sup>817</sup> Eircom has a single White Label VoIP customer, [REDACTED] (which purchased only [REDACTED] from Eircom as of Q1 2020), but their purchases of wholesale Managed VoB are dwarfed by Eircom Managed VoB self-supply – [REDACTED]<sup>818</sup> of Eircom Managed VoB channels are delivered on a self-supply basis.

<sup>817</sup> As of Q4 2019, [REDACTED] reported two wholesale Managed VoIP lines in the footprint of the Regional FACO Markets.

<sup>818</sup> 90-100%.

- 7.283 Therefore, the largest purchaser of FACO on the Regional LL-FACO Market and the Regional HL-FACO Market, by a significant margin, is Eircom's own downstream retail arm. In the case of merchant market supply, BT and Vodafone are the two largest purchasers, based on BT's purchases of SB-WLR, and Vodafone's purchases of WLV. These figures suggest the possibility that either, or both, BT and Vodafone could potentially exert CBP. However, this possibility 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.
- 7.284 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, in principle, capable of leveraging its importance to exercise CBP.
- 7.285 As of Q4 2019, Eircom accounts for 39% of all RFTS subscriptions, a decline of 1% since the 2015 FACO Decision. OAO RFTS market shares have also – generally – similarly remained stable over the same time period. Accordingly, Eircom is still the largest provider of RFTS, and its relative importance compared to its competitors on the downstream RFTS market has remained stable.
- 7.286 Based on the evidence available to it, ComReg has formed the preliminary 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.
- 7.287 [X █████ X] is the largest merchant market purchaser of SB-WLR on the LL-FACO market from Eircom [X █████ X]. Moreover, [X █████ X] therefore has, in principle, some capability to credibly leverage any CBP which it possesses. However, this CBP capability is only credible in the presence of wholesale NG broadband. In the absence of such network coverage in the Regional FACO Markets – at least to an appreciable extent – this SP is unlikely to be able to credibly exert CBP.
- 7.288 Similarly, [X █████ X] has also invested in a Managed VoIP platform and self-supplies Managed VoB RFTS to its own end users, using Eircom and SIRO wholesale NG broadband inputs. However, this SP is unlikely to be able to credibly exert any CBP on the Regional FACO Markets, due to the comparative or total absence of wholesale NG broadband.

- 7.289 As set out at paragraph 7.280 above, in an MGA scenario, the CBP of Access Seekers would be even weaker, given that Access Seekers would have no alternative means of RFTS service provision, were Eircom to cease its supply of merchant market SB-WLR. In such a scenario, the proportion of FACO sales accounted for by Eircom self-supply would increase substantially, further reducing already insufficient levels of CBP.
- 7.290 ComReg is, therefore, of the preliminary view that Eircom's market power (including its ability to delay or impede access to FACO, or to set charges at an inefficiently high level) would, absent regulation, be unlikely to be constrained to an appreciable extent by most buyers of its FACO services.

### **Credible alternative sources of FACO for the buyer**

- 7.291 The strength of CBP in FACO negotiations is influenced by the degree to which a buyer can credibly refuse to purchase, or delay purchasing, FACO. Such a strategy, in order to be credible, depends on a number of factors, including whether there are alternative (existing or potential) sources of supply of FACO, and the degree to which the buyer can switch within a reasonable timeframe to alternative sources of supply without incurring unrecoverable (sunk) costs.
- 7.292 Access Seekers in the Regional FACO Markets continue to rely, to a very significant extent, on Eircom FACO to provide RFTS to their customers, and in the absence of regulation, are unlikely to be in a position to credibly threaten to respond to changes in Eircom's commercial terms and conditions by seeking an alternative source of supply, where NG broadband networks are unavailable (or not sufficiently available).
- 7.293 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 7.219 to 7.225 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**

- 7.294 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.

- 7.295 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.<sup>819</sup>
- 7.296 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.
- 7.297 ComReg also examined Eircom's FACO pricing behaviour, and set out its preliminary 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.

### Preliminary Conclusion on CBP Assessment

- 7.298 In paragraphs 7.250 to 7.297 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 preliminary view 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.
- 7.299 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 Preliminary Conclusions on FACO Market Analysis and Proposed SMP Designations

- 7.300 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 preliminary 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:

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<sup>819</sup> open eir Switched Transit Routing and Price List (STRPL), version 163.0, 12 March 2020. Available online at [https://www.openeir.ie/wp-content/uploads/2020/05/STRPL-Issue-V163\\_0-marked-12032020.pdf](https://www.openeir.ie/wp-content/uploads/2020/05/STRPL-Issue-V163_0-marked-12032020.pdf)

- (a) The Urban LL-FACO Market; and
- (b) The Urban HL-FACO Market.

7.301 ComReg's preliminary view 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 of this Consultation.

7.302 In contrast, ComReg has formed the preliminary 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.

7.303 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 preliminary view 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.

7.304 Where ComReg determines, based on market analysis carried out by it in accordance with Regulation 27 of the Framework Regulations,<sup>820</sup> 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.

7.305 ComReg's preliminary view, therefore, is that Eircom should be designated with SMP on both of Regional LL-FACO Market and the Regional HL-FACO Market.

**Q. 7. Do you agree with ComReg's preliminary conclusions on the 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.**

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<sup>820</sup> 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 4.386 above, ComReg set out its preliminary view on the definition of the Relevant RFTS Markets in the presence of upstream FACO regulation nationally, although in doing so ComReg has had regard to the regulatory proposals in the Relevant FACO Markets discussed later in this Consultation.
- 8.2 In this section, having set out the preliminary view that Eircom has SMP in the Regional FACO Markets (see paragraphs 7.300 to 7.305) and having proposed to impose obligations on Eircom in those markets, but that the 3CT is failed on the Urban FACO Markets, and SMP regulation should therefore be removed from those markets, ComReg now examines the 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**').

### 8.1 Product Market

- 8.3 The RFTS Product Markets, as outlined at paragraph 4.327, remain unchanged, having regard to the proposed presence of regulation on the Regional FACO Markets, and the proposed removal of regulation from the Urban FACO Markets.

### 8.2 Geographic scope of the Modified RFTS Markets

- 8.4 The purpose of this section is to define the geographic scope of the Modified RFTS Markets. This assessment takes place in the presence of upstream regulation in the Regional FACO Markets, but with no regulation present on the Urban FACO Markets. It is therefore appropriate to consider whether, given the definition of sub-national geographic markets on the upstream FACO markets, it is similarly appropriate to define sub-national geographic markets on the downstream RFTS markets. ComReg's approach follows the approach adopted by the EC in the 2014 Recommendation.
- 8.5 In assessing the geographic scope of the Modified RFTS Markets, ComReg assesses whether or not the conditions of competition across the State are likely to be sufficiently homogenous. If this is the case, it is likely that a national market exists. However, where on the Relevant RFTS Product Markets, there are significant and stable differences in the competitive conditions across different geographic areas of the State, this may warrant defining separate sub-national geographic markets.

- 8.6 Below, ComReg assesses the geographic features of the Relevant RFTS Markets, given the presence of regulation on the upstream Regional FACO Markets, and the absence of such regulation on the Regional FACO Market, compared to a counterfactual in which a single national FACO geographic 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 (paragraphs 8.7 to 8.10);
  - (b) Evolution of SP's market shares (paragraphs 8.11 to 8.13; and
  - (c) Geographic variances in products and pricing (paragraph 8.14).

### **8.2.1 Geographic variation in entry conditions and the availability of services**

- 8.7 In considering the geographic scope of the 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 separate FACO geographic markets. In doing so, ComReg assesses the coverage and market share evolution of NG broadband networks over time as a means of identifying any existing or potential variances in entry and competitive conditions across geographic different areas.
- 8.8 ComReg's preliminary assessment of the scope of the RFTS market suggested that RFTS offered over FNA and NG broadband (CATV, FTTC and FTTP networks) may be viewed as sufficiently close substitutes by end users in terms of their key characteristics, pricing and intended use, where they are available. As set out in detail at Section 5 above, the presence or absence at an EA of 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 provides its preliminary assessment of the network coverage and market share distributions of these alternative platforms.
- 8.9 As set out in detail in Section 5 and Annex: 9, ComReg's preliminary view is that the availability of NG broadband differs across EAs. The NG broadband options (and therefore the possibility of availing of Managed VoIP) available to a given RFTS end user will 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.
- 8.10 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, prospectively, NBI. A number of other SPs offer both wholesale and retail Managed VoIP services over these NG Broadband networks.

## 8.2.2 Geographic differences in evolution of SP market shares

- 8.11 As discussed in Section 5, ComReg's preliminary view is that there is likely to be a degree of variation in RFTS SP market shares in the footprints of the Urban FACO Markets, and the Regional FACO Markets, driven by the differing availability of NG broadband in these two geographic markets.
- 8.12 Table 75 below, provides a breakdown of the number of Eircom Exchanges by the number of SPs capable of providing services within each Exchange Area, absent regulation in the Urban FACO Market, but in the presence of regulation in the Regional FACO Market. Table 75 indicates that a number of SPs have invested in providing Managed VoIP-based RFTS either using their own networks (e.g. Eircom, Virgin Media) or through access to upstream wholesale NGA 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 NGA broadband.
- 8.13 ComReg further assesses the geographic differences in market shares in its assessment of the Relevant FACO Markets at Section 5.

**Table 75: Number of SPs (including Eircom) capable of providing RFTS using own NG broadband network inputs and/or wholesale NG broadband inputs by the Number of Exchanges, Premises Covered and SP Market Share [REDACTED]**

Number of SPs <sup>821</sup>	No. of Eircom EAs	Premises Covered	Total RFTS Lines	Market share						
				Eircom	Virgin Media <sup>822</sup>	BT (Sky etc.)	Vodafone	Digiweb	Pure Telecom	Other
1	75	25,957	8,380	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED
2	71	29,658	11,124	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED
3	161	73,262	30,300	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED
4	174	120,419	56,885	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED
5	574	823,770	460,976	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED
6	148	1,166,321	906,742	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED	REDACTED

<sup>821</sup> 'Number of SPs' measures the number of SPs which are capable of providing NG broadband based on own network and/or purchase of wholesale inputs.

<sup>822</sup> ComReg notes that Virgin Media's network presence is largely in urban areas where many other SPs are present.

### **8.2.3 Geographic variances in products and pricing**

- 8.14 ComReg's preliminary views on geographic variances in RFTS products or pricing of RFTS are as set above in paragraphs 4.363 to 4.376.

### **8.2.4 Preliminary conclusion on geographic market**

- 8.15 Having considered the above, it is ComReg's preliminary view that some factors are suggestive that it may be appropriate to define separate Modified Relevant RFTS Geographic Markets, based on factors including the presence or absence at an EA of NG broadband, the competing number of SPs 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.
- 8.16 Overall, ComReg does not discount the possibility that there may be separate geographic markets for the Modified Relevant RFTS Market on the basis of sub-geographic Relevant FACO Markets, however, ComReg proposes to make no firm conclusions in this regard and leaves this question open as it would not have a 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.
- 8.17 The issue of sub-geographic markets is considered in detail in the assessment of the Relevant FACO Markets in Section 5 and Annex: 9. 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**

- 8.18 Having undertaken an SMP and 3CT assessment of the Relevant FACO Markets in Section 7, ComReg considers the 3CT assessment of the Modified RFTS Markets in the presence of the differing regulatory outcomes proposed for the Relevant FACO Markets (i.e. the Urban FACO Market and the Regional FACO Market) as outlined in Section 7, and having regard to the proposed remedy approach for the Regional FACO Markets in Section 10.
- 8.19 In general, the Modified RFTS Markets 3CT in the footprint of the Regional FACO Markets will closely mirror the RFTS Markets 3CT set out at Section 6 above. This is because, in both instances, the need for any regulation in these markets needs to take account of the presence of any appropriate regulation in the upstream Relevant FACO Markets. In this respect, given the Urban FACO Markets are not considered to be 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.

### 8.3.1 Criterion 1: High and non-transitory barriers to entry

- 8.20 ComReg's preliminary views on barriers to entry, in the presence of FACO regulation as set out in Section 10, to the Relevant RFTS Markets are outlined in paragraphs 6.10 to 6.80 above.
- 8.21 ComReg's preliminary view on the assessment of barriers to entry to the Relevant RFTS Markets, in the presence of the proposed regulation in the Regional FACO Markets (and the absence of regulation in the Urban FACO Markets), remains unchanged. Wholesale FACO products (including SB-WLR) are proposed to be made available to Access Seekers on a regulated basis in the Regional FACO Markets. With respect to the Urban FACO Markets, these are proposed to be deregulated on the basis of lowered barriers to entry, including in relation to self-supplying FACO via Managed VoB and consequently providing the ability to provide RFTS (Standalone LL-RFTS, Bundled LL-RFTS and HL-RFTS, respectively).
- 8.22 As noted above, RFTS may be provided by means of Managed VoIP delivered over wholesale NGA broadband inputs. In that regard, Eircom WLA is made available on a regulated basis nationwide (although is only used by Access Seekers where it is economic to do so), pursuant to the 2018 WLA/WCA Decision, while Eircom WCA is made available on a regulated basis in the footprint of the Regional WCA Market, and on a commercial basis in the footprint of the Urban WCA Market.
- 8.23 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.

### 8.3.2 Criterion 2: Is the market tending towards effective competition within the relevant time horizon?

- 8.24 ComReg's preliminary views on criterion 2, in the presence of FACO regulation, are outlined in paragraphs 6.81 to 6.151 above.
- 8.25 ComReg's preliminary views on tendency towards effective competition in the Modified RFTS Markets remain unchanged. In the footprint of the Urban FACO Markets, Access Seekers are likely to be able to offer RFTS to end users on the basis of the presence of wholesale NGA broadband networks, 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 proposes in Section 10 that Eircom will be obliged to continue to provide SB-WLR to Access Seekers, thereby ensuring their capacity to provide RFTS to end users. ComReg accordingly concludes on a preliminary basis that the second 3CT criterion is likely to fail on the Modified RFTS Markets.

### 8.3.3 Criterion 3: The insufficiency of competition law alone to adequately address the market failure(s) concerned

- 8.26 ComReg's preliminary view in relation to criterion 3 is unchanged (as per paragraphs 6.152 to 6.163 above) by the proposed presence of different regulatory structures/outcomes on the Urban FACO Markets and the Regional FACO Markets.

## 8.4 Overall Preliminary Conclusions on the Modified RFTS Markets

- 8.27 Having concluded on a preliminary basis 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 Relevant RFTS Markets.
- 8.28 ComReg first notes that there are some grounds to support defining sub-national RFTS geographic markets, in the presence of the Urban FACO Markets and the Regional FACO Markets. However, on the basis of a 3CT of the Modified RFTS Markets, ComReg has formed the view that this preliminary 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.

**Q. 8. Do you agree with ComReg's preliminary conclusions on the market assessment for the RFTS Markets, absent regulation in the Urban 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.**



# 9 Regional FACO Markets Competition Problems and Impacts

## 9.1 Overview

- 9.1 In this Section, ComReg seeks to identify those competition problems which, absent SMP regulation,<sup>823</sup> could potentially arise in both the Regional HL-FACO and Regional LL-FACO Markets (together, the '**Regional FACO Markets**'). ComReg then proceeds in Section 10 to consider the imposition of appropriate remedies in order to address the identified competition problems.
- 9.2 In Section 5, ComReg defined four separate Relevant FACO Markets (the two Urban FACO Markets and the two Regional FACO Markets). Having carried out the 3CT, ComReg finds, on a preliminary basis, that the Urban FACO Markets are likely to be effectively competitive. Therefore, ComReg proposes to remove the *ex ante* regulation which was imposed under the 2015 FACO Decision. In contrast, as discussed in paragraph 7.301, ComReg considers on a preliminary basis that the Regional FACO Markets are not deemed to be effectively competitive, and, in accordance with Regulation 27(4) of the Framework Regulations, proposes that Eircom be designated as having SMP on those markets, meaning that it has the ability to act independently of its competitors, customers, and end users.
- 9.3 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 ComReg considers appropriate.
- 9.4 As set out in the 2014 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 industry. 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, thereby justifying the imposition of *ex ante* regulation.

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<sup>823</sup> FACO has, to date, been provided by Eircom pursuant to the regulatory obligations imposed under the 2015 FACO Decision. The assessment carried out in this Section applies the MGA to determine what competition problems could potentially arise, assuming that such regulatory obligations were not in place.

- 9.5 This Section discusses the competition problems which would, in ComReg's preliminary view, be likely to arise on the Regional HL-FACO and Regional LL-FACO Markets, in the absence of regulation. In this respect, it is ComReg's preliminary view that the underlying ability and incentives for Eircom to potentially 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 ComReg notes that 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 on a preliminary basis 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.
- 9.7 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 acts 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 leverages 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 engages in exploitative behaviours, such as excessive pricing or practices leading to inefficiency/inertia, to the detriment of both competition and end users.
- 9.8 Each of the competition problems set out above is discussed in detail below with regard to the Regional FACO Markets.

## Types of Competition Problems

### 9.2 Exclusionary practices

- 9.9 ComReg is of the preliminary view that Eircom, as an SP designated with SMP in the Regional FACO Markets, is likely to have 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 the 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 on the market, or by inducing or forcing competitors to exit the market, where they are already present.
- 9.10 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.
- 9.11 ComReg is of the preliminary view that, absent regulation, Eircom, having been designated with SMP in the Regional FACO Markets, is likely 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.

- 9.12 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. The theory behind this behaviour, the means by which it might be achieved, and its potential impact on the Regional FACO Markets is discussed in the following sub-section.

### 9.3 Leveraging

- 9.13 As detailed above, where a vertically-integrated SP which has SMP in one market, and which 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.
- 9.14 Given the close relationship between the Regional FACO Markets, other horizontally related markets (e.g. WLA, WCA, transit, and FVCT),<sup>824</sup> and vertically related products and services (e.g. RFTS and WLV),<sup>825</sup> absent regulation, there is likely potential for both means of leveraging to occur. Each type of behaviour has the ability to raise rivals' costs, reduce competitive pressures on related wholesale and retail services, and enable the SMP SP (in this case, 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').

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<sup>824</sup> 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.

<sup>825</sup> 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.

### 9.3.1 Vertical Leveraging

- 9.15 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 is of the preliminary view that vertical leveraging could occur, given that Eircom, as a vertically-integrated SP with SMP, likely has both the ability and the incentive to use its market power to influence the competitive conditions in downstream wholesale and/or retail markets and, 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 proposes to deregulate, 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

- 9.16 Vertical leveraging could be effected by Eircom 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 RFTS market, 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

- 9.17 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 either delay or inhibit the switching and migration process. Examples of the types 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) Requesting additional customer authorisation mechanisms; or
  - (c) 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.
- 9.18 Unreasonable RFTS contract terms could also be used to effectively dissuade a customer from moving to a competing SP in a timely manner, thereby undermining the effectiveness of access to FACO products, services and facilities. 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.

### Quality discrimination

- 9.19 Given that Eircom is vertically-integrated, it may be difficult to compare the 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 might facilitate an environment where Eircom likely 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.
- 9.20 Absent regulation in the Regional FACO Markets, Eircom, as the SMP SP, also has the ability to make more cost-efficient, NGA 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 likely 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 comparatively raising its rivals' costs.

### Creating or exploiting information asymmetries, and withholding relevant information

- 9.21 A vertically-integrated SMP SP may also create or exploit information asymmetries to impede downstream competition. For example, this arises 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 (hereafter, '**OSS**') and Business Support Systems (hereafter, '**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.



- 9.22 A lack of transparency in the respective terms and conditions of supply of FACO on a self-supply basis, and on a merchant market basis, 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 their own downstream services. In this context, Access Seekers are unlikely to have any reasonable confidence that FACO is provided on a non-discriminatory basis.
- 9.23 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.
- 9.24 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 other 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

- 9.25 Absent regulation of the Regional FACO Markets, ComReg is of the preliminary view that Eircom could potentially withdraw access to current product offerings, including, but not limited to, SB-WLR, which it is currently obliged to make available to Access Seekers, pursuant to the 2015 FACO Decision. 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 preliminary 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

- 9.26 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.
- 9.27 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

- 9.28 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 is of the preliminary view that Eircom could engage in this type of behaviour and 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 deriving a sufficient margin to recover its incurred costs, ultimately resulting in the foreclosure of competition.
- 9.29 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.

### 9.3.2 Horizontal Leveraging

- 9.30 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 derive sufficient profit margins, through predatory pricing.<sup>826</sup>
- 9.31 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 (for example, WLA, WCA, transit and FVCT), and has both the ability and incentive to negatively impact the position of its competitors in these markets.
- 9.32 Of these adjacent markets, both FVCT and WLA are currently regulated nationally, pursuant to the 2019 Termination Decision<sup>827</sup> and the 2018 WLA/WCA Decision. WCA is regulated at a regional level (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 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.
- 9.33 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 profit margin may be derived 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.

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<sup>826</sup> 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 relative costs (including, but not limited to, CAPEX and OPEX associated with infrastructural investment and maintenance).

<sup>827</sup> 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>).

- 9.34 Taking the above cases into consideration, ComReg is of the preliminary view 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.

## 9.4 Exploitative Practices

- 9.35 Economic theory suggests that, where a firm possesses market power, it is in a position 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 preliminary view that Eircom, as an SP with SMP in the Regional FACO Markets, and, given its presence in a number of adjacent markets, would potentially have 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.

### 9.4.1 Excessive pricing

- 9.36 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 the relevant service.<sup>828</sup> 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.
- 9.37 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*",<sup>829</sup> including its ability and incentive to engage in excessive pricing in the Regional FACO Markets.<sup>830</sup>

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<sup>828</sup> 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".

<sup>829</sup> 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>

<sup>830</sup> 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).

- 9.38 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, 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, it ultimately has the potential to 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 at the retail level by RFTS end users, as Access Seekers attempt to avoid incurring the additional expenses arising from increased SB-WLR prices by passing these cost increases through to their customers.
- 9.39 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, is likely to 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 as described at paragraph 9.38 above, and potentially being restricted by the absence of demand-side substitutes, the Access Seekers would likely be subjected to a margin squeeze, thereby reducing their own profit margins and restricting their ability to compete with the incumbent.
- 9.40 ComReg has formed the preliminary view 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.
- 9.41 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 a competitive level.

### 9.4.2 Inefficiency/inertia

- 9.42 A firm with SMP in a relevant market may also, by virtue of the lack of effective<sup>831</sup> competitive pressure in that market, be insulated from the need to innovate and improve efficiency and QoS to stay ahead of rivals. This may limit the development of new technology and/or lead to costlier and less efficient methods of supply<sup>832</sup> and, consequently, higher prices for end users than would likely otherwise exist under competitive market conditions.
- 9.43 ComReg has formed the preliminary view that Eircom has SMP in the Regional FACO Markets. Accordingly, ComReg is of the preliminary view that, absent regulation, Eircom would likely face limited competitive pressure to innovate and provide an efficient FACO service, enabling it to delay the implementation of new technology and systems, without being subjected to normal competitive pressures. However, potentially mitigating a portion of this risk is Eircom's proposal to modernise its PSTN network across the entire LL-FACO Market (comprising both the Urban and Regional LL-FACO Markets) by implementing a Multi-Service Access Node (hereafter, '**MSAN**') technology (between mid-2020 and 2023), thereby increasing both the lifespan and efficiency of the copper access network. In light of the proposed upgrade,<sup>833</sup> ComReg has formed the preliminary view in this case that Eircom, as SMP SP, may have the incentive to engage in the type of behaviour outlined above, however, with regard to potentially withholding investment, it is unclear whether it has the ability to do so.

### Summary of Preliminary Conclusions on Competition Problems

- 9.44 Having regard to the analysis set out in this Section, ComReg sets out its preliminary view that, absent regulation, Eircom, as the proposed 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.

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<sup>831</sup> 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.

<sup>832</sup> 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.

<sup>833</sup> 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.

- 9.45 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, accounting separation, and a Statement of Compliance (hereafter, 'SoC'). The detail of these obligations is discussed in Section 10.

**Q. 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.**



# 10 Proposed Remedies in the Regional FACO Markets

## 10.1 Approach to Specifying and Implementing Remedies

10.1 In Section 7, ComReg set out its preliminary view that Eircom is likely to have SMP in the Regional FACO Markets. In Section 9, ComReg identified a range of competition problems, and competition or consumer impacts that, absent regulation, could arise in the Regional FACO Markets. These competition problems related, *inter alia*, to Eircom having the 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. In this Section, ComReg considers the imposition of regulatory remedies to address these competition problems, by:

- (a) Setting out the legal framework for imposing remedies (discussed in Section 10.2 below);
- (b) Reviewing existing FACO remedies imposed under the 2015 FACO Decision and in other Decisions (discussed in Section 10.3 below);
- (c) Voluntary Commitments proposed by Eircom (discussed in Section 10.4 below);
- (d) Assessing the approach to imposing regulatory remedies in the Regional FACO Markets (discussed in Section 10.5 below); and
- (e) Proposing and justifying regulatory remedies in the Regional FACO Markets relating to access, non-discrimination, transparency, price-control and cost accounting, accounting separation and SoC (discussed in Section 10.6 below).

## 10.2 Legal Framework for Imposing Remedies<sup>834</sup>

10.2 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 the obligations set out in Regulations 9 to 13 of the Access Regulations, as it deems appropriate. In this regard, the obligations that may be imposed by ComReg on SMP Undertakings are those relating to:

- (a) Access;

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<sup>834</sup> As noted in paragraph 2.38 above, the EECC has not yet been transposed into Irish law. The legislation under the EECC governing market analysis is not substantially different to existing legislation. Therefore, in its final decision on this Consultation, ComReg intends to replace references to existing national legislation used in this Consultation with references to the corresponding national legislation that will transpose the Code.

- (b) Transparency;
  - (c) Non-Discrimination;
  - (d) Price Control and Cost Accounting;
  - (e) Accounting Separation; and
  - (f) Statement of Compliance.
- 10.3 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;<sup>835</sup> 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.
- 10.4 Regulation 12(4) of the Access Regulations sets out statutory criteria that ComReg must take into account before imposing access obligations on an SMP Undertaking. These criteria include, *inter alia*, examining the technical and economic viability of using or installing competing facilities; the feasibility of providing access; the initial outlay of investment by the Undertaking; and the need to safeguard competition in the long term.
- 10.5 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;<sup>836</sup> 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.<sup>837</sup>

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<sup>835</sup> 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.

<sup>836</sup> Pursuant to Regulation 13(2) of the Access Regulations.

<sup>837</sup> Pursuant to Regulation 13(3) of the Access Regulations.

10.6 These considerations are taken into account, as appropriate, when assessing whether and what form of remedy to impose and are also discussed in further detail in the context of the RIA in Section 12 of this Consultation. ComReg also took the following into account in considering the imposition of remedies on the SMP Undertaking:

- (a) Any relevant comments letters issued by the EC pursuant to Articles 7 and 7a of the Framework Directive in its review of regulatory measures notified by Member States under the EU consultation mechanism for electronic communications service.

### 10.3 Existing FACO Remedies

10.7 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.

10.8 These regulatory obligations are primarily set out in the 2015 FACO Decision and are discussed briefly below.

#### 10.3.1 Existing FACO access remedies

10.9 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 (hereafter, '**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) Eircom having to:
  - (i) To negotiate in good faith with Undertakings requesting Access;
  - (ii) Not to withdraw access to facilities already granted without the prior approval of ComReg;
  - (iii) To grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of products, services or facilities;

- (iv) 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 FACO products, services and facilities;
- (v) To provide access to services needed to ensure interoperability of end-to-end services to end users, including facilities for intelligent network services;
- (vi) To provide access to OSS or similar software systems necessary to ensure fair competition in the provision of services;
- (vii) To interconnect networks or network facilities; and
- (viii) To provide access in accordance with a range of conditions governing fairness, reasonableness and timeliness.

10.10 ComReg did not impose specific requirements on Eircom to provide wholesale access to Next Generation VoIP-based FACO<sup>838</sup> (hereafter, '**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.

10.11 ComReg proposed that pre-existing regulatory obligations governing the requirement to provide standalone CPS (being CPS not provided with WLR), CA and CS were no longer warranted or justified on the basis that demand for these products had significantly decreased, and the risks of foreclosure in the event of the non-availability of these products therefore appeared to be minimised. ComReg set out its view that, given the nature of retail competition (whereby end users predominantly purchase RFVA and RFVC from the same supplier), such standalone CPS, CA and CS obligations were no longer necessary to safeguard competition. These obligations were subsequently removed.

10.12 Obligations to provide CPS together with WLR (being SB-WLR) were, however, mandated.

10.13 ComReg also considered a range of statutory criteria that it is required to bear in mind<sup>839</sup> when imposing access obligations, including, *inter alia*:

- (a) Examining the technical and economic viability of using or installing competing facilities;
- (b) The feasibility of providing access;

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<sup>838</sup> Internet Protocol (hereafter, '**IP**') based FVCO that would be delivered over an upstream regulated Wholesale Broadband Access (hereafter, '**WBA**') product or indeed through broadband enabled via LLU.

<sup>839</sup> Such criteria are set out in Regulation 12(4) of the Access Regulations.

- (c) The initial investment outlay by the Undertaking; and
- (d) The need to safeguard competition in the long term.

### 10.3.2 Existing FACO non-discrimination remedies

10.14 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 (hereafter, '**EoO**') standard;
- (d) Non-discrimination to be applied on an Equivalence of Inputs (hereafter, '**EoI**') standard in certain circumstances, namely:
  - (i) Eircom shall provide ordering and provisioning for SB-WLR on an EoI basis, when SB-WLR is ordered using a Combined SB-WLR and NGA Order. However, if SB-WLR is ordered and provisioned separately to Next Generation Bitstream or Virtual Unbundled Access ('**VUA**'), Eircom shall provide ordering and provisioning for SB-WLR on an EoO basis;
  - (ii) Eircom shall provide fault reporting and fault repair for SB-WLR on an EoI basis 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. This obligation applies irrespective of whether SB-WLR was ordered using a Combined SB-WLR and NGA Order, or ordered separately to NG Bitstream or VUA.

10.15 In addition, Eircom was obliged to provide a 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.

10.16 Eircom was required to submit to ComReg a written SoC that demonstrates its compliance with its non-discrimination obligations, in accordance with the following timescales, unless otherwise agreed with ComReg:

- (a) In the case of any offer of a new product, service or facility, seven (7) months in advance of its being made available;
- (b) In the case of any change to an existing product, service or facility, three (3) months in advance of its being made available;

- (i) In the case of an existing product, service or facility, within three (3) months of the effective date of the Decision Instrument set out in the 2015 FACO Decision; or
- (ii) As may otherwise be required by ComReg.

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 Services<sup>840</sup> (with Eircom also subject to access and other obligations for such services).

### 10.3.3 Existing FACO transparency remedies

10.18 In the 2015 FACO Decision, to address potential competition problems associated with asymmetry of information and to support access, non-discrimination, price control and other obligations, ComReg imposed a range of transparency obligations.

10.19 Eircom is subject to an obligation of transparency in relation to Access which includes:

- (a) Making publicly available and keeping updated on its wholesale website, a 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.

10.20 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

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<sup>840</sup> "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) (hereafter, 'hereafter, **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 WLW services<sup>841</sup> that it provides.

10.21 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.

10.22 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:

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<sup>841</sup> White Label Voice ('WLW') 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.

10.23 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.

10.24 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.

- 10.25 With respect to the obligation outlined in paragraph 10.24 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.
- 10.26 At the same time, and in accordance with the appropriate timelines outlined in paragraph 10.24 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.
- 10.27 Eircom is obliged to, as specified by ComReg in writing from time to time, 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.
- 10.28 Pursuant to the 2011 KPIs Decision,<sup>842</sup> Eircom is obliged to publish Key Performance Indicators (hereafter, '**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.
- 10.29 Eircom is obliged to make publicly available on its wholesale website all SLAs (and any updates thereto) relating to the provision of the products, services and facilities in this market.
- 10.30 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 (hereafter, '**NDA**'). Once the information ceases to be confidential or commercially sensitive, Eircom must publish it on its publicly available wholesale website without undue delay.

#### 10.3.4 Existing FVCO and WLR price control remedies

- 10.31 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.

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<sup>842</sup> 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 (hereafter, the '**2011 KPIs Decision**').

- 10.32 In addition, Eircom is also subject to three margin squeeze test obligations (e.g. 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.

### 10.3.5 Existing FVCO and WLR cost accounting and accounting separation remedies

- 10.33 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 (hereafter, the '**2010 Accounting Separation Decision**').<sup>843</sup>

## 10.4 Voluntary Commitments Proposed by Eircom

- 10.34 ComReg also notes that, in the course of its work leading to the publication of this Consultation, in February 2020<sup>844</sup> Eircom approached ComReg presenting it with a set of potential draft voluntary commitments (hereafter, the '**Commitments**'),<sup>845</sup> in lieu of which, it sought not to be subject to SMP-based regulation. These are summarised below. A non-confidential version of the Commitments is set out in Annex: 3 of this Consultation.
- 10.35 Briefly, Eircom proposed that, on the RFVA Markets, it would voluntarily commit to a specific series of maximum monthly charges for Standalone PSTN and Standalone ISDN BRA lines, as well as committing not to engage in tying behaviour (hereafter, the '**RFVA Commitments**'). Eircom proposed that, in return for the RFVA Commitments, ComReg would remove SMP obligations on Eircom from the RFVA Markets, including obligations in respect of price control, transparency, cost accounting, and the obligation not to unreasonably bundle.

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<sup>843</sup> ComReg Document 10/67: Accounting Separation and Cost Accounting Review of Eircom Limited; 31 August 2010: <http://www.comreg.ie/fileupload/publications/ComReg1067.pdf>

<sup>844</sup> Presentation by Eircom to ComReg on 13 February 2020.

<sup>845</sup> These Commitments were without prejudice to views that Eircom would provide in response to the matters which are the subject of this Consultation.

- 10.36 On the FACO Markets, Eircom's Commitments were also to voluntarily restrict its conduct in respect of pricing, access, transparency and non-discrimination, for a 5 year period, with Eircom committing as follows: WLR being charged at €16.82; <sup>846</sup> ISDN BRA, ISDN FRA and ISDN PRA to be charged at respective current markets rates; and Current Generation FVCO to be charged at current market rates (hereafter, the '**FACO Commitments**'). Eircom's FACO Commitments were subject to a condition whereby, after a period of 2 years following the availability of FTTP at a premises (whether by Eircom (including Open Eir), SIRO or NBI), the FACO Commitments may be subject to change, with appropriate notification periods.<sup>847</sup>
- 10.37 Eircom proposed that, in return, ComReg would remove certain SMP obligations on Eircom, including obligations in respect of:
- (a) **Access obligations:** imposed for prospective non-competitive areas only and no access obligation for new ISDN BRA lines;
  - (b) **Price control obligations:** WLR and FNA-based FVCO removed;
  - (c) **Transparency obligations:** imposed for prospective non-competitive areas only, with obligations to publish KPIs removed, and no SoC obligation;
  - (d) **Non-discrimination obligations:** imposed for prospective non-competitive areas only); and
  - (e) **Accounting separation and cost accounting obligations:** removed entirely.
- 10.38 Eircom further proposed that it would formalise its voluntary commitments to ComReg, while noting that [redacted] [redacted].
- 10.39 In general terms, ComReg welcomes Eircom's willingness to engage and notes that the European Electronic Communications Code due to be transposed in Irish law by 21 December 2020 will enable ComReg to have regard for the purpose of market analyses to commitments offered by Eircom in a timely manner which address identified competition problems in a way that promotes competition to the benefit of consumers.

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<sup>846</sup> Or equivalent POTS-based pricing when bundled with broadband per published price path to June 2024 in Urban (CISPL) and Regional WCA areas (per ComReg Decision D11/18).

<sup>847</sup> Obligations would be removed at an Exchange Area level (or other unit) once there was 80% coverage of FTTP by such operators.

- 10.40 For the time being, however, there is no basis in legislation to accept voluntary commitments from Authorised Undertakings and apart from this, in any event, the Commitments offered by Eircom on their own would have been insufficient to address all of the competition problems identified in Section 9 of this Consultation. For instance, based on Eircom's most recent separated accounts,<sup>848</sup> the price proposed by Eircom in respect of SB-WLR for the relevant FACO services may not reflect underlying costs.
- 10.41 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 Consultation.
- 10.42 ComReg will consider interested parties' views on this matter (including ComReg's view that the measures presented by Eircom would not be sufficient to address the competition problems identified during the market analysis). As noted later in the context of proposed price control obligations, while ComReg's preliminary view is that a price control obligation continues to be required, the precise nature of the price control in respect of PSTN WLR rental charges will be consulted on separately, as part of ComReg's forthcoming Access Network Model Consultation. ComReg's preliminary view of the appropriate price control obligation will be informed by the findings of the market analysis updated, as and if required, to account for any relevant developments in the market, including as regards applicable prices for the duration, or part of the duration, of the market review.

## 10.5 Assessment of Regulatory Approaches to Imposing Remedies in the Regional FACO Markets

- 10.43 In Section 7, ComReg has set out its preliminary view that Eircom is likely to have SMP in the Regional FACO Markets. Furthermore, in Section 9, ComReg identified a range of potential competition problems that may arise in the Regional FACO Markets, absent regulation, arising from Eircom's ability and incentives as a vertically-integrated SMP Undertaking that competes with Access Seekers in a number of other retail and wholesale markets.
- 10.44 As noted in paragraph 10.2 above, Regulation 8(1) of the Access Regulations and Regulation 27(4) of the Framework Regulations require ComReg to impose at least some level of regulation on Undertakings designated as having SMP. In Section 7, ComReg set out its view that the Regional FACO Markets are not effectively competitive (and may not become effectively competitive within the timeframe covered by this review). In Section 9, ComReg identified a range of competition problems that could occur in the Regional FACO Markets, absent regulation.

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<sup>848</sup> <https://www.eir.ie/regulatoryinformation/separated-accounts/>.

- 10.45 As ComReg’s preliminary view is that Eircom has SMP in Regional FACO Markets, regulation must be applied in these markets. Therefore, in this Section, ComReg considers what form of regulation is appropriate. In particular, which of the remedies identified in paragraph 10.2 above are appropriate having regard to the particular circumstances of the Regional FACO Markets, the associated identified competition problems and taking account of the relevant statutory requirements to which ComReg must have regard when imposing remedies. ComReg sets out its preliminary views on these issues below.

## 10.6 Proposed Remedies in the Regional FACO Markets

- 10.46 The Relevant LL-FACO Product Market is, in summary, comprised of a wholesale access and a calling component:

- (a) 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<sup>849</sup>
- together with
- (b) FVCO,<sup>850</sup> 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.

- 10.47 The Relevant HL-FACO Product Market is similarly comprised of a wholesale access and a calling component:

- (a) FA the provision of voice telephony services by means of:

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<sup>849</sup> "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, includes Exchange launched VUA/Bitstream;

"FTTH-based VUA/Bitstream" means VUA or Bitstream that is based on FTTH;

"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;

<sup>850</sup> FVCO does not distinguish between types of telephone numbers called

- (i) Fixed narrowband access ('**FNA**') (provided by means of ISDN FRA or ISDN PRA); or
  - (ii) NGA Broadband<sup>851</sup>
- 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.

10.48 Fixed Narrowband Access FACO (hereafter, '**FNA FACO**') used in the context of proposed remedies, is defined as 10.46(a)(i)+(b)(i) and 10.47(a)(i)+(b)(i) above.

10.49 Next Generation Access FACO (hereafter, '**NGA FACO**') is defined as 10.46 (a)(ii)+(b)(ii) and 10.47(a)(ii)+(b)(ii) above. Consistent with its position in the 2015 FACO Decision, ComReg is not imposing obligations on Eircom with respect to access to NGA FACO (independent of 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 service providers to develop their own Managed VoIP based capabilities over the longer term thereby encouraging more effective and sustainable competition.

10.50 In the paragraphs below ComReg sets out its preliminary views regarding remedies that it proposes to impose upon Eircom in the Regional FACO Markets (with respect to FNA FACO). These include:

- (a) Access obligations (see paragraphs 10.51 to 10.157);
- (b) Non-discrimination obligations (see paragraphs 10.158 to 10.179);
- (c) Transparency obligations (see paragraphs 10.180 to 10.222);
- (d) Price control and cost accounting obligations (see paragraphs 10.223 to 10.294);
- (e) Accounting separation obligations (see paragraphs 10.295 to 10.312); and
- (f) SoC obligations (see paragraphs 10.313 to 10.357).

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<sup>851</sup> "NGA Broadband" means broadband provided by means of NGA;



## 10.6.1 Access Remedies

### Overview

- 10.51 As identified in Section 4, in providing RFTS, a number of SPs are wholly dependent on Eircom FACO to compete in the provision of RFTS. ComReg has already set out its preliminary view 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 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.
- 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,<sup>852</sup> 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 an outcome to 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.

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<sup>852</sup> See European Commission serious doubts/comments and BEREC Opinions (where made) on Polish cases PL/2010/1127, PL/2011/1273, PL/2011/1255-1258 and Latvian case LV/2012/1296.

- 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 Communication 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 proposed access obligations**

- 10.59 As noted in paragraph 10.4 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 the NBP in the IA is capable, in ComReg's preliminary view, of materially altering the conditions of competition in the Regional FACO Markets within – and beyond - the period of this review;
- (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 exception of ISDN BRA<sup>853</sup>, 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.
- (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 proposing price control remedies (as set out at sub-section 10.6.4 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;

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<sup>853</sup> See paragraphs 10.84 to 10.88.

- (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:** ComReg's preliminary view is that intellectual property rights are not likely to be 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 preliminary view is that its proposed approach should facilitate the provision of pan-European services since the proposed 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 proposes to impose 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 10.9 to 10.13 above.

### Reasonable Requests for Access to FACO and Associated Facilities

- 10.61 ComReg considers it necessary to impose a range of access obligations on Eircom which are ultimately intended to maintain sustainable competition in downstream markets.
- 10.62 ComReg's preliminary view is that, pursuant to Regulation 12(1) of the Access Regulations, Eircom should be required to meet all reasonable requests from Undertakings for the provision of access<sup>854</sup> to FNA FACO and associated facilities, i.e., access to FNA FVCO and copper/fibre-based WLR in the Regional FACO Markets.

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<sup>854</sup> For the avoidance of doubt, a request for access refers both to a request for provisioning of an existing product, service or facility and a request for a development to either provide a new product, service or facility or change an existing one

- 10.63 While the likelihood of new FNA FACO products, services or facilities being introduced<sup>855</sup> in the Regional FACO Markets may be low, given Eircom's intention to prolong the life of the FNA network by its investment in its network modernisation project (outlined in paragraph 10.104 below), the obligation outlined in paragraph 10.62 above is proportionate and justified. Given that the products and services are in decline in the Regional FACO Markets, ComReg's preliminary view is to limit access requests<sup>856</sup> for 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 this Consultation comes into effect, those access requests required for the implementation of the network modernisation project and requests in connection with a FNA FACO product, service or facility which Eircom provides to itself.
- 10.64 The significant majority of the access obligations that ComReg proposes to impose here, and elsewhere in this Section, effectively result in a continuation of Eircom's offer of the existing FNA FACO products in accordance with the product descriptions and terms and conditions of supply or use, as specified in the current version of the Eircom RIO,<sup>857</sup> and, in addition, in accordance with the proposed obligations discussed elsewhere in this Consultation.
- 10.65 As noted in Section 7, ComReg does not consider that, absent NG Broadband which is capable of supporting the delivery of Managed VoIP, existing or potential competition would effectively constrain Eircom's SMP within the lifetime of this market review. In particular, ComReg has noted that, in the footprint of the Regional FACO Markets, RFTS competition has been and, is likely to continue to be sufficiently dependent on 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.
- 10.66 ComReg does not, however, propose to require Eircom to meet reasonable requests for access to 'NGA FACO', i.e., IP-based FACO that would be delivered over upstream Regulated Access Products (hereafter, '**RAP(s)**') or, indeed, through broadband enabled via local loop unbundling (hereafter, '**LLU**').<sup>858</sup>

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<sup>855</sup> In the period following the publication of the decision on foot of this Consultation.

<sup>856</sup> In the context of access requests for FACO product development.

<sup>857</sup> Currently RIO version 6 dated 2 May 2019, as published on [Open eir's website](#), as may be amended from time to time and in accordance with the obligations proposed elsewhere in this Consultation.

<sup>858</sup> Any product mandated within the upstream market described in the 2018 WLA/WCA Decision.

- 10.67 ComReg's preliminary view with respect to NGA FACO is that 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.
- 10.68 ComReg notes that Eircom and BT both offer (as outlined in Section 5 above) commercial White Label NGA FACO ('**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).
- 10.69 The proposed imposition of these and other access obligations identified below is also assessed in paragraphs 10.70 to 10.157, having regard to the statutory criteria identified in paragraphs 10.59 and 10.60 above.

### Additional Proposed Access Remedies

- 10.70 In addition, apart from the general obligation above to meet reasonable requests for access to FNA FACO in the Regional FACO Markets, ComReg proposes to impose specific access requirements on Eircom to provide a range of specific products, services and facilities, as well as more general requirements governing this.
- 10.71 In this respect, ComReg proposes to impose a range of specific obligations on Eircom in order to address identified competition problems and, ultimately, to promote the development of downstream competition to the benefit of end users.
- 10.72 ComReg's preliminary view is that it is appropriate to continue to impose obligations (as per the 2015 FACO Decision) upon Eircom:
- (a) To provide access to specified wholesale products, services and facilities, namely:
    - (i) SB-WLR (see paragraphs 10.74 to 10.88 below);
    - (ii) Ancillary Services on SB-WLR (see paragraphs 10.74 to 10.88 below); and
    - (iii) Interconnection Services and associated co-location facilities (see paragraphs 10.89 to 10.106 below).
  - (b) To negotiate in good faith with Undertakings requesting Access (see paragraphs 10.107 to 10.112 below);
  - (c) Not to withdraw Access to facilities already granted without the prior approval of ComReg (see paragraphs 10.113 to 10.115 below);



- (d) 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 10.116 to 10.117 below);
- (e) 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 10.118 to 10.119 below);
- (f) 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 10.120 to 10.121 below);
- (g) To provide access to OSS or similar software systems necessary to ensure fair competition in the provision of products, services and facilities (see paragraphs 10.122 to 10.125 below);
- (h) To interconnect networks or network facilities (see paragraphs 10.126 to 10.128 below); and
- (i) To provide access in accordance with a range of conditions governing fairness, reasonableness and timeliness (see paragraphs 10.129 to 10.145 below).

10.73 The consideration of, and justification for, the access remedies listed above is discussed below.

#### **SB-WLR and Ancillary Services on SB-WLR**

10.74 Pursuant to Regulation 12 of the Access Regulations, ComReg proposes that Eircom should be required to provide SB-WLR as well as a range of associated facilities, including access to:

- (a) SB-WLR; and
- (b) Wholesale ancillary services, excluding wholesale low value CPE rental.

10.75 The justification for the above proposed requirements is discussed below.

10.76 SB-WLR is a wholesale bundle that, *inter alia*, combines CPS (being FNA FVCO) together with WLR (being FA).<sup>859</sup> 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).

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<sup>859</sup> WLR, for the purposes of the discussion on remedies, encompasses wholesale access to PSTN, ISDN BRA, ISDN FRA and ISDN PRA.



- 10.77 As noted in Section 9, ComReg has noted that the provision of RFTS in the footprint of the Regional FACO Markets has been and, for the period of this review, is likely to continue to be, sufficiently dependent on Access Seekers having wholesale access to SB-WLR and associated facilities.<sup>860</sup> Absent regulation, ComReg's preliminary 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 FNA FACO products, services and facilities such as SB-WLR. In this respect, 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.
- 10.78 For these reasons, ComReg proposes that Eircom should be required, pursuant to Regulation 12(2)(a) of the Access Regulations to provide access to SB-WLR.
- 10.79 ComReg is also of the preliminary view that Eircom should, in accordance with Regulation 12(2) of the Access Regulations, continue to be required 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 remedy in addressing competition problems in the downstream RFTS market.
- 10.80 Such ancillary services include the various calling features (such as call barring, call waiting, and, caller line identity restriction) which are set out in Sections 4.2 of the Eircom's SB-WLR Product Description (issue 3.0, dated 12 June 2017)<sup>861</sup> as may be amended from time to time, and as is published on Eircom's wholesale website (hereafter, the '**Ancillary Services on SB-WLR**').<sup>862</sup>
- 10.81 Where a request by an Undertaking for the provision of Access (including Access to those products, services and facilities described in paragraph 10.72 above), 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 (including as part of its final response) each of the objective reasons for such refusal or partial grant. Eircom's response shall be provided in a fair, reasonable and timely manner.

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<sup>860</sup> 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 Mid-term Assessment and sunset periods detailed in Section 11 will apply to any of these changes.

<sup>861</sup> A copy is available on Open eir's website at [www.openeir.ie/Products/Voice/Single\\_Billing\\_-\\_Wholesale\\_Line\\_rental/](http://www.openeir.ie/Products/Voice/Single_Billing_-_Wholesale_Line_rental/).

<sup>862</sup> Insofar as they relate to the Regional FACO Markets, and in accordance with the proposed obligations set out elsewhere in this Consultation.

- 10.82 Furthermore, either concurrently to the notification to the Undertaking in paragraph 10.81, or on a monthly basis, Eircom shall provide information to ComReg regarding the objective reasons for such refusal or partial grant of Access, including the products, services or facilities requested, order details, and the identity of each Undertaking. Eircom shall provide the information to ComReg in the format and detail specified by ComReg.<sup>863</sup>
- 10.83 ComReg's preliminary view is that Eircom should no longer be required to provide access to wholesale low-value CPE rental (hereafter, '**wholesale LV-CPER**') as end users can purchase CPE from a large number of retail outlets nationwide or alternatively SPs could, at their discretion, procure and supply CPE to their retail end users. A number of Eircom's 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 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.
- 10.84 ComReg notes that Eircom published, on its product development roadmap, a proposal for 'ISDN BRA end of sale' from 1 January 2021, and an 'ISDN BRA end of support' from 31 December 2024.<sup>864</sup> ComReg's preliminary view is that Eircom should continue to have an obligation to provide Access to its ISDN BRA product in the Regional LL-FACO Market. ComReg's preliminary view is that multiple PSTN lines are not an effective substitute for ISDN BRAs, given that the Direct Dial In<sup>865</sup> (hereafter, '**DDI**') feature is not supported on multiple PSTN lines. The ISDN DDI feature appears to be a key service feature utilised by businesses.

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<sup>863</sup> 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.

<sup>864</sup> Eircom product development CRD ID 645 (ISDN BRA - End of Sale), in which Eircom noted that "*the drivers for the end-of-sale are because the product has reached end-of-life and there is no growth for this product within the market. In addition, Open eir have a finite supply of terminal adapters and the manufacturer will have ceased global production of terminal adapters to support the ISDN BRA product*". Terminal adapters, also known as Network Termination Units ('**NTUs**'), are installed in the end user's premises.

<sup>865</sup> ISDN DDI enables an end user to call directly an end user by using the public ISDN numbering plan.

- 10.85 As of Q4 2019, there were approximately [X [REDACTED] X] and [X [REDACTED] X] ISDN BRA and FRA/PRA lines respectively in the Regional FACO Markets. The number of ISDN BRA paths<sup>866</sup> ([X [REDACTED] X]) is comparable to the number of ISDN FRA/PRA paths ([X [REDACTED] X]) in the Regional FACO Markets. There are approximately [X [REDACTED] X] new ISDN BRA installed annually for various businesses in the Regional FACO Markets. Eircom's proposed ISDN BRA end of sale (on 1 January 2021) and end of support (on 31 December 2024) would remove the ISDN BRA service from the SME sector while continuing to provide ISDN FRA and ISDN PRA services to the corporate sector.
- 10.86 In the period Q1 to Q3 2019, the ratio of ISDN BRA cease order completions to provide order completions was [X [REDACTED] X] in the Regional LL-FACO Market. In the Urban LL-FACO Market the ratio was [X [REDACTED] X]. In this period, Eircom provided [X [REDACTED] X] ISDN BRA lines in the Regional LL-FACO FACO Market. As of 9 April 2020, Eircom had [X [REDACTED] X] ISDN BRA Network Termination Units (hereafter, 'NTUs') in stock. ComReg's preliminary view is that 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. Furthermore, Eircom can recover and reuse NTUs from ceased ISDN BRA services and therefore has the ability to both provide and maintain ISDN BRA services in the Regional LL-FACO Market. Eircom is planning to continue using legacy BRA equipment in its network to provide ISDN BRA services for existing subscribers and so, has the ability to provide and maintain ISDN BRA services in the Regional LL-FACO Market. Absent this obligation, certain end users currently reliant on ISDN BRA in the Regional LL-FACO Market would not have sufficient access to an alternative modern equivalent product (e.g. Managed VoIP).
- 10.87 As of Q3 2019, approximately 85% of the national ISDN BRA installed base was within the Urban LL-FACO Market. Based on ComReg's preliminary view, outlined in this Consultation, Eircom has the ability to implement an 'ISDN BRA end of sale' and 'ISDN BRA end of support' nine (9) and 18 months<sup>867</sup> respectively, after the Effective Date of the Decision Instrument. 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). Post sunset period, in the Urban LL-FACO Market, Eircom has the ability to recover and reuse NTUs in order to provide and maintain ISDN BRA services the Regional LL-FACO Market.

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<sup>866</sup> Two paths for each ISDN BRA line.

<sup>867</sup> Given that 18 months after the Effective Date of the Decision Instrument shall be earlier than 31 December 2024, Eircom has the ability to implement ISDN BRA end of support in the Urban LL-FACO Market at an earlier date.

- 10.88 Given the ongoing rollout<sup>868</sup> of NG Broadband networks in the Regional LL-FACO Market, ComReg's preliminary 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.

### Interconnection services and associated co-location facilities

- 10.89 Pursuant to Regulation 12(2)(f) and (i) of the Access Regulations, ComReg's preliminary view is that Eircom should be required to provide access to a range of specific interconnection services and associated co-location facilities that are associated with the provision of access to FACO.
- 10.90 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.
- 10.91 Eircom currently supplies a range of interconnection services to FACO Access Seekers pursuant to its existing SMP obligations:
- (a) In-Span Interconnect/Handover (hereafter, '**ISI/H**'), which means the connection between the Eircom Exchange and the alternative SP's nominated Point of Handover (hereafter, '**POH**');
  - (b) Customer-Sited Interconnect/Handover (hereafter, '**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 (hereafter, '**IBI/H**'), which means the connection between the Eircom Exchange and the alternative SP's equipment within the exchange or equivalent facility.
- 10.92 The above interconnection products (together referred to as '**Current Generation**' (hereafter, '**CG**') **Interconnection Services**') support the purchase of FNA FVCO and, in the context of this review, it is ComReg's preliminary view 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 FVCO<sup>869</sup> (or, indeed, to purchase FVCT).<sup>870</sup>

<sup>868</sup> By Eircom, SIRO and Virgin Media, and the expected commencement of rollout by NBI.

<sup>869</sup> 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.

<sup>870</sup> 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**.

- 10.93 Absent regulation, ComReg considers that Eircom would have the ability and incentive to leverage its SMP position into the Regional FACO Markets in its supply of interconnection products, services and facilities by (outright or constructive) denial of access to, for example, Interconnection Services, or by acting in a discriminatory manner (for example, through offering preferential terms and conditions, including prices, to one group of purchasers over another). For the reasons discussed in Section 9, Eircom could also potentially impede/raise the costs of effective handover of calls to or from SB-WLR-based retail subscribers, and thus undermine the effectiveness of those services. Such leveraging behaviour could undermine remedies imposed in the Regional FACO Markets which are designed to address the lack of effective competition within them, and, ultimately, sustainable competition in the RFTS markets.
- 10.94 ComReg therefore proposes to continue to require Eircom to provide the specific TDM-based interconnection products, services and facilities, referred to in paragraph 10.91, to facilitate the handover of Regional FACO traffic at an Access Seeker's POH.
- 10.95 The inclusion of these 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).
- 10.96 In addition to the CG Interconnection Service, ComReg proposes to impose an obligation on Eircom to implement a NG Interconnection Service. The NG Interconnection Service product must support as the voice control protocol:
- (a) Session Initiation Protocol (hereafter, '**SIP**') as defined by the Internet Engineering Task Force standards (based on Requests for Comment such as RFC3261).<sup>871</sup>
- 10.97 The standard above is the original and most basic form of SIP and is the most widely implemented as standard in vendor platforms. This will allow for a more straightforward interoperability verification between SP's SIP platforms.

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<sup>871</sup> RFC3261 – SIP: Session Initiation Protocol - <https://tools.ietf.org/html/rfc3261>

- 10.98 ComReg notes that Eircom is currently developing a NG Interconnect Service.<sup>872</sup> This development was commenced in response to a request from an Access Seeker on 27 February 2018. On 19 July 2019, Eircom indicated that the initial target launch date of the development was 31 January 2020. On 10 October 2019, Eircom revised the target launch to 31 August 2020.
- 10.99 ComReg's position is that it is reasonable, proportionate and justified to require Eircom to provide a NG Interconnection Service product to Access Seekers no later than 3 months after the publication of the final decision arising from this Consultation. Absent the NG Interconnection Service remedy, Eircom could behave in such a manner as to delay the introduction of NG Interconnection Service, thereby prolonging CG Interconnection Service and associated costs for Access Seekers.
- 10.100 The proposed NG Interconnection Service product will perform TDM to IP conversion<sup>873</sup> of an Access Seeker's originating Regional FACO traffic before conveying it to the Access Seeker's specified POH. The underlying transport network is the Next Generation Network (hereafter, '**NGN**'). The POH for Regional FACO traffic shall be the Access Seeker's nominated WEIL(s)<sup>874</sup> served from the NG Interconnection Service double-tandem exchange(s), or equivalent.
- 10.101 In the event that the CG Interconnection Service double-tandem exchanges are different from the NG Interconnection Service double-tandem exchanges, Eircom shall 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).
- 10.102 QoS functionality available on Eircom's WEIL product can ensure the prioritisation of voice traffic on the WEIL over other data traffic.

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<sup>872</sup> IP interconnection product currently under development by Eircom (ID 511: SIP/SIP-I Voice Interconnection over IP, forecast launch 31 August 2020).

<sup>873</sup> For traffic from TDM RSUs.

<sup>874</sup> All WEIL variants i.e., In-Building Handover (hereafter, '**IBH**'), In-Span Handover (hereafter, '**ISH**'), Customer-sited Handover (hereafter, '**CSH**') and Edge Node Handover (hereafter, '**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;



- 10.103 IP Interconnect is a modern and proven technology which is widely available throughout Europe<sup>875</sup> and is, in general, more cost effective than traditional TDM-based interconnection.
- 10.104 In November 2019, Eircom proposed a network modernisation project whereby it will replace all [X [REDACTED] X] Remote Subscriber Units (hereafter, 'RSU(s)') in its network with MSANs which will be controlled by Call Control Servers (hereafter, 'CCS(s)'), i.e., PSTN Emulation.<sup>876 877</sup> 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. It should be noted that removal of Primary and Secondary layer interconnection (a feature of CG Interconnection Service) is subject to ComReg approval. For the avoidance of doubt, Eircom's network modernisation project is an initiative to modernise FNA FACO.
- 10.105 The availability of the NG Interconnection Service can facilitate Access Seekers who wish to migrate their interconnect traffic from CG. ComReg expects at this point in time, that this transition onto a newer form of effective modern interconnection would be expected to be more cost efficient than the existing legacy approach.
- 10.106 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.

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<sup>875</sup> 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](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>.

<sup>876</sup> PSTN Emulation Architecture, ITU-T, Y.2031 <https://www.itu.int/rec/T-REC-Y.2031-200609-I/en>.

<sup>877</sup> 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](https://www.etsi.org/deliver/etsi_es/282000_282099/282002/01.01.01_50/es_282002v010101m.pdf).



### Requirement to negotiate in good faith

10.107 Pursuant to Regulation 12(2)(b) of the Access Regulations, ComReg proposes to impose 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 powers<sup>878</sup> between Eircom and Access Seekers in the negotiation process by reducing incentives to unnecessarily prolong negotiations and should facilitate 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.

10.108 ComReg also notes that the obligation to negotiate in good faith implies that the responsibility rests with Eircom to demonstrate that its approach to negotiation with Undertakings was in good faith and that any unmet access requests<sup>879</sup> can be shown to be unreasonable by reference to objective criteria. In this regard, Recital 19 of the Access Directive states regarding requests to SMP Undertakings for access that:

*“..such requests should only be refused on the basis of objective criteria, such as technical feasibility or the need to maintain network integrity”*

10.109 ComReg, therefore, proposes 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.

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<sup>878</sup> As noted at paragraph 7.295 above, ComReg considers CBP to be ineffective in constraining Eircom's SMP in the Regional FACO Markets.

<sup>879</sup> For the avoidance of doubt, access requests include Access Seeker requests for access to specified wholesale products/services (listed in 10.72 (a) above). For example, SB-WLR orders with 'rejected' and 'undeliverable' status fall within the scope of this obligation.

10.110 ComReg notes 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.

10.111 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.

10.112 In ComReg's preliminary view, 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.

#### **Requirement not to withdraw access to facilities already granted**

10.113 Pursuant to Regulation 12(2)(c) of the Access Regulations, ComReg proposes to impose an obligation on Eircom not, without the prior approval of ComReg, to withdraw access to facilities already granted. For the avoidance of doubt, this does 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.

- 10.114 Having regard to the competition problems identified in Section 9, ComReg has identified that Eircom would have the ability and incentive to delay or refuse access to FACO and access to associated facilities, either outright or constructively, resulting in restrictions and/or distortions in competition to the detriment of consumers. As networks develop, this could also result in changes to points of interconnection or types of interconnection offered or provided by Eircom. ComReg recognises 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. However, ComReg considers that the proposed remedy, requiring that Eircom seek ComReg's approval prior to any withdrawal of access, will promote regulatory certainty for all parties, without unduly restricting investment incentives.
- 10.115 More specifically, ComReg proposes 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. Where Eircom proposes to withdraw products, services or facilities, ComReg would retain the right to consult with relevant parties, prior to making a decision on whether to grant or to withhold its approval.

#### **Requirement to grant open access to technical interfaces, protocols and other key technologies**

- 10.116 Pursuant to Regulation 12(2)(e) of the Access Regulations, ComReg proposes to impose an obligation on Eircom 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, ComReg considers that this remedy is both justified and proportionate in order 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.
- 10.117 In so doing, ComReg considers that this remedy 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**

- 10.118 Pursuant to Regulation 12(2)(f) of the Access Regulations, ComReg proposes to impose an obligation on Eircom 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 10.89 to 10.103 above.
- 10.119 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**

- 10.120 Pursuant to Regulation 12(2)(g) of the Access Regulations, ComReg proposes to impose an obligation on Eircom 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.
- 10.121 This obligation is needed to support Eircom's general access obligation because Eircom could potentially impede or raise the costs associated with Access Seekers' use of FACO in the Regional FACO Markets or Interconnection Services, by making services non-interoperable through, for example, effectively or constructively refusing access to intelligent network services to the extent that they are necessary for FACO, thus undermining the effectiveness of the proposed 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**

- 10.122 Pursuant to Regulation 12(2)(h) of the Access Regulations, ComReg proposes to impose an obligation on Eircom to provide access to OSS or similar systems to ensure fair competition in the provision of products, services, and facilities.
- 10.123 Access to Eircom's OSS plays an important role in Eircom's provisioning of wholesale services (such as SB-WLR etc.) to Access Seekers and its own downstream arm. This also includes access to OSS for the purpose of fault and in-service management. Access to OSS is, therefore, 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.

- 10.124 Where Access Seekers are 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, ComReg considers that 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.
- 10.125 The standards of access equivalence (whether on an EoO<sup>880</sup> or EoI<sup>881</sup> basis) that ComReg is proposing to be applied by Eircom in providing access to its OSS or similar software systems are discussed in the context of proposed non-discrimination remedies in paragraphs 10.164 to 10.177 below.

#### **Requirement to interconnect networks or network facilities**

- 10.126 Pursuant to Regulation 12(2)(i) of the Access Regulations, ComReg proposes to impose a requirement on Eircom to interconnect networks or network facilities.
- 10.127 In order to avail of access to FNA FACO products, services and facilities in the Regional FACO Markets, Access Seekers will need to interconnect with Eircom for the purpose of taking their retail end users' originated calls (over SB-WLR) onto their own network.
- 10.128 Having regard to the competition problems identified in Section 9, ComReg considers that Eircom has the ability and incentive to either actually or constructively refuse to allow Access Seekers availing of SB-WLR to interconnect to it, thereby undermining the effectiveness of the SB-WLR remedy itself, and, ultimately, restricting or distorting competition at the retail level.

#### **Requirements governing fairness, reasonableness and timeliness of access**

- 10.129 As noted in Section 9, ComReg considers that 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.

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<sup>880</sup> **EoO** essentially refers to provision of products, services, facilities, and information by an SMP Undertaking to Access Seekers such that such products, services, facilities, and information is 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 Undertaking provides to itself, albeit potentially using different systems and processes.

<sup>881</sup> **EoI** essentially refers to provision of products, services, facilities, and information by an SMP Undertaking to Access Seekers such that such products, services, facilities, and information is 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 Undertaking provides to itself, and using the same systems and processes.

- 10.130 ComReg's preliminary view is that, pursuant to Regulation 12(3) of the Access Regulations, certain conditions should, therefore, be attached to Eircom's proposed 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.
- 10.131 Specifically, ComReg considers that in circumstances 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.
- 10.132 The purpose of the above requirements is to ensure that access to wholesale products, services, and facilities is provided in a fair, reasonable and timely manner, thereby promoting effective downstream competition, to the ultimate benefit of consumers.
- 10.133 As noted in paragraphs 10.109 above, ComReg is also proposing to impose an obligation on Eircom that, where a request for access from an Undertaking is refused or only partially met, the objective reasons for such should be provided in detail to the Undertaking which has made the request, or to all Undertakings and ComReg and to do so in a timely fashion (having regard to the nature of the request).
- 10.134 Specific conditions that ComReg proposes to impose upon Eircom include requirements to:
- (a) Conclude, maintain or update, as appropriate, SLAs with Access Seekers. An SLA is a legally binding contract in relation to the service levels that Eircom would commit to when supplying FACO to Access Seekers, as more particularly set out in Eircom's RIO,<sup>882 883</sup> as may be amended from time to time;
  - (b) Ensure that the SLA includes provision for service credits to be provided by Eircom to Access Seekers in the event that committed service levels are not met;
  - (c) Ensure that SLAs detail how service credits are calculated and include the provision of a sample calculation;

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<sup>882</sup> Eircom's RIO is available on its Open eir website at [https://www.openeir.ie/Reference\\_Offers/?selectedtab=rio](https://www.openeir.ie/Reference_Offers/?selectedtab=rio).

<sup>883</sup> The RIO is the offer of contract by Eircom to Undertakings in respect of the provision of FACO products, services and facilities and is discussed later in paragraphs 10.189 to 10.198 in the context of proposed transparency obligations.



- (d) Ensure that the application of service credits, where they occur, is applied automatically, and in a timely and efficient manner;
- (e) Ensure that the levels of the Service Credits are fair and reasonable;
- (f) Ensure that the SLAs include performance metrics, being 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;
- (g) Provide Access Seekers' requests for multiple wholesale products in a concurrent timeframe; and
- (h) Negotiate in good faith with Access Seekers in relation to the conclusion of 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<sup>884</sup> 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.

10.135 These proposed conditions essentially mirror those imposed principally in the 2015 FACO Decision. These proposed 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

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<sup>884</sup> Subject to the restrictions outlined in 10.63



- (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.

10.136 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.

10.137 A request from an Access Seeker for a new SLA<sup>885</sup> or an amendment to an existing SLA needs to be considered by Eircom in the context of its obligation to meet reasonable requests for access. In practice, this means that Eircom shall, at the initiation of SLA negotiations (which can be on foot of a request for access from an Access Seeker, or where Eircom itself is seeking to introduce an SLA), propose:

- (a) Projected timeframes for the acceptance or rejection of the requested SLA amendment (or new SLA) as being a reasonable request for access; and
- (b) Projected timeframes within which the SLA will be concluded, noting that Eircom is subject to an obligation to conclude SLA negotiations within 6 months.

10.138 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). If there is no agreement on this timeline, then an Access Seeker may request ComReg to investigate Eircom's compliance with the obligation to negotiate in good faith.

10.139 If the agreed timeline and associated dates are not met, i.e., an SLA has not been concluded, or if the Access Seeker is of the view that the delay was caused by Eircom and is unreasonable, then the Access Seeker may request ComReg to investigate Eircom's compliance with the above obligation to negotiate in good faith (if it feels that the delay to the delivery of the SLA was caused by Eircom) as well as Eircom's obligation to meet reasonable requests for access and to conclude an SLA.

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<sup>885</sup> Subject to the restrictions outlined in paragraph 10.63.

- 10.140 While negotiations in respect of a new SLA<sup>886</sup> or an amendment to an existing or proposed SLA shall be concluded, unless otherwise agreed by ComReg, within six (6) months of the date the Access Seeker(s) makes such a request, this does not mean that negotiations cannot conclude before the end of the 6 month period specified in the obligation. Neither is an Access Seeker precluded from raising a dispute or compliance issue with ComReg during that negotiation period in respect of Eircom's compliance with its SMP obligations. Furthermore, at any time, it is open to ComReg to investigate, on its own initiative, Eircom's compliance with its SMP obligations.
- 10.141 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.
- 10.142 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.
- 10.143 It should be noted that the above obligation requiring Eircom to negotiate in good faith in relation to the conclusion of legally binding and fit-for-purpose SLAs does not, under any circumstances, limit the existing legal powers of ComReg (including but not limited to its enforcement powers) to intervene on its own initiative at any stage in respect of Eircom's compliance with its SMP obligations (including but not limited to those requiring Eircom to grant Undertakings access in a fair, reasonable and timely manner, or to provide in detail the objective reasons for a refusal or partial grant of an access request).
- 10.144 In view of the above, ComReg's preliminary view is that the proposed obligations requiring Eircom to provide access to FNA FACO products, services and associated facilities, are proportionate and justified in the Regional FACO Markets.
- 10.145 ComReg has also considered whether access obligations would be sufficient in themselves to resolve the identified competition problems. For the reasons set out in the discussion of the other proposed remedies below, and set out in section 12.3.3 of 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.

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<sup>886</sup> Subject to the restrictions outlined in paragraph 10.63.

## Payphone Access Charge Service

- 10.146 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.
- 10.147 The PAC Service means the service whereby Eircom levies and administers the PAC on behalf of payphone operators.
- 10.148 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
  - (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).
- 10.149 ComReg notes that 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
- 10.150 The PAC database indicates that 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 (hereafter, 'ERAU').<sup>887</sup> 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
- 10.151 Based on network data provided by Eircom, the number of active payphones [X [REDACTED] X],<sup>888</sup> is much lower than the figure cited above.
- 10.152 Of those active payphones, Eircom operates 456 payphones<sup>889</sup> under its retail Universal Service Obligation<sup>890</sup> (hereafter, 'USO') and a further [X [REDACTED] X] payphones on a commercial basis.

<sup>887</sup> <https://serviceregister.comreg.ie/services/search/>

<sup>888</sup> Less than 1,000.

<sup>889</sup> <https://www.eir.ie/regulatoryinformation/public-payphones/>

<sup>890</sup> Provision of Public Pay Telephones, Universal Scope and Designation, ComReg 19/06, Decision Number D01/19, 25 February 2019.

- 10.153 In 2018, Eircom credited [redacted] <sup>891</sup> to payphone operators under its existing PAC Service obligation. In 2019, this figure was [redacted] <sup>892</sup>. In each year, the PAC Service payments did not exceed €10,000. In 2019, this amounted to [redacted] per day per phone.
- 10.154 Of the total active payphones identified in paragraph 10.151, only 6% are operated by a payphone operator other than Eircom, under 2% are located in the Regional FACO Markets and so, would be eligible for the PAC service after this FACO market review
- 10.155 Given the low value of the existing PAC Service payments, and declining payphone market, ComReg's preliminary view is that it is no longer proportionate to maintain the PAC Service remedy on Eircom. ComReg therefore proposes to withdraw this remedy.

### Summary of Preliminary Conclusions on Access Obligations

- 10.156 Having regard to the analysis set out in paragraphs 10.51 to 10.155 above, ComReg's preliminary view is that proposed access obligations are proportionate and justified. The proposed specific requirements include obligations to:
- (a) Provide access to specified wholesale products services and facilities, namely
    - (i) SB-WLR;
    - (ii) Ancillary Services on SB-WLR; and
    - (iii) Interconnection Services and associated co-location facilities.
  - (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;

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<sup>891</sup> Less than €10,000.

<sup>892</sup> Less than €10,000.

- (h) Interconnect networks and/or network facilities; and
- (i) Provide access in accordance with a range of conditions governing fairness, reasonableness and timeliness.

10.157 ComReg has also considered whether the access obligations identified above would be sufficient in and of themselves to address the competition problems identified in Section 9 and does not consider this to be the case. For example, excessive pricing, margin squeeze and discriminatory behaviour could still occur in the presence of an access obligation.

## 10.6.2 Non-Discrimination Remedies

### Overview

10.158 The application of an *ex ante* non-discrimination remedy seeks to prevent a vertically-integrated Undertaking 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.

10.159 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.

10.160 As noted in the Access Directive,<sup>893</sup> 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 Undertakings that supply services to Undertakings with whom they compete in downstream markets.

10.161 Regulation 10 of the Access Regulations provides that ComReg can impose non-discrimination remedies in relation to access or interconnection on an Undertaking designated with SMP, in particular to ensure it behaves in such a way that it:

- (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.

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<sup>893</sup> Recital 17 of the Access Directive.

10.162 In this respect, non-discrimination obligations can be standalone, but can also support other obligations, such those relating to access, transparency and price control.

10.163 An overview of existing non-discrimination obligations has been provided in paragraphs 10.14 to 10.17 above.

### **Proposed Non-Discrimination Remedies**

10.164 ComReg's preliminary proposal is to retain the non-discrimination obligations imposed on Eircom by means of 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,<sup>894</sup> ComReg is proposing not to impose non-discrimination obligations on Eircom with respect to its NGA FACO, with the exception of Access to NG Interconnection Services.

### **General non-discrimination remedies**

10.165 ComReg proposes that Eircom be required to:

- (a) Apply equivalent conditions in equivalent circumstances to other Undertakings 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 other Undertakings under the same conditions and of the same quality as Eircom provides to itself or to its subsidiaries, affiliates or partners.

10.166 For the avoidance of doubt, it is ComReg's preliminary view that the non-discrimination obligations above are to apply irrespective of whether or not a specific request for products, services, facilities or information has been made by an Undertaking to Eircom. For example, if information or a service is provided by Eircom following a request from one Undertaking, Eircom is obliged to offer this to other Undertakings, notwithstanding that such other Undertakings have not made a request for it (or known to make a request for it). This is to ensure fair treatment of all Undertakings.

10.167 These obligations are intended 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.

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<sup>894</sup> See paragraphs 10.66 to 10.67 above.



## Specification of non-discrimination standards with respect to the provision of FACO

- 10.168 ComReg proposes that the non-discrimination obligations should be applied on, at least, an EoO standards basis. When Eircom provides Access Seekers with access to products, services and facilities in the Regional FACO Markets, including access to information, Eircom would be required to do so in a manner which achieves the same standards in terms of functionality, price, terms and conditions, service and quality levels as Eircom provides to itself, albeit potentially using different systems and processes.
- 10.169 ComReg considers that this EoO standard is appropriate in the context of FNA FACO, particularly given that the existing provision of FNA FACO products, services and facilities is largely over a legacy copper-based network (coupled with ComReg's proposal not to require Eircom to provide access to NGA FACO). ComReg considers that adopting an EoI standard would not be proportionate at this time. 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.<sup>895</sup>
- 10.170 However, ComReg considers that an EoI standard for SB-WLR is justified, proportionate and reasonable under certain circumstances. In particular, such circumstances arise with respect to ordering processes when a 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 EoI 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 EoI standard for ordering processes for SB-WLR when SB-WLR is ordered in conjunction with NGA VUA/Bitstream Plus using a combined order type.

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<sup>895</sup> 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.



10.171 Similarly for an SB-WLR service which is in use with an NGA VUA/Bitstream Plus service to provide services to a user i.e., post provisioning or which is provisioned together with an NGA VUA/Bitstream Plus service, ComReg also considers that Eircom should be subject to an Eol standard for fault handling and fault repair services for the SB-WLR service element. This 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**

10.172 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.

10.173 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 preliminary view is that this issue can be partially addressed through an effective price control obligation (see discussion later in paragraphs 10.223 to 10.293). 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**

10.174 Non-discrimination monitoring activities are supported by access and transparency measures<sup>896</sup> such as requirements to put in place and publish SLAs, performance guarantees and KPIs.<sup>897</sup>

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<sup>896</sup> Proposed transparency obligations are discussed from paragraph 10.180 onwards.

<sup>897</sup> 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.

- 10.175 KPIs 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. It also facilitates ComReg in fulfilling its role in monitoring the markets.
- 10.176 In addition to the full suite of Transparency obligations, as discussed later in paragraphs 10.211 to 10.214, 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.
- 10.177 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 Preliminary Conclusions on Non-Discrimination Obligations**

- 10.178 Having regard to the analysis set out in paragraphs 10.164 to 10.177 above, ComReg's preliminary view is that proposed non-discrimination obligations are proportionate and justified in Regional FACO Markets. The specific proposed requirements include:
- (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 a NGA VUA/Bitstream Plus service; and
  - (e) Eircom continuing to report KPIs to demonstrate how it is meeting its non-discrimination obligations.
- 10.179 ComReg has also considered whether the non-discrimination obligations summarised in paragraph 10.178 would be sufficient in and of themselves to address the competition problems identified in Section 9 and also set out in paragraphs 12.31 to 12.33 of the RIA, and 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.

### 10.6.3 Transparency Remedies

#### Overview

- 10.180 Regulation 9 of the Access Regulations provides that ComReg may, *inter alia*, specify obligations to ensure transparency in relation to access or interconnection requiring an SMP Undertaking 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.
- 10.181 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.
- 10.182 An overview of existing transparency obligations is set out at paragraph 10.18 to 10.30 above.

#### Proposed Transparency Remedies

- 10.183 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.
- 10.184 A transparency obligation is considered 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 SMPs 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.
- 10.185 Apart from the above, as noted in the Access Directive,<sup>898</sup> transparency of terms and conditions for access and interconnection, including prices, also serve to speed up negotiations between Undertakings, 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.

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<sup>898</sup> Recital 16 of the Access Directive.

- 10.186 ComReg therefore considers that Eircom should be required to 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,<sup>899</sup> ComReg is not proposing to impose transparency obligations upon Eircom with respect to NGA FACO. The proposed obligations set out below therefore only relate to FNA FACO in the Regional FACO Markets.<sup>900</sup>
- 10.187 ComReg also proposes that Eircom should be required, as specified by ComReg in writing from time to time, to make public on its publicly available wholesale website, information that may be reasonably requested by ComReg that is relevant to the provision of FNA FACO products, services and associated facilities such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices. This allows ComReg to proactively intervene in specific cases where it considers that transparency is lacking regarding the provision of information regarding FNA FACO products, services and associated facilities, notwithstanding the standard transparency measures proposed above being in place.
- 10.188 ComReg also notes that, pursuant to Regulation 9(3) of the Access Regulations, it can issue directions requiring Eircom to make changes to the RIO to give effect to obligations imposed by ComReg, and to publish the RIO with such changes. Eircom must comply with any such directions made by ComReg.
- 10.189 The proposed transparency obligations to be imposed on Eircom are:
- (a) General transparency requirements (see paragraph 10.190 below);
  - (b) Transparency requirements concerning RIO (see paragraphs 10.191 to 10.198 below);
  - (c) Transparency requirements governing RIO change management (see paragraphs 10.199 to 10.201 below);
  - (d) Advance notification timeframes for RIO and price changes (see paragraphs 10.202 to 10.208 below);
  - (e) Transparency requirements on wholesale billing (see paragraphs 10.209 to 10.210 below);
  - (f) Transparency requirements regarding Key Performance Metrics, Performance Metrics and SLAs (see paragraphs 10.211 to 10.214 below); and

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<sup>899</sup> See paragraphs 10.66 to 10.67 above.

<sup>900</sup> For the avoidance of doubt, Eircom's network modernisation project is an Eircom initiative to modernise FACO over FNA.

- (g) Transparency requirement to facilitate the legitimate sharing of confidential and/or commercial information through a non-disclosure agreement (see paragraphs 10.215 to 10.220 below).

### General transparency requirements

10.190 ComReg proposes that Eircom should be required to:

- (a) Publish a RIO which should contain a minimum specified set of details, including prices. The RIO must be sufficiently unbundled so that Access Seekers are not required to pay for services that are not requested, and be subject to a transparent change management process, including advance public notification of proposed changes to products and prices;
- (b) Provide, in accordance with specified timeframes, advance notification to Access Seekers and to ComReg of proposed changes to the RIO, prices and the introduction of products, services and facilities;
- (c) Ensure transparency in its billing by making its wholesale invoices sufficiently disaggregated, detailed and clearly presented such that an Access Seeker can reconcile the invoice to Eircom's RIO and RIO prices;
- (d) Publish on its publicly available website 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.

### Transparency requirements concerning RIO

10.191 ComReg has taken utmost account of the BEREC guidelines on the minimum criteria for a reference offer.<sup>901</sup>

10.192 ComReg proposes that Eircom should make publicly available and keep updated on its wholesale website, a RIO, which should contain a specified minimum list of items. Amongst the purposes of the RIO is to provide current or potential Access Seekers with all relevant information about the FNA FACO products, services and facilities that are, or are intended to be, provided by Eircom (also having regard to its non-discrimination and other obligations), thereby allowing them to make commercial decisions effectively and efficiently

10.193 More specifically, ComReg considers that the RIO should include at least the following items:

- (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, (the latter being the '**RIO Price List**');

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<sup>901</sup> 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;
- (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.

10.194 Overall, the proposed RIO obligations in paragraph 10.193 are largely consistent with those that have been imposed on Eircom arising from its SMP position in other regulated markets, and are also consistent with obligations imposed upon Eircom under the 2015 FACO Decision.

- 10.195 With regard to the requirement at paragraph 10.193(d), ComReg considers it important that both it and Access Seekers have visibility over the non-pricing and pricing terms and conditions associated with the FACO component of Eircom's WLV service, thereby supporting the effective monitoring and enforcement of Eircom's access, non-discrimination, pricing and other obligations.
- 10.196 On that basis, ComReg is of the view that Eircom should be obliged to continue to satisfy the transparency obligations relating to its WLV service, which in the context of this market analysis relates to the FACO component of Eircom's WLV service.
- 10.197 ComReg also considers that 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.
- 10.198 ComReg considers that the format of the RIO itself should be based on the version that is currently published<sup>902</sup> (Version 6.0, dated 2 May 2019) on Eircom's wholesale website, thereby continuing the current practice.

#### Transparency requirements governing RIO change management

- 10.199 ComReg also proposes to impose various transparency requirements governing change management of the RIO and its associated elements/documentation in order to enable Access Seekers to have visibility of any changes made or to be made, to the RIO over time. This will also support monitoring and enforcement of compliance with SMP obligations.
- 10.200 In this respect, ComReg proposes that Eircom should:
- (a) Publish and keep updated on its public wholesale website both clean (or unmarked) and tracked changes (or marked) versions of its RIO. The tracked change version of the RIO must also be sufficiently clear to allow Access Seekers to clearly identify all actual and proposed amendments from the preceding version of its RIO;
  - (b) Publish and keep updated on its public wholesale website an accompanying RIO change matrix which lists all of the amendments incorporated, or to be incorporated, in any amended RIO (the '**RIO Change Matrix**');
  - (c) 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 changes version of the RIO Price List must also be sufficiently clear to allow Access Seekers to clearly identify all actual and proposed amendments from the preceding version of its RIO Price List;

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<sup>902</sup> Eircom's RIO is available on its Open eir website at [https://www.openeir.ie/Reference\\_Offers/?selectedtab=río](https://www.openeir.ie/Reference_Offers/?selectedtab=río).



- (d) Publish and keep updated on its publicly available wholesale website a RIO Price List change matrix, which lists all of the amendments incorporated, or to be incorporated, in any amended RIO Price List (the '**Price List Change Matrix**'); and
- (e) Maintain and make publicly available 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.

10.201 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.<sup>903</sup>

#### Advance notification timeframes for RIO and price changes

10.202 ComReg proposes to impose obligations upon Eircom to provide advance notification of proposed amendments or changes to the RIO and related prices according to specified timeframes. This is to provide sufficient notification to Access Seekers to allow them to factor in such proposed changes into the commercial decision-making activities and to make any necessary adjustments or developments to billing or other systems, as appropriate. These advance notification requirements also provide a transparent and available mechanism according to which ComReg can monitor compliance by Eircom with the access, non-discrimination, pricing and other obligations proposed in this Consultation

10.203 In this respect, ComReg considers that advance notification timeframes for RIO and RIO Price List changes can reasonably vary depending on whether the changes/amendments relate to existing or new FNA FACO products, services and facilities;

10.204 ComReg proposes that Eircom be subject to the following obligations with respect to proposed changes/amendments (price and non-price):

- (a) Eircom shall (unless otherwise agreed by ComReg) provide two (2) months' advance notification of proposed amendments/changes to an existing FNA FACO product, service or facility, with such notification to be made publicly available by Eircom on its wholesale website. Eircom shall also 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;

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<sup>903</sup> See Section 10 of the Decision Instrument in the 2015 Decision.

(b) Eircom shall (unless otherwise agreed by ComReg) provide six (6) months' advance notification of the proposed amendments associated with the introduction of a new FNA FACO product, service or facility, with such notification to be made publicly available by Eircom on its wholesale website. Eircom shall also 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.

10.205 ComReg's preliminary view is that while the likelihood of new FNA FACO products, services or facilities being introduced<sup>904</sup> in the Regional FACO Markets may be low, given Eircom's intention to prolong the life of the FNA network by its investment in its network modernisation project (outlined in paragraph 10.104 above), the obligation outlined in paragraph 10.204(b) above is proportionate and justified. Given that the products and services are in decline in the Regional FACO Markets, ComReg preliminary view is to limit new access requests to those access requests extant on the date the decision arising from this Consultation comes into effect and those access requests required for the implementation of the network modernisation project.

10.206 ComReg also notes that, in circumstances 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), ComReg reserves the right to extend the timeframes set out at paragraph 10.204(a) above.

10.207 The above transparency requirements oblige Eircom to notify ComReg in the event of text 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 text change process as detailed 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.

10.208 ComReg proposes below to impose a requirement upon Eircom to provide ComReg with an SoC. The proposed timeframes within which Eircom is to provide the SoC to ComReg is aligned with the advance notification timeframes under the transparency obligations in paragraphs 10.204 to 10.205 above with respect to price and non-prices amendments.

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<sup>904</sup> In the period following the publication of this Decision.

### Transparency requirements on wholesale billing

- 10.209 ComReg proposes to require Eircom to provide transparency in its billing of FACO charges to its wholesale customers, and to ensure that its wholesale invoices for FACO are sufficiently disaggregated, detailed and clearly presented so that an Access Seeker can reconcile the invoice to Eircom's RIO and RIO Price Lists.
- 10.210 This should ensure that Access Seekers have the clear ability to monitor the wholesale charges being levied on them and facilitate an auditable means of detecting of any billing anomalies and/or non-compliance with regulatory obligations.

### Transparency requirements regarding KPIs, Performance Metrics and SLAs

- 10.211 As discussed in the context of non-discrimination<sup>905</sup> 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.
- 10.212 ComReg proposes to impose a requirement on Eircom to publish KPIs, for the Regional FACO Markets, on its public website in accordance with the existing requirements as set out in the 2011 KPI Decision.<sup>906</sup>
- 10.213 This KPI remedy is justified as it provides confidence to Access Seekers that Eircom's performance in the supply of FNA FACO products, services and facilities will be measured against relevant performance indicators in a transparent way, and therefore supports the non-discrimination and access obligations.
- 10.214 In paragraphs 10.129 to 10.145 above, in the context of requirements governing fairness, reasonableness and timeliness of access to be provided, ComReg proposes to impose obligations on Eircom concerning SLAs and Performance Metrics in the Regional FACO Markets. In addition, ComReg proposes to require Eircom to publish its performance metrics and its SLAs on its publicly available wholesale website. The justification for such requirements is the same as that which was set out above with respect to KPIs, namely that ComReg considers this to be an effective way of providing transparency regarding the FACO service levels provided by Eircom, having regard to its access, non-discrimination and other obligations.

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<sup>905</sup> See paragraphs 10.174 to 10.177 above.

<sup>906</sup> 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').

### Transparency requirement to facilitate the legitimate sharing of confidential and/or commercial information through a non-disclosure agreement

- 10.215 ComReg proposes that Eircom, as the SMP Undertaking in the Regional FACO Markets should be required to provide information regarding technical developments, network rollout and wholesale services, insofar as it affects the provision of FNA FACO products, services and facilities in the Regional FACO Markets (subject to the obligations set out in this Decision) and to do so with sufficient visibility to ensure that Access Seekers are in a position to prepare business or operational plans.
- 10.216 In this respect, ComReg notes that, in some cases, circumstances may arise where Eircom considers that certain information to be provided by it, pursuant to its non-discrimination obligations, is of a confidential and/or commercially sensitive nature. To cater for such circumstances, ComReg proposes requiring Eircom to meet the following requirements, which largely mirror those which are imposed in other markets on which Eircom has been designated with SMP.
- 10.217 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 such information along with objective reasons justifying why it considers the information to be confidential and/or commercially sensitive. ComReg will consider the information in accordance with ComReg's guidelines on the treatment of confidential information in ComReg Document No. 05/24<sup>907</sup> 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.
- 10.218 If, having considered a submission from Eircom in accordance with paragraph 10.217 above, ComReg concludes that the information is confidential and/or commercially sensitive, the following provisions shall apply:
- (a) Eircom shall not be required to publish the information;
  - (b) Notwithstanding paragraph 10.218(a), in circumstances considered appropriate by ComReg, Eircom shall publish general non-confidential details as to the nature of such information and shall make the information or, as agreed with ComReg, extracts of such information, available to an Access Seeker that has signed a Non-Disclosure Agreement (hereafter, '**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 wholesale website; and

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<sup>907</sup> See ComReg Document 05/24, '*Guidelines on the treatment of confidential information*', March 2005. <https://www.comreg.ie/csv/downloads/ComReg0524.pdf>.

- (c) Without prejudice to the generality of Eircom's non-discrimination obligations, any confidential and/or commercially sensitive information (or, as agreed with ComReg, extracts thereof) referred to with respect to Eircom's transparency obligations shall not be made available by Eircom to its downstream operations until such time as it is made available to an Access Seeker, or as otherwise agreed with ComReg.

10.219 If and when any commercially sensitive and/or confidential information referred to with respect to Eircom's transparency obligations 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.

10.220 This obligation is considered necessary to ensure that Eircom cannot circumvent compliance with its access, non-discrimination and transparency obligations on the grounds that it considers that certain information is commercially sensitive and/or confidential.

### **Summary of Preliminary Conclusions on Transparency Obligations**

10.221 Having regard to the analysis set out in paragraphs 10.183 to 10.220 above, ComReg's preliminary view is that proposed transparency obligations are proportionate and justified. The proposed specific requirements include:

- (a) General transparency requirements (see paragraph 10.190 above);
- (b) Transparency requirements concerning RIO (see paragraphs 10.191 to 10.198 above);
- (c) Transparency requirements governing RIO change management (see paragraphs 10.199 to 10.201 above);
- (d) Advance notification timeframes for RIO and price changes (see paragraphs 10.202 to 10.208 above);
- (e) Transparency requirements on wholesale billing (see paragraphs 10.209 to 10.210 above);
- (f) Transparency requirements regarding KPIs, Performance Metrics and SLAs (see paragraphs 10.211 to 10.214 above); and
- (g) Transparency requirement to facilitate the legitimate sharing of confidential and/or commercial information through a non-disclosure agreement (see paragraphs 10.215 to 10.220 above).

10.222 ComReg has considered whether transparency obligations would be sufficient in themselves to resolve the competition problems identified in Section 9, and as outlined in paragraphs 12.28 to 12.30 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.

## 10.6.4 Price Control and Cost Accounting Remedies

### Overview

10.223 In Section 9, ComReg identified that Eircom has 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 in order to leverage its SMP position into adjacent or downstream markets. In light of this, ComReg considers that the imposition of obligations of price control and cost accounting on Eircom is justified.

10.224 ComReg has proposed, as detailed at sub-section 10.6.1 above, imposing a range of access obligations on Eircom, including the requirement to provide the following products, services and facilities in the Regional FACO Markets:

- (a) SB-WLR (which includes FNA FVCO);<sup>908</sup>
- (b) Ancillary Services on SB-WLR; and
- (c) Interconnection services and associated co-location facilities.

10.225 In this section, ComReg considers whether price control obligations are appropriate to address the competition problems identified in Section 9 and, if so, what form of price control would best meet the regulatory objectives to promote: efficiency; sustainable competition; and efficient investment and innovation, for the ultimate benefit of end users.

10.226 ComReg has also proposed (see sub-section 10.6.3) to impose a transparency obligation on Eircom's WLV service. ComReg similarly needs to consider whether price control obligations are appropriate for this service insofar as they relate to FACO products, services and facilities and, if so, what form of price control would best meet the above regulatory objectives.

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<sup>908</sup> The proposed price controls for the two components of SB-WLR, which are WLR and FVCO, are addressed separately in this section. WLR can be delivered over four FNA infrastructures: PSTN, ISDN BRA, ISDN FRA, and ISDN PRA

- 10.227 In this section, ComReg outlines the form of potential price control obligations available and costing methodologies which could be used to determine the appropriate levels of costs for Eircom's wholesale access products, services and facilities, and sets out the provisional approach to the implementation of price control obligations in the Regional FACO Markets. In setting these price control obligations, ComReg must take account of a number of factors, as set out in the Access Regulations, the Framework Regulations, and the Communications Regulations Act (as amended) prior to imposing any SMP obligation including price control and cost accounting obligations.
- 10.228 A range of price control options are available to ComReg, benchmarking, retail minus, margin squeeze test, and cost orientation. ComReg briefly describes each of these approaches below.
- 10.229 Costing methodologies determine which costs are included in cost models, and how these are then transformed into a wholesale charge by Eircom. In constructing a costing methodology ComReg takes into account relevant aspects including the cost standard, cost base, and cost model, each of which are discussed below.
- 10.230 Finally, ComReg outlines its preliminary view of the appropriateness of applying price control obligations to the relevant access products, services and facilities for the Regional FACO Markets.
- 10.231 One exception to these preliminary views is in relation to the proposed form of price control that should apply to PSTN WLR in the Regional FACO Markets. ComReg does consider that some form of price control is warranted due to the proposed finding of SMP in the Regional FACO Markets and the identification of the price related competition problems, but in this Consultation, ComReg is not specifying the detailed nature of the specific price control obligation. 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 ComReg intends to consult on this in Q3 2020 (the '**Separate ANM Pricing Consultation**').



10.232 The Separate ANM Pricing Consultation will consider the most appropriate form of price control for PSTN WLR. It is ComReg's intention that the decisions to be made on foot of this Consultation and the Separate ANM Pricing Consultation will be adopted together. However, in the event that this is not the case, ComReg proposes that the existing price control obligation of cost orientation for PSTN WLR as per the 2015 FACO Decision (as amended by the 2016 Pricing Decision)<sup>909</sup> should be maintained for a short transitional period, which ComReg expects to be between 4 to 6 months from the effective date of the Decision arising from this Consultation. This transitional price control obligation will enable the matters subject to this Consultation to be decided upon while at the same time providing for the additional time to facilitate the final price control obligations (post transition period) to be adopted.

## Forms of potential price control remedies

### Regulatory forbearance

- 10.233 Regulatory forbearance means that ComReg exercises its discretion not to impose a price control obligation on Eircom. Eircom would have freedom to set, for example, connection and rental prices for the various wholesale access services at the level of its choosing. These prices could vary over time and amongst Access Seekers and/or between its retail arm and Access Seekers (where non-discrimination obligations were not imposed). ComReg would have no influence on the prices for wholesale access services under this situation.
- 10.234 Given the finding of SMP in the Regional FACO Markets, regulatory forbearance is not possible because, as discussed later (as set out at paragraphs 12.24 to 12.26), the competition problems which ComReg has identified in Section 9 would not be adequately addressed.

### Benchmarking

- 10.235 Benchmarking is the practice whereby regulated prices for wholesale access services are set with reference to the prices of comparable services (which can include prices in other countries). Benchmarking may be used by NRAs in the absence of sufficient cost data to allow an NRA to arrive at a suitably informed price for the local market. Under such an approach structural factors (e.g. network typology, terrain, population density, labour costs, etc.) from other countries are incorporated into the result.<sup>910</sup> These factors could be adjusted to take account of Irish circumstances, but this may lead to an excess of complexity, given that established cost and volume data is available in Ireland.

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<sup>909</sup> 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-to-consultation-document-1567-and-final-decision> (the '2016 Pricing Decision').

<sup>910</sup> In relation to benchmarking, ComReg considers that the judgment of Cooke J. in *Vodafone Ireland Limited v Commission for Communications Regulation* [2013] IEHC 382 is of significance when considering whether it is appropriate to apply this form of price control.

## Retail-minus

- 10.236 A retail-minus price control determines the margin between the wholesale charge and the related downstream retail prices by considering what proportion of retail and other downstream costs would need to be deducted from the retail price in order to be left with appropriate wholesale prices at which Access Seekers, reliant on the upstream (wholesale) input, can effectively replicate the retail offer of the incumbent.
- 10.237 A potential advantage of a retail-minus price control is that it can, in some circumstances, be comparatively easy to implement as there is no need to develop a detailed cost model of the underlying network. On the other hand, ComReg has already developed a detailed access network cost model which ComReg considers to be superior in this instance to relying on costs derived via a retail minus approach (i.e. the modelled costs are more reflective of the costs incurred in providing the service). A further downside to using a retail-minus price control is that it is not possible to do so for products, services and facilities that do not have an associated retail equivalent (e.g. interconnection services). Another downside in using retail-minus is that it may be less of a constraint on retail prices. If retail prices increase, the corresponding wholesale charge will increase as well, and therefore the wholesale charges are not independently constrained as the retail price sets the wholesale charge. This is an especial concern where there is limited network competition as is the case for this market.

## Margin squeeze test

- 10.238 A margin squeeze test (hereafter, '**MST**') can be set between retail and wholesale products, or between different wholesale products. An MST can be used as a price control obligation to set maximum wholesale prices or as a complementary test in conjunction with other regulatory tools (e.g. cost orientation) to ensure that price control obligations are complied with.
- 10.239 A margin squeeze can occur where the SMP SP sets wholesale prices such that, given the prevailing retail prices, it does not allow an Access Seeker to cover its downstream retail costs (e.g. sales, marketing, etc.). Similarly, the SMP SP could set its downstream retail prices such that it may not cover the downstream retail costs incurred by the Access Seeker after acquiring the essential wholesale inputs from the SMP's wholesale arm. In the medium-to-long-term, if Access Seekers cannot profitably replicate the SMP SPs' retail offers, they may exit the market, to the ultimate detriment of end users. MSTs can be seen as promoting entry and supporting sustainable competition. However, at the same time, they can have an effect on the intensity of competition and preserve inefficient competitors.

10.240 The drawbacks of MST tests are in many respects similar to that of retail minus price controls. They can be very complex especially when there is no direct retail price comparator and the same concerns regarding the lack of constraint on retail prices also apply especially in the context of limited network competition.

### Cost orientation

10.241 A cost orientation price control obligation should allow the SMP SP to ensure that its wholesale prices recover no more than its actual incurred costs, adjusted for efficiency plus a reasonable rate of return. The estimate of the level of costs typically includes the efficiently incurred operating costs of the SMP SP, plus an allowance for the appropriate cost of capital (rate of return) in line with Regulation 13(2) of the Access Regulations.

10.242 ComReg considers that setting wholesale access prices using cost orientation helps 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. A cost orientation obligation does not suffer from the drawback of retail minus and MSTs whereby it is possible that retail prices are unconstrained and wholesale prices can, as a consequence, be set at an excessive level.

10.243 Cost orientation price controls can be designed to identify the correct level of access prices ensuring an adequate rate of return to the incumbent while setting appropriate investment signals.

10.244 A potential drawback of the cost orientation price control is that the development of a cost model can be a time-consuming and resource intensive process. However, Eircom's cost accounting systems contain significant detail on its access costs. In addition, ComReg has previously developed through the Revised CAM (and more recently as part of the ANM modelling exercise) a detailed access network cost model that allows it to analyse costs at the required level of granularity to inform pricing decisions.

### Costing methodologies

10.245 This section discusses the various costing methodologies which are used in the generation of wholesale charges, focussing in particular on:

- (a) Cost standards;
- (b) Cost bases; and
- (c) Cost models.

10.246 The scope of this section is to outline the parameters that apply in the various costing methodologies which are proposed in the next section for: Interconnection services - both Current and Next Generation; Co-Location and Order Handling; Ancillary Services on SB-WLR; ISDN WLR; FNA FVCO. As noted previously, PSTN WLR will be addressed separately in the Separate ANM Pricing Consultation.

## Cost standards

- 10.247 Certain assets and resources are dedicated to specific services and, therefore, direct costs can be recovered solely from those services.
- 10.248 However, where assets and resources are used to deliver numerous services (a very common occurrence in telecommunications), rules are needed to inform the allocation of the related costs to the particular services that the assets and resources support:
- (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).
- 10.249 Table 76 below outlines some of the cost standards used in regulatory decisions and a brief description of each:

**Table 76: Cost Standard Descriptions**

Concept	Description
<b>(Pure) LRIC</b>	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.
<b>LRAIC</b>	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.
<b>LRAIC+</b>	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).
<b>FAC or ATC</b>	This is the Average Total Cost (hereafter, ' <b>ATC</b> ') and 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 bases

- 10.250 For the cost base, there are two options – current cost, or historical cost.
- 10.251 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 (hereafter, '**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.
- 10.252 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.
- 10.253 Alternatively, the historic cost base approach uses Historical Cost Accounting (hereafter, '**HCA**'), 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. Some of the incumbent's assets may be fully depreciated but still in use, and the HCA approach should ensure that Eircom is not over-recovering costs for these assets.
- 10.254 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. However, if there is no investment and assets are 'sweated' to get the maximum value from them, then the incumbent will not be compensated over and above 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 methodologies<sup>911</sup> (hereafter, 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.

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<sup>911</sup> Commission Recommendation dated 11 September 2013 on 'Consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment'.

## Cost models

- 10.255 ComReg must consider what type of model is appropriate to determine the costs of provision of the access services. ComReg considers that two options are relevant: a Top-Down (hereafter, 'TD') model; or a Bottom-Up (hereafter, '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.
- 10.256 A TD cost model, using the historic cost base, can, as a starting point, use the current financial information of the SMP SP (or the incumbent), as an input to determine unit costs. The information required can be obtained from financial statements (e.g. income statement, balance sheet). TD cost models are generally used to achieve exact cost recovery.
- 10.257 The TD approach has an advantage through linking the cost recovery to the actual costs incurred by the SMP SP and can be less time-consuming to implement. However, a TD approach carries a number of disadvantages:
- (a) The accounting information may include inefficient costs incurred by the SMP SP;
  - (b) The process relies on the requirement for the SMP SP to provide significant amounts of accurate and robust data; and
  - (c) The data provided cannot easily be converted into a forward-looking approach and can provide the wrong 'build or buy' signal to industry.
- 10.258 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, since such a cost model can consider how a network would be built today using modern technology by a reasonably efficient entrant.
- 10.260 BU models have a number of advantages including sending appropriate build-or-buy signals to alternative operators who may want to replicate the asset, or when networks need to be renewed (e.g. as is the case with the deployment of fibre networks). It is also more efficient to make forward-looking estimations based on expected levels of demand, rather than relying on historical data. Furthermore, BU modelling avoids the risk of including inefficient costs, and also avoids the inability of TD cost data to be sufficiently granular to be applied in a cost model. Therefore, a BU cost model also lends itself to the use of a LRAIC+ cost approach. Similar benefits would not be realised using a TD cost model.



10.261 BU models have a number of disadvantages too. For example, modelling a network can be a time-consuming and expensive process. It can also be difficult to achieve the hypothetical efficiency level constructed in such modelling, and modelling operating expenditures requires in-depth knowledge of network operations.

### Proposed Price Control Obligations

10.262 ComReg now considers the application of the proposed price control obligations for:

- (a) Both CG and NG Interconnection services (discussed in paragraphs 10.264 to 10.270);
- (b) Co-Location and Order Handling (discussed in paragraphs 10.271 to 10.272);
- (c) Ancillary Services on SB-WLR (discussed in paragraphs 10.273 to 10.276);
- (d) WLR component of SB-WLR (including ISDN) (discussed in paragraphs 10.277 to 10.282);
- (e) FNA FVCO (discussed in paragraphs 10.283 to 10.287); and
- (f) White Label Voice (discussed in paragraphs 10.288 to 10.290).

10.263 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, ComReg considers that the proposed price control obligations outlined below are appropriate and proportionate.

### Interconnection Services, co-location and order handling process costs associated with WLR

#### **Current Generation Interconnection Services**

10.264 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**').<sup>912</sup>

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<sup>912</sup> As set out in footnote 874 above.



- 10.265 ComReg considers that, in the Regional FACO Markets, the remedies of access, transparency and price control for SB-WLR and FNA FVCO are unlikely to be effective unless the SMP SP also permits voice traffic generated by means of SB-WLR to be interconnected with the networks of other SPs. These forms of interconnection facilitate the interconnection of voice and legacy or Traditional Interface (hereafter, 'TI') leased lines. Eircom is currently subject to an obligation to provide cost-oriented CG Interconnection Services in the Relevant FACO Markets, due to the potential competition problems associated with price related behaviours including excessive pricing and margin squeeze, but also in Markets 3a and 3b (pursuant to the 2018 WLA/WCA Decision) and Market 4 (pursuant to the 2020 WHQA Decision).
- 10.266 ComReg recently decided under the price control imposed in the 2020 WHQA Decision that cost orientation should be used - paragraph 8.266 of this decision states that:

*“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.”*

- 10.267 Therefore, for consistency between decisions, and reflecting that these legacy interconnection facilities are used to support a number of services in other markets, ComReg proposes that, in the Regional FACO Markets, legacy CG Interconnection Services should continue to be subject to a cost orientation obligation, which Eircom can base on its review of the existing BU-LRAIC+ cost models, being undertaken as per the 2020 WHQA Decision.

### **Next Generation Interconnection Services**

- 10.268 NG Interconnection Service<sup>913</sup> (a new obligation proposed to be imposed on Eircom) is a packet switched based interconnection used for the conveyance of FNA FVCO and includes CSI/H, IBI/H ISI/H, ENH, and Next Generation Interconnection Paths. The physical circuit of a Next Generation Interconnection Path is known as WEIL. WEILs take a number of forms, as outlined earlier in this paper (see paragraph 10.100). WEILs can be used to support traffic from broadband and leased line services, as well as voice.

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<sup>913</sup> See paragraphs 10.92 to 10.106 above.

10.269 ComReg, in conjunction with Eircom, developed cost models to assess the efficient costs incurred by Eircom in providing NG interconnection services, allowing it to set cost oriented prices for these services. These bottom-up LRAIC plus cost models, which were required to establish cost oriented prices, were detailed in the 2012 Pricing Decision and updated by ComReg's 2016 Access Pricing Decision and 2018 WLA/WCA Decision, and were further specified in the 2020 WHQA Decision. The rationale from the 2020 WHQA Decision continues to apply for NG Interconnection Services. Briefly, this is:

- (a) the present structure of the technology deployed in the Eircom core network is largely similar to that in existence at the time of the 2012 Pricing Decision; and
- (b) the logic and structure behind the modelling undertaken is still valid, even with the significant migration to a fibre cable access network.

10.270 ComReg proposes to continue the obligation of cost orientation on Eircom for NG Interconnect Services, based on a BU LRAIC+ costing methodology. ComReg does not consider that this approach will create an extra burden on Eircom, as this is simply the continuation of the approach from the 2020 WHQA Decision. This pricing approach should avoid the risk of excessive pricing as discussed earlier, but also 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.

#### **Co-location and Order Handling**

10.271 Co-location charges were based on a price control obligation of cost orientation imposed in the 2015 FACO Decision. ComReg notes that these services are unlikely to be offered by other SPs and, to avoid a situation of excessive prices, provisionally considers that an obligation of cost-oriented charges should be maintained on co-location. Thus, co-location charges should be based on no more than the actual costs incurred (TD HCA), adjusted for efficiency, plus a reasonable rate of return. ComReg considers that this approach assures 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.

10.272 Similar to co-location charges, ComReg considers 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.

#### **Ancillary Services on SB-WLR**

10.273 ComReg proposes that Ancillary Services on SB-WLR should continue to be subject to a price control obligation of cost orientation on the Regional FACO Markets.

- 10.274 Eircom currently has a suite of ancillary services (e.g. call management services such as call forwarding, call barring, messaging services etc.) available to Access Seekers who wish to provide them to end users. By maintaining the access obligations for these services to Access Seekers, ComReg sees merit in Eircom having to supply these services. It would be economically inefficient for each Access Seeker to attempt to technically replicate their own versions of these services for end users in the Regional FACO Markets.
- 10.275 Eircom is currently 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. ComReg favour this approach as it balances the ability of Eircom to recover reasonable costs, but also acknowledges the absence of a requirement for bottom up costing methodology, which might otherwise be required to incentivise new market entrants.
- 10.276 ComReg considers that preserving this approach 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.

**WLR component of SB-WLR (including ISDN)**

- 10.277 ComReg proposes to impose a range of access obligations on Eircom, including the requirement to provide SB-WLR, which includes both an FNA FVCO and WLR component. This sub-section focusses on WLR, which is the fixed access element of FNA FACO, and which can be delivered over four FNA infrastructures: PSTN, ISDN BRA, ISDN FRA, and ISDN PRA.
- 10.278 ComReg provisionally considers that WLR offered over PSTN should continue to be subject to a price control obligation, the specific form which will be consulted on in the Separate ANM Pricing Consultation. ComReg considers that some form of price control is warranted due to the finding of SMP in the Regional FACO Markets and the identification of the price related competition problems, but as mentioned in paragraph 10.232, ComReg is undertaking a separate detailed modelling exercise (the ANM) that will consider the specific price control obligation that should be applied to PSTN WLR in the Regional FACO Markets. As discussed in paragraph 10.232, ComReg has proposed that for PSTN WLR, the existing price control obligation of cost orientation, as per the 2015 FACO Decision (as amended by the 2016 Pricing Decision) should continue to apply for a short transitional period, if the decisions to be made on foot of this Consultation and the Separate ANM Pricing Consultation are not adopted together.
- 10.279 In relation to ISDN BRA, ISDN PRA, and ISDN FRA, ComReg provisionally considers 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).

- 10.280 Legacy WLR services such as ISDN 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.
- 10.281 The number of users of ISDN access products has continued to decline since the publication of the 2015 FACO Decision. In the Regional FACO Markets there are fewer users of these products. Accordingly, ComReg is concerned that without at least re-imposing the current prices as ceilings, then end users may experience significant variations in prices. In setting a maximum charge, Access Seekers will continue to have price stability and certainty for the period.
- 10.282 In relation to ISDN WLR charges experiencing fluctuations and causing volatility for end users, the 2013 Recommendation recognised such possibilities and considered that costing methodologies should 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.”*

**FNA FVCO component of SB-WLR**

- 10.283 ComReg has proposed to impose a range of access obligations on Eircom including the requirement to provide SB-WLR, which includes both a FVCO and WLR component. For the FNA FVCO component, ComReg is required to consider whether price control obligations are appropriate and, if so, what type of price control would best meet the regulatory objectives to promote effective competition for the ultimate benefit of end users.
- 10.284 Currently, Eircom provides an FNA FVCO service to other Access Seekers as a component of SB-WLR. The existing FNA FVCO price control is based on an obligation of cost orientation via the use of TD LRAIC+ cost modelling.
- 10.285 In addition, the cost-oriented tariffs linked to FNA FVCO are structured to recognise instances where Access Seekers had invested 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.

- 10.286 ComReg has assessed that the obligation of cost orientation should continue for FNA FVCO, which is a necessary support to facilitate users of SB-WLR. ComReg's preliminary view is that the tariffs for these services should be capped at existing levels. The rationale for this preliminary view is:
- (a) The legacy technology which underlies this service is increasingly difficult to source and maintain;
  - (b) 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
  - (c) 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.
- 10.287 ComReg recognises 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 10.66), ComReg is not proposing to impose any access obligations on Eircom in relation to such an NGA FACO service, nor is ComReg proposing to impose price control obligations on such a service.

**White Label Voice (WLV) service**

- 10.288 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.<sup>914</sup> 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. Presently, sales by Open eir of this service remain material (circa [X [REDACTED] X] in the Regional FACO Markets).

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<sup>914</sup> As set out at footnote 490 above, if Eircom is interconnected with the terminating SP, its WLV service will deliver voice call without the need for transit.

- 10.289 As discussed earlier, in the absence of a price control obligation of some form on certain wholesale products, services or facilities (or indeed a combination of such items), then ComReg considers that Eircom would have the ability and incentive to engage in anti-competitive behaviours, which could reduce its competitors' abilities to compete, and/or foreclose the market to competition, impacting competitors and, ultimately, consumers in the medium to longer term (i.e. if competitors to Eircom leave the market, or are deterred from investing in infrastructure, this would reduce competition and may lead to higher prices, lower levels of innovation, and less choice for consumers). ComReg considers that Eircom WLV is a service that could, in the absence of a price control obligation not to cause a margin squeeze, give rise to potential anti-competitive behaviours.
- 10.290 In particular, Eircom could, in the absence of a MST, 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 themselves. If Eircom pursued such behaviours in relation to its WLV service, then this would undermine the individual price control obligations being imposed on the various regulated inputs, which in turn could also prove detrimental to Access Seekers that purchased these inputs separately to provide their own RFTS. Therefore, ComReg considers that the absence of a price control obligation of a MST between the price of Eircom's WLV service and the necessary wholesale inputs could undermine competition in the upstream markets, which would alter outcomes in the downstream RFTS market to the detriment of end users.

### Proposed cost accounting remedies

- 10.291 To ensure the effectiveness of the specified price control obligations, ComReg considers that it is necessary to have a clear and comprehensive understanding of the costs associated with Eircom's provision of FACO products, services, and facilities. Obligations to maintain appropriate cost accounting systems generally support obligations of price control (and accounting separation), and can also assist ComReg in monitoring the obligation of non-discrimination.
- 10.292 Having regard to the need to support the effectiveness of the proposed price control obligations set out in paragraphs 10.223 to 10.290 above, ComReg considers that the continued imposition of cost accounting obligations on Eircom in the Regional FACO Markets is justified. In this respect, Eircom shall ensure that it maintains appropriate cost accounting systems to justify its prices/costs of FACO products, services, and facilities in the Regional FACO Markets. Cost accounting obligations are currently imposed on Eircom, as specified in the 2010 Accounting Separation Decision (with accounting separation obligations discussed below).

10.293 The burden of proof rests with Eircom to show that its prices/charges for FACO 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. Furthermore, for the purpose of calculating the costs of efficient provision of such products and services, in accordance with Regulation 13(4) of the Access Regulations, ComReg notes that it may also use cost accounting methods independent of those used by any SP in the market. ComReg can also issue a direction requiring an SP to provide full justification for its prices, and may, where appropriate, require prices to be adjusted.

### Summary of Preliminary Conclusions on Price Control and Cost Accounting Obligations

10.294 Having regard to the analysis set out in paragraphs above in paragraphs 10.223 to 10.293 above, ComReg's preliminary view is that the proposed price control and cost accounting obligations are proportionate and justified. Table 77 summarises ComReg's provisional proposals:

**Table 77: Price control obligations for Regional FACO Markets**

Product, service or facility	Price control obligation	
<b>PSTN WLR</b>	Cost orientation	Price Control – detailed nature to be determined in the Separate ANM Pricing Consultation
<b>ISDN BRA WLR</b>	Maximum charge	Maximum charge
<b>ISDN FRA WLR</b>	Maximum charge	Maximum charge
<b>ISDN PRA WLR</b>	Maximum charge	Maximum charge
<b>FNA FVCO</b>	Cost orientation	Cost orientation
<b>CG Interconnection</b>	Cost orientation	Cost orientation
<b>NG Interconnection</b>	N/A	Cost orientation
<b>Co-location</b>	Cost orientation	Cost orientation
<b>Order handling</b>	Cost orientation	Cost orientation
<b>Ancillary services</b>	Cost orientation	Cost orientation
<b>White Label Voice</b>	N/A <sup>915</sup>	Margin squeeze
<b>Retail line rental</b>	Margin Squeeze test	N/A
<b>POTS-based VUA and Standalone VUA plus VoIP</b>	Margin Squeeze test	N/A
<b>Switchless Voice</b>	Margin Squeeze test	N/A

<sup>915</sup> Not specifically subject to price control but the combination of margin squeeze tests and cost oriented prices in effect acted as a form of price control on this end-to-end service.



## 10.6.5 Accounting Separation Remedies

### Overview

- 10.295 In paragraphs 10.223 to 10.293 above, ComReg proposed to impose various price control and cost accounting obligations on Eircom relating to the provision of FACO products, services, and facilities in the Regional FACO Markets.
- 10.296 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 Undertakings designated with SMP, with the objective of reflecting, as closely as possible, the performance of those parts of the Undertaking's business, were it to operate on a standalone basis. In the case of vertically-integrated Undertakings, it can also support non-discrimination obligations, prevent unfair cross-subsidies to other services, and assist 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.
- 10.297 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.
- 10.298 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.
- 10.299 ComReg proposes that the accounting separation obligations should also apply to both CG and NG Interconnection Services (including the WEIL product which is a component of NG Interconnection Services). This latter 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.
- 10.300 The detailed nature of these accounting separation and cost accounting obligations are those which are currently imposed on Eircom, as specified in the 2010 Accounting Separation Decision (as may be amended from time to time).

## Proposed Accounting Separation Obligations

- 10.301 In Section 9 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 FACO products, services and associated facilities in the Regional FACO Markets. In view of this, ComReg provisionally considers that the imposition of obligations of accounting separation on Eircom is justified, in addition to the imposition of the price control obligations of cost orientation and cost accounting.
- 10.302 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 FACO products, services and facilities and other horizontally and vertically-related input services, ComReg proposes to continue to apply an obligation of cost accounting on Eircom.
- 10.303 Eircom is currently 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 Decision. ComReg proposes to maintain the obligations set out under that Decision.
- 10.304 ComReg considers the Accounting Separation obligation reporting requirements under the following headings:
- (a) Historic Cost Accounting (hereafter, '**HCA**') Statements;
  - (b) Additional Financial Statements (hereafter, '**AFS**'); and
  - (c) Additional Financial Information (hereafter, '**AFI**').

### HCA Statements

- 10.305 ComReg's preliminary position is to retain the obligation requiring Eircom to publish in its HCA Statements, a consolidated income statement and consolidated Statement of Mean Capital Employed for Wholesale Access. This is a continuation of the current process and arises in light of the proposal for on-going cost orientation regulation of certain FACO products, services and facilities in the Regional FACO Markets.

- 10.306 As it is intended that products, services and associated facilities provided in the Regional FACO Markets will continue to be regulated, ComReg proposes to retain the requirement to provide consolidated financial results for the wholesale access income statements, as produced annually by Eircom in its Separated Accounts, but in particular for the results contained in Eircom's "Wholesale Fixed Narrowband and Unbundled Access"<sup>916</sup>. These obligations flow from the 2010 Accounting Separation Decision.
- 10.307 Given the proposed deregulation of the exchanges in the Urban FACO Markets, ComReg considers that there is a need to rationalise some related reporting obligations within the HCA Statements.
- 10.308 In relation to the existing obligation to provide an annual Statement of Average Costs and Revenues by service for the Wholesale Fixed Narrowband and Unbundled Access, ComReg considers that this should be removed. The proposed removal of this obligation reflects the fact that a considerable share of SB-WLR services nationally are provided in the Urban FACO Markets, and given the deregulation proposed elsewhere, Eircom will no longer be subject to price control obligations in particular exchanges. ComReg therefore does not consider that preserving this statement will be of benefit to stakeholders as it will, based on ComReg's proposals elsewhere in this Section, be a composite of regulated and unregulated sales by Eircom, so would not provide stakeholders with a like for like comparison.

### Additional Financial Statements

- 10.309 As part of the Additional Financial Statements (hereafter, 'AFS') there is a separation of the Wholesale Fixed Narrowband and Unbundled Access results, between PSTN, ISDN and Unbundled Access. In light of the proposal to deregulate the Urban FACO Markets, ComReg's preliminary view is that this existing reporting obligation would no longer be a requirement, as part of the AFS submissions. ComReg is proposing this as part of the rationalisation of some of the related financial reporting currently imposed on Eircom.

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<sup>916</sup> These results presented in the publicly available accounting statements are generated from the provision of Wholesale Fixed Narrowband (defined as PSTN and ISDN Single Billing Wholesale Line rental and connections services, both externally and internally), and for Wholesale Unbundled Access this relates to the external provision of physical infrastructure access such as local loop unbundling, and line share to SPs, it also includes certain physical infrastructure elements of VUA, such as accommodation and power charges associated with required SP equipment. <https://www.eir.ie/regulatoryinformation/separated-accounts/>

### Additional Financial Information

10.310 Consequent to the preliminary position, ComReg will also conduct a review of the existing AFI suite of reports. ComReg anticipates that a number of the existing AFI reports linked to the FACO Markets may no longer be retained as reporting obligations. This, though, is a matter between ComReg and Eircom. On an annual basis, ComReg discusses the requirements for AFI reports with Eircom and has, in previous years, revised the list as required. ComReg proposes to continue with this approach, thereby ensuring that, should AFI reports be required in the future, Eircom will be obliged to produce them.

### Summary of Preliminary Conclusions on Accounting Separation Obligations

10.311 Having regard to the analysis set out in paragraphs 10.295 to 10.310 above, ComReg's preliminary view is that maintaining the existing accounting separation obligations as specified in the 2010 Accounting Separation Decision are proportionate and justified.

10.312 ComReg's preliminary position is that the proposed accounting separation obligations are proportionate and justified. Therefore, ComReg's preliminary position is that the reporting obligations associated with the FACO Market product and services should be rationalised as outlined, as a consequence of the proposed deregulation of the Urban FACO Markets.

### 10.6.6 Statement of Compliance Remedies

10.313 Below, ComReg sets out the SoC remedies which it proposes to impose.

10.314 Pursuant to Regulations 9, 10, 11, 12 and 13 of the Access Regulations, ComReg proposes to require Eircom to submit to it within six months of the decision a written Statement of Compliance (hereafter, '**SoC**') which explains how it has ensured compliance with the regulatory obligations imposed on it in the Regional FACO Markets. This is considered proportionate and justified having regard to the need by ComReg to ensure effective monitoring and enforcement of all regulatory obligations, given the potential for any non-compliance to impact ultimately on competition in downstream or adjacent markets.

10.315 ComReg proposes that in addition to being submitted to ComReg, subject to any confidentiality considerations, the SoC will be published by Eircom on its publicly available wholesale website.

10.316 ComReg proposes to require Eircom to submit to it a written SoC signed by a Director or Directors (hereafter, the '**Directors**') on behalf of the Board of Directors, of Eircom Ltd explaining the basis upon which they are satisfied that the arrangements, structures and internal controls in place provide reasonable assurance that Eircom is in compliance with Eircom's obligations in respect of the Regional FACO Market.

10.317 In order that ComReg can assess, on the basis of the SoC, 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, ComReg proposes to set out the minimum requirements that the SoC must meet. ComReg proposes in particular that the Statement includes the following:

- (a) A description and explanation of the governance measures implemented by Eircom to ensure that it is, and remains, in compliance, including relevant reporting structures and processes and the information made available to Eircom's management;
- (b) A description of the methodology followed to identify risks of non-compliance with the obligations imposed on Eircom in the Regional FACO Markets and to develop the controls required to manage such regulatory risks including in particular by reference to identifying, employing and relying on adequate expertise, material and information;
- (c) A detailed description of the regulatory risks identified utilising that methodology for all the products, services and facilities offered by Eircom in the Relevant Regional FACO Markets, in particular in respect of a number of key activities from a 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 information, both Structured Information and Unstructured Information, in conformance with regulatory requirements; and
- (d) For each of the product, service, and facility offered by Eircom in the Regional FACO Markets, a description of the risk analysis and control development process that has been carried out. This description should cover the scope of the review (including the business areas, activities, processes and documentation reviewed and the expertise relied on) and set out the outcome of the review, including as the case may be any reasons why the conclusion was reached that there was no material risk as well as an analysis of compliance with EoI or EoO obligations as the case may be. The description should also extend to the development of appropriate controls.

10.318 ComReg also proposes to require Eircom to keep the Statement of Compliance up to date. This would include an obligation to submit an updated SoC to ComReg where there are material changes that are made to the governance measures, the methodology used to identify and address risks of non-compliance or Eircom's identification of risks or to the controls put in place. An updated Statement of Compliance would also be required where a new product, service or facility is introduced, or a change is made to an existing product, service or facility (including prices). At a minimum, a description of the analysis conducted by Eircom and the reasons for the outcome reached would be included in the Statement of Compliance updated to reflect the amended or new product, service or facility. Any changes made to the Statement of Compliance should be easily identifiable, including appendices which should all link back to the signed SoC

### Justification for the imposition of a SoC Remedy

10.319 The Statement of Compliance which ComReg proposes to require Eircom to provide will detail and explain Eircom's risk assessment and control and governance measures, and this in turn will provide assurance to ComReg as to Eircom's compliance with the obligations set out in this Decision Instrument.

10.320 The function of the SoC is to require Eircom to demonstrate how it ensures compliance with the regulatory obligations imposed on it in the Regional FACO Markets. The SoC obligation requires Eircom to explain the regulatory governance measures and arrangements that it has put in place in order to identify and manage risks of non-compliance with its SMP obligations, thereby providing reasonable assurances to ComReg that Eircom effectively manages risks of non-compliance in the Regional FACO Market.

10.321 ComReg imposed a SoC obligation on Eircom in the 2013 NGA Decision<sup>917</sup> and in the 2015 FACO Decision with respect to Eircom's non-discrimination obligations. The requirement for SoCs extending to all SMP obligations in the relevant regulated markets apply in respect of the Wholesale High Quality Access,<sup>918</sup> Wholesale Central Access and Wholesale Local Access markets.<sup>919</sup>

10.322 ComReg is now proposing that Eircom submit a SoC to ComReg with respect to all its regulatory obligations in the Regional FACO Markets in a similar way as this is required in respect of the other markets identified. ComReg notes in this regard that the proposed obligation on Eircom to provide a SoC is aligned to those markets, although the text as set out in the proposed Decision Instrument in the Consultation has been drafted with the benefit of ComReg's experience to date with SoCs in the WCA/WLA markets and a number of clarifications have been made. The substance of the obligation, however, is the same.

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<sup>917</sup> Next Generation Access: Remedies for Next Generation Access Markets Dated January 31 2013, Reference Number: 13/11, Decision Number: D03/13.

<sup>918</sup> As further detailed in the 2020 WHQA Decision.

<sup>919</sup> As further detailed in the 2018 WLA/WCA Decision.



- 10.323 The proposed obligation requires that the SoC be signed by a person of appropriate authority within Eircom, the 'SoC Signatory', in order to confirm to the best of their knowledge, Eircom's compliance with its regulatory obligations. The SoC will also include the review and verification process followed by the SoC Signatory and requires the SoC Signatory to be a Director of Eircom.
- 10.324 ComReg's preliminary view is that, subject to confidentiality, the Regional FACO Markets SoC should be published on Eircom's publicly available wholesale website.

### Information to be provided in the SoC

- 10.325 The implementation of effective regulatory governance structures and arrangements by Eircom requires the identification and management of risks of non-compliance with Eircom's regulatory obligations in the Regional FACO Markets. This requires an assessment to be carried out by Eircom of, inter alia, systems, processes and activities that have relevance for Eircom's compliance with its regulatory obligations in the Regional FACO Markets in order to determine where and how regulatory risk might arise. For example, the business processes and associated systems that underpin the development of RAPs or provisioning of RAP products and services or service assurance may give rise to regulatory risk. A structured and systematic approach to the assessment of risk is required in order to identify potential risks of non-compliance. A similar approach is necessary for the effective design and operation of controls in order to manage the identified risks of non-compliance.
- 10.326 In the proposed SoC obligation, ComReg requires Eircom to explain its approach to risk identification and the development of controls including an explanation of the scope and output of the risk review, the processes reviewed, the material considered and how Eircom employed subject matter experts in the risk analysis and control development processes. Eircom is also required to provide the output of the risk analysis, which includes a description of the potential regulatory issues which could give rise to regulatory risk. Eircom is required to outline the consideration given to the potential regulatory issues identified during the analysis and the reasons why it concluded that issues identified do or do not give rise to regulatory risk.
- 10.327 Eircom's risk analysis process, which it currently applies in the WLA/WCA, WHQA and FACO Markets is structured such that it produces the information outlined above and that this information is stored by Eircom. Therefore, ComReg considers that this requirement, with respect to the Regional FACO Markets, will not result in an undue additional burden on Eircom. Furthermore, the provision of this information to ComReg has the potential to increase confidence in the scope and comprehensiveness of Eircom's regulatory governance and oversight in the Regional FACO Markets.



10.328 This information is required in order for ComReg to understand Eircom's approach to risk management and the extent to which it has fully evaluated risks and has developed, and is operating, controls. This information demonstrates the extent to which identified risks of non-compliance with obligations are being managed by Eircom in a manner that provides reasonable assurances to ComReg with respect to Eircom's compliance with its regulatory obligations in the Regional FACO Markets. It also provides information which supports the Directors' confirmation that, in their opinion, the governance arrangements in place provide reasonable assurance that Eircom is in compliance with its regulatory obligations in the Regional FACO Markets.

### Activities particularly relevant to the Regional FACO Markets

10.329 ComReg has identified categories of activities which it considers are particularly relevant to the delivery and availability of regulated wholesale products and services in the Regional FACO Markets. ComReg considers that non-compliance by Eircom with regulatory obligations associated with these activities has the potential to have a significant impact on Access Seekers. Effective regulatory governance in general, including with respect to these activities, will assist Eircom to be compliant with its regulatory obligations resulting in benefits to competition and, ultimately, end users.

10.330 For the avoidance of doubt, ComReg is not proposing that these are the only categories or areas where the proposed SoC obligation requires Eircom to provide information on the implementation and operation of regulatory governance. It is reasonable to expect that appropriate and effective governance and oversight of the management of Confidential Regulated Information<sup>920</sup> as required by Eircom's regulatory obligations in the Regional FACO Markets will apply throughout the Eircom organisation.

10.331 ComReg notes that the proposed SoC obligation is required with respect to all of Eircom's activities and processes i.e. all areas where Eircom's regulatory obligations apply in the Regional FACO Markets. ComReg expects that Eircom has the knowledge and expertise to make a determination as to the scope, extent and potential impact of its activities on its compliance with its regulatory obligations in the Regional FACO Markets and should address the requirements of the SoC obligation accordingly and in a comprehensive manner.

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<sup>920</sup> "Confidential Regulated Information" or "CRI" means information relating to Regulated Access Products (RAPs) over and above that which is currently in the public domain. This includes Confidential Wholesale Customer Information.

"Confidential Wholesale Customer Information" means confidential or commercially sensitive information provided to the Wholesale Function by a wholesale customer relating to RAPs.

- 10.332 However, in this Consultation ComReg is proposing that, due to their significance and relevance, the consideration given to the management of regulatory risk arising from Eircom's activities, processes and systems associated with these categories should be explicitly included in the proposed SoC obligations:
- (a) Provisioning and Service Assurance;
  - (b) Development of RAP Products and Services;
  - (c) Eircom's investment decisions; and
  - (d) Management of Confidential Regulated Information.

### Directors' Statement and Sign-off

- 10.333 The proposed obligation requires that the SoC be signed by a person of appropriate authority within Eircom such that assurances can be provided to ComReg that regulatory governance and oversight is afforded the necessary oversight and attention by Eircom.
- 10.334 Furthermore, ComReg considers that the signatory needs to be a person within Eircom who is sufficiently independent from day-to-day operational activity and decision-making, in relation to the development, and supply of wholesale regulated products and services, in order to be able to objectively confirm Eircom's compliance with its regulatory obligations.
- 10.335 ComReg considers that the SoC should be signed by a Director or Directors of Eircom on behalf of the Board of Directors, of Eircom Limited and should include a statement acknowledging the Directors' responsibility in ensuring Eircom's compliance with its regulatory obligations and confirmation that the governance arrangements in place provide reasonable assurance that Eircom has taken reasonable steps to ensure compliance with its regulatory obligations in the Regional FACO Markets. ComReg considers that this requirement emphasises the importance of the SoC and reinforces the need for, and increases the likelihood of the establishment, by Eircom, of appropriately robust oversight and governance measures relating to the implementation and operation of regulatory governance in Eircom.
- 10.336 ComReg also notes that, under the Companies Act 2014, Company Directors have specific obligations with which they must comply relating to securing compliance with relevant obligations, defined in the Act, as follows:

*"The directors of a company to which this section applies shall also include in their report under section 325 a statement—*

*(a) acknowledging that they are responsible for securing the company's compliance with its relevant obligations; and*

*(b) with respect to each of the things specified in subsection (3), confirming that the thing has been done or, if it has not been done, specifying the reasons why it has not been done.*

*(3) The things mentioned in subsection (2)(b) are—*

*(a) the drawing up of a statement (to be known, and in this Act referred to as, a “compliance policy statement”) setting out the company's policies (that, in the directors' opinion, are appropriate to the company) respecting compliance by the company with its relevant obligations;*

*(b) the putting in place of appropriate arrangements or structures that are, in the directors' opinion, designed to secure material compliance with the company's relevant obligations; and*

*(c) the conducting of a review, during the financial year to which the report referred to in subsection (2) relates, of any arrangements or structures referred to in paragraph (b) that have been put in place.”*

- 10.337 In ComReg’s opinion, while the obligations referred to in the Companies Act 2014 do not include regulatory obligations, ComReg considers that it is relevant and instructive that the Companies Act 2014 requires Directors to prepare a statement that, inter alia, confirms that, in their opinion, arrangements are designed and put in place that secure material compliance with the company’s relevant obligations.
- 10.338 ComReg’s view is that, in order to ensure that the signatory has the required independence and authority, the signatory should be a Director authorised to represent the Board of Directors (defined in the Companies Act 2014) of Eircom.
- 10.339 ComReg is aware from SoCs previously received from Eircom that there are various certification processes in place as part of the Regulatory Governance Model (hereafter, ‘**RGM**’) which it has implemented in order to govern compliance with its regulatory obligations generally. ComReg understands that these include self-certification processes by Eircom managers certifying, for example the operation of the governance processes in their areas of responsibility.
- 10.340 ComReg proposes that the SoC describes both the processes followed and the information relied upon by the signatory to the SoC who are required to certify the correct operation of the governance process. Similarly, ComReg proposes that the SoC includes a description and explanation of the governance measures implemented in Business Areas and activities which have relevance to Eircom’s compliance with its regulatory obligations. ComReg also proposes that the SoC includes a description and explanation of the processes followed by Eircom’s management, in particular Senior Managers in relevant Business Areas,<sup>921</sup> in order to assess the operation and effectiveness of the processes used to identify and mitigate risks of non-compliance.

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<sup>921</sup> Senior Managers in Business Areas where Eircom’s regulatory obligations apply, for example Business Areas responsible for the provision and service assurance of Regulated Access Products.

10.341 As some form of verification process must currently be carried out by the SoC Signatory and the staff who provide certification, ComReg considers that it is reasonable that it should understand and review and verification process followed by the SoC Signatory and Eircom Management in order for ComReg to reasonably satisfy itself that Eircom has adequate governance and oversight arrangements in order to ensure compliance with its regulatory obligations. ComReg considers that providing this information should not be an additional undue burden and is reasonable and proportionate.

### Eircom's Regulatory Governance Model

10.342 On 10 December 2018,<sup>922</sup> ComReg signed the Settlement Agreement<sup>923</sup> with Eircom, requiring Eircom to implement a Regulatory Governance Model (**RGM**) for all of Eircom's SMP obligations in the markets where Eircom has SMP. As a signatory to the Settlement Agreement Eircom agreed to put in place regulatory governance arrangements and structures, referred to as an RGM, in order to manage the risk of non-compliance with its regulatory obligations.

10.343 The RGM relies on Eircom's expertise and knowledge of its processes, systems and procedures to identify, manage and control the risks of non-compliance with its regulatory obligations. Eircom's RGM manages risks of non-compliance with SMP obligations and one of the outputs is a Risk and Control Matrix (RACM) which lists the risks identified by Eircom and the controls put in place in order to manage the identified risks.

10.344 ComReg does not consider the SoC obligation to be overly burdensome on Eircom, as it has, to date, implemented an RGM in order to apply internal governance and oversight to its compliance with its regulatory obligations, including its obligations as they apply to the Regional FACO Markets. It is reasonable to assume, and would be expected, that consideration would be given by Eircom to all Business Areas, activities and processes when developing an RGM in order to comply with its SMP regulatory obligations.

10.345 The identification of regulatory risk and the operation of controls are activities central to the implementation and operation of effective regulatory governance, and the demonstration and explanation of how Eircom implements regulatory governance is a central requirement of the proposed SoC obligation. Eircom has informed ComReg that it chooses to use its RGM to develop and provide SoCs to ComReg in markets where it has an obligation to do so. Eircom has provided a detailed description of how it uses the RGM to produce an SoC in its WLA/WCA SoC.

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<sup>922</sup> Please refer to ComReg Document No. 18/110, dated 10 December 2018, "Wholesale Compliance Litigation Update - Outcome of Cases 481 and 568 and related litigation" <https://www.comreg.ie/publication/wholesale-compliance-litigation-update/>.

<sup>923</sup> Settlement Agreement between Eircom and ComReg dated 10 December 2018.

- 10.346 ComReg notes that additional information is also requested in the proposed SoC relating to the development of controls to manage the risks identified by Eircom. ComReg considers that this is not unduly burdensome and is justified and proportionate as Eircom develops controls using its RGM process. Therefore, the information requested relating to the development of controls is available to Eircom.
- 10.347 A key element of Eircom's RGM is the analysis, development, management and documentation of the risk and control framework. This includes the production of data and information, some of which can be used when preparing an SoC. A significant portion of the information required for the SoC is generated as an output from the risk assessment processes executed as part of the implementation of Eircom's RGM. In the proposed SoC obligation, ComReg requires Eircom to produce information on the output generated from the risk analysis and control development process. ComReg considers that the requirement to provide such information, relating to the execution of its risk analysis process in the proposed SoC, will not result in an additional burden being placed on Eircom as this information is currently being generated by Eircom as it operates its RGM.

### Timeframe for Provision of the SoC to ComReg

- 10.348 ComReg proposes that Eircom is to be required to provide an SoC for the Regional FACO Markets within six (6) months from the effective date of the decision (to be published as a result of this Consultation). ComReg considers that some difference is required in the approach to the timeframe within which an SoC should be provided to ComReg with respect to changes to existing products on the one hand, and new products on the other.
- 10.349 ComReg considers that the following timeframes are appropriate for the provision of the SoC by Eircom:
- (a) In the case of any offer of a new FACO product, service or facility, seven (7) months in advance of it being made available to industry; in the case of any change to an existing FACO product, service or facility, three (3) months in advance of it being made available to industry; or as otherwise may be required by ComReg. ComReg considers a product notification (including amendment) could only be considered to be complete if it includes the updated SoC.
- 10.350 ComReg notes that the timeframes specified above are aligned to the proposed transparency obligations discussed in this Consultation with respect to advance notification timeframes for proposed price and non-price changes/amendments by Eircom to its RIO and prices.
- 10.351 In all cases, SoC and associated updates should include version control information including a revision history in order to allow the reader of the SoC to easily identify changes and when they were made.

## Publication of the Statement of Compliance

- 10.352 ComReg has considered whether the SoC should be published and available to Access Seekers and is of the preliminary view that it should be. The SoC is primarily concerned with the degree of governance Eircom applies to meeting its regulatory obligations in the Regional FACO Markets.
- 10.353 ComReg is of the preliminary view that the provision of the SoC to Access Seekers gives greater visibility to Access Seekers of the processes Eircom has put in place to ensure it complies with its regulatory obligations in the Regional FACO Markets. This has the potential to improve Access Seekers' confidence that they are receiving the same wholesale product or service that Eircom is supplying to its own downstream arm, for example, and this is beneficial to providing regulatory certainty, facilitating competition and ultimately greater choice to end users.
- 10.354 However, ComReg recognises that some information to be published as part of the proposed SoC may be considered confidential by Eircom. In these circumstances, where a request is made by Eircom to ComReg not to publish aspects of the SoC then ComReg will apply its rules relating to the publication of confidential information when assessing any such request.
- 10.355 ComReg's preliminary view is that Eircom should make available the SoC to Access Seekers by making it available on its publicly available wholesale website one month after provision of the SoC to ComReg, unless otherwise agreed by ComReg.
- 10.356 ComReg also does not consider that the additional step of providing the SoC to Access Seekers to be unduly burdensome as the SoC is required to be provided to ComReg.
- 10.357 Having regard to the analysis set out above, ComReg's preliminary view is that Eircom should be obliged to provide an SoC to ComReg with respect to all its regulatory obligations as imposed in the Regional FACO Markets.

## 10.7 Overall Preliminary Conclusions on Remedies in the Regional FACO Markets

- 10.358 Having regard to the competition problems identified in Section 9 and the discussion in paragraphs 10.1 to 10.357 above, ComReg proposes to impose a range of access, non-discrimination, transparency, price control, cost accounting, accounting separation and SoC remedies on Eircom, with such obligations being imposed symmetrically in the Regional FACO Markets.

**Q. 10. Do you agree with ComReg's preliminary conclusions on remedies 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.**



# 11 Withdrawal of SMP and Remedies on the Urban FACO Markets and Mid-Term Assessment

- 11.1 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 Regulations<sup>924</sup> allows ComReg to give reasonable notice to any parties which it considers to be affected by the withdrawal of such obligations.
- 11.2 As noted in Section 7, ComReg's preliminary view is that the following markets are no longer susceptible to *ex ante* regulation:
- (a) Urban Low-Level FACO Market, and
  - (b) Urban High-Level FACO Market.
- 11.3 This preliminary view, as discussed previously, is 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 NGA Broadband networks capable of delivering RFTS by means of Managed VoIP offered by Access Seekers to end users on a retail basis, or to other SPs on a wholesale basis. The presence of such constraints is assured, in an MGA, through upstream regulation in the WLA Market, as per the 2018 WLA/WCA Decision.

## 11.1 Withdrawal of remedies – sunset period

- 11.4 In order to facilitate an orderly transition to de-regulation of the Urban FACO Markets, ComReg's position is that a sunset period is appropriate, starting from the effective date of the Response to Consultation and final Decision. During this period, access to existing FACO services will be maintained at prevailing prices. At the end of this sunset period, these obligations will be withdrawn. During this sunset period (and having regard to the conditions below) Eircom is not obliged to meet requests for new FACO inputs or amendments to existing FACO products, services, facilities or Associated Facilities on a regulated basis. Eircom may, at its discretion, meet any such new requests/amendments on a purely commercial basis.

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<sup>924</sup> This provision is mirrored at Article 67 of the EEC.



- 11.5 ComReg therefore proposes that a sunset period be implemented, in order to facilitate orderly deregulation. Upon removal of regulation on the Urban FACO Markets, Eircom shall not withdraw access to any existing products, services, or facilities on those markets for a period of eighteen (18) months from the date the Decision arising from this Consultation comes into effect. During the first 9 months of this 18 month period, in the Urban FACO Markets, Eircom is required to provide access to new orders for the products, services and facilities set out in Section 7 of the Decision Instrument contained in Appendix H of the 2015 FACO Decision. The 18 month sunset period for the removal of all obligations in the Urban FACO Markets would run in parallel with this 9 month 'new order' period.
- 11.6 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 for the duration of the eighteen (18) month period. 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.

## 11.2 Updating the Assessment over the period of the Market Review

- 11.7 Given the need for market reviews to be forward-looking (where possible), and the potentially somewhat dynamic nature of the Regional FACO Markets, given any impact of the ongoing rollout of NG broadband networks by Eircom, SIRO and Virgin Media, and the expected commencement of rollout by NBI, ComReg proposes to reapply the 80% coverage criterion during the lifetime of the market review (and to consult within 24 months of the adoption of the Decision made on foot of this Consultation) in order to examine the appropriateness of the continued imposition of regulatory obligations (the '**Mid-term Assessment**'). This could lead to, for example, the maintenance of existing regulation or its lessening or removal, as appropriate, in those EAs falling within the Regional FACO Markets. Where regulation is to be lessened or removed, the Mid-term Assessment sunset period discussed in paragraph 11.8 below would be applied.

- 11.8 In determining the appropriate Mid-term Assessment sunset period, ComReg's preliminary view is that 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 Mid-term Assessment 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 Mid-term Assessment will therefore mean the volume of switching from FNA-based FACO to Managed VoB is likely to also be substantially lower. ComReg therefore proposes that a shorter sunset period would apply following the completion of the Mid-term Assessment. Upon the lessening or removal of regulation on specific EAs in the Regional FACO Markets, based on the Mid-term Assessment, it is proposed that Eircom would be required not withdraw access to any existing FNA FACO products, services, or facilities on those EAs for a period of nine (9) months from the date on which the Mid-term Assessment decision comes into effect. During the first three (3) months of this 9 month Mid-term Assessment sunset period, Eircom would be required to provide access to new orders for the relevant products, services and facilities. The 9 month Mid-term Assessment sunset period for the lessening/removal of obligations in certain EAs in the Regional FACO Markets, will run in parallel with this 3 month 'new order' period.
- 11.9 Accordingly, ComReg proposes to issue the Mid-term Assessment Consultation within 24 months of the effective date of the Decision arising from this Consultation. ComReg, mindful of its statutory obligations, intends to consult on any changes it proposes to make following the Mid-term Assessment.
- 11.10 The Mid-term Assessment would, in the context of the FACO product and geographic market definitions set out in the decision to be made arising from this Consultation, apply the criterion set out in that Decision, to consider whether or not regulation in each EA falling within the Regional FACO Markets should be changed. If so, ComReg proposes to consider whether or not the continuing imposition of regulatory obligations in such areas remains appropriate.
- 11.11 ComReg, accordingly, proposes to withdraw existing regulatory obligations on Eircom, given its preliminary finding that the Urban Low-Level FACO Market and the Urban High-Level FACO Market are not susceptible to *ex ante* regulation. In this respect, ComReg proposes that existing obligations, other than as set out above, would be withdrawn on the date at which ComReg's final decision comes into effect, subject to the sunset periods described above.

**Q. 11. Do you agree with ComReg's preliminary conclusions on the withdrawal of SMP remedies on the Urban 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.**

# 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 proposed regulation is likely to have the desired impact. It is a structured approach to policy development, and analyses the impact of the proposed regulation, and other regulatory options, on different stakeholders. Appropriate use of a RIA should assure identification of the most effective regulatory option.
- 12.2 In carrying out a RIA, ComReg adheres to its RIA Guidelines<sup>925</sup> and takes account of the Better Regulation programme.<sup>926</sup> ComReg is also cognisant of international best practice, such as guidance from the EC and the Organisation for Economic Co-operation and Development (hereafter, '**OECD**').
- 12.3 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 also requires that, prior to imposing regulatory obligations on Undertakings, ComReg shall conduct a RIA in accordance with international best practice, and otherwise in accordance with measures that may be adopted under the Better Regulation programme.
- 12.4 The ultimate aim of conducting a RIA of proposed regulation in the Relevant FACO Markets is to ensure that the regulatory measures which are implemented are appropriate, proportionate and justified. As Decisions can vary in terms of their impact, if, after initial investigation, a Decision appears to have relatively low impact, ComReg may carry out a lighter RIA in that respect.
- 12.5 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

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<sup>925</sup> [ComReg Document 07/56a](#), ComReg, "Guidelines on ComReg's Approach to Regulatory Impact Assessment", 10 August 2007 (the '**RIA Guidelines**').

<sup>926</sup> Department of the Taoiseach, "Regulating Better", January 2004. See also "Revised RIA Guidelines: How to conduct a Regulatory Impact Analysis", June 2009, (hereafter, the '**Revised RIA Guidelines**'), available from: [http://publicspendingcode.per.gov.ie/wp-content/uploads/2012/07/Revised\\_RIA\\_Guidelines\\_June\\_20091.pdf](http://publicspendingcode.per.gov.ie/wp-content/uploads/2012/07/Revised_RIA_Guidelines_June_20091.pdf)

**Step 5:** Assess the impacts on stakeholders and competition and choose the best regulatory option.

- 12.6 In the analysis set out below, ComReg carries out each of these steps in respect of the Regional FACO Markets.
- 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.”<sup>927</sup>*
- 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.”<sup>928</sup>*
- 12.9 In determining the impacts of the various regulatory options, current 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.
- 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 preliminary analysis. This is the approach which ComReg follows in this Consultation and this RIA should be read in conjunction with the overall Consultation. A RIA will be finalised in the Response to Consultation and final Decision arising from this Consultation, having taken into account responses to this Consultation, and any comments from the EC and the CCPC.
- 12.11 ComReg now conducts a RIA, having regard to the proposed regulatory remedies set out in Section 10 of this Consultation, along with consideration of other options. The following sections, along with the analysis and discussion set out elsewhere in this Consultation represent a RIA. It sets out a preliminary assessment of the potential impact of proposed regulatory obligations for the Regional FACO Markets, and the proposed removal of regulatory obligations in the two Urban FACO Markets and the three Relevant RFTS Markets, as set out in Sections 10 and 11.

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<sup>927</sup> See paragraph 2.1 of the Revised RIA Guidelines.

<sup>928</sup> Communication from EC, “Second strategic review of Better Regulation in the European Union”, COM(2008)32, p.6.

## 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 it proposes to designate with SMP in the Regional FACO Markets. In choosing appropriate remedies, ComReg is obliged, pursuant to Regulation 8(6) of the Access Regulations,<sup>929</sup> 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), and Regulation 16 of the Framework Regulations;<sup>930</sup> and
  - (c) Only imposed following consultation in accordance with Regulations 12 and 13<sup>931</sup> of the Framework Regulations.
- 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:
- (a) To promote competition;
  - (b) To contribute to the development of the internal market; and
  - (c) To promote the interests of users within the European Union.

## 12.3 Regional FACO Markets Regulatory Impact Assessment

### 12.3.1 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 the EC list of 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 need to 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 Consultation.

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<sup>929</sup> As mirrored at Article 68(4) of the EECC.

<sup>930</sup> As mirrored at Article 3 of the EECC.

<sup>931</sup> As mirrored at Articles 23 and 32 of the EECC.

- 12.15 In this Consultation, ComReg has set out its analysis and preliminary views on 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 Section 2, 4 and 5, ComReg set out its preliminary views on the definitions of the Relevant FACO and RFTS Markets, which provide the parameters within which competition would be assessed;
  - (b) In Sections 6 and 7, ComReg carried out competition assessments and set out its preliminary view that, having failed the 3CT, the Relevant RFTS Markets, and the Urban FACO Markets, were deemed to be effectively competitive. However, having passed the 3CT, the Regional FACO Markets were not deemed to be effectively competitive, thereby being susceptible to *ex ante* regulation. ComReg accordingly proposes to designate 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
  - (d) In Section 10, ComReg set out proposals to address these identified competition problems and justified proportionate remedies which it proposes to impose on Eircom.
- 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 in paragraph 2.28, ComReg is required to impose at least one of the above obligations on those 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 SMP 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 all 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 potential harmful effects that can potentially arise from the exercise of SMP in the Regional FACO Markets. In this regard, ComReg considers that the regulatory measures proposed in Section 10 should address, in a 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 preliminary 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.

### **12.3.2 Step 2: Identify and Describe the Potential Regulatory Options**

- 12.21 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 potential regulatory options is available to ComReg to address the potential competition problems that may arise in the Regional FACO Markets.
- 12.22 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.<sup>932</sup> For example, the lightest measure that can be imposed is the obligation of transparency. Should this be insufficient to address competition problems on its own, ComReg may apply a non-discrimination obligation. If this is still not sufficient, ComReg may 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.
- 12.23 The questions of regulatory forbearance and the incremental imposition of one or more of the above obligations in the Regional FACO Markets are considered in paragraphs 12.24 to 12.43 below.

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<sup>932</sup> As mirrored at Articles 69 to 74 of the EECC.



## Forbearance from regulating the Regional FACO Markets

- 12.24 Forbearance is not applicable in the case of the Regional FACO Markets. As set out in Section 7, ComReg is of the preliminary view that the Regional FACO Markets are not effectively competitive, nor are they likely to become effectively competitive within the timeframe covered by this market review. Therefore, pursuant to Regulation 8(1) of the Access Regulations and Regulation 27(4) of the Framework Regulations,<sup>933</sup> in the case of the current analysis of the Regional FACO Markets, ComReg is required<sup>934</sup> to impose at least some level of regulation on Eircom, having been designated as having SMP.
- 12.25 In Section 9, ComReg set out its preliminary view that, absent regulation, Eircom would likely 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 preliminary view that such markets (and impacted adjacent markets) would not function effectively, ultimately to the detriment of downstream competition and end users.
- 12.26 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 the regulatory options below.

## Regulatory Options on Obligations in the Regional FACO Markets

- 12.27 As discussed in paragraph 9.5, it is ComReg's preliminary view that the competition problems which might potentially arise, as a result of Eircom having SMP in both the Regional High-Level FACO Market and the Regional Low-Level FACO Market, are likely to arise in both cases. 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 both of the Regional FACO Markets.

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<sup>933</sup> As mirrored at Articles 67 and 68(1) of the EECC.

<sup>934</sup> In accordance with Regulation 8(1) of the Access Regulations, as mirrored at Article 68(1) of the EECC.

## FACO Transparency Obligations

- 12.28 ComReg's preliminary view, set out in Section 9, is that, due to the ability and incentives of Eircom to engage in the identified anti-competitive behaviours, transparency obligations<sup>935</sup> 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.
- 12.29 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.
- 12.30 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

- 12.31 Having reviewed competition problems with respect to the Regional FACO Markets in Section 9, ComReg set out its preliminary view in Section 10 that non-discrimination obligations were necessary to ensure that Access Seekers being provided with FACO are treated in an equivalent manner.<sup>936</sup> 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.
- 12.32 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 itself (or coupled with transparency) does not specifically address what type of product or service should be offered, or how it should be priced.

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<sup>935</sup> See paragraphs 9.9 to 9.44 above.

<sup>936</sup> See paragraphs 10.164 to 10.179 for proposed non-discrimination remedies in the Regional FACO Markets.

- 12.33 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

- 12.34 Having reviewed the competition problems identified in Section 9, ComReg set out its preliminary view 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.<sup>937</sup> Transparency and non-discrimination obligations are necessary supporting obligations, but ComReg holds the preliminary view that such obligations alone are incapable of effectively addressing access issues.
- 12.35 ComReg's preliminary view 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.
- 12.36 ComReg is of the preliminary view that the specified access obligations are fundamental requirements in the Regional FACO Markets and, taking account of the provisions of Regulation 12(1) of the Access Regulations,<sup>938</sup> the absence of such obligations would hinder the development of effectively competitive retail markets by restricting or distorting competition among SPs, to the detriment of end users.
- 12.37 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.<sup>939</sup>

### FACO Price Control and Cost Accounting Obligations

- 12.38 Having identified competition problems with respect to the Regional FACO Markets in Section 9, ComReg set out its preliminary view in Section 10 that wholesale charges for access to FACO and associated facilities should be subject to both price control and cost accounting obligations.<sup>940</sup>

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<sup>937</sup> See paragraphs 10.51 to 10.156 for proposed access remedies in the Regional FACO Markets.

<sup>938</sup> As mirrored at Article 23(1) of the EECC.

<sup>939</sup> These overarching objectives are mirrored at Recital 23 of the EECC.

<sup>940</sup> See paragraphs 10.294 for proposed price control and cost accounting remedies in the Regional FACO Markets.

- 12.39 ComReg proposes that Eircom be subject to a price control obligation of cost orientation and cost accounting with respect to access to FACO and associated facilities, the details of which discussed in paragraphs 10.223 to 10.294, and are summarised in Table 77. 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 cost orientation obligation on Eircom will provide regulatory certainty to all stakeholders, including both Access Seekers and end users.
- 12.40 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 proposes to continue to impose a cost accounting obligation on Eircom, having regard to its integrated position across several upstream and downstream markets and, in particular, noting its SMP designations in a number of these markets.

### **FACO Accounting Separation Obligations**

- 12.41 ComReg set out its preliminary view in Section 10 that the imposition of an accounting separation obligation on Eircom would be proportionate and justified to mitigate the potential competition problems discussed in paragraphs 10.295 to 10.312.
- 12.42 As noted in Section 10, in general, the purpose of an accounting separation obligation is to provide a higher level of detailed information than that which can be derived from the statutory financial statements of SPs designated with SMP, with the objective of reflecting, as closely as possible, the performance of those parts of the SP's business, were it to operate on a standalone basis. In the case of vertically-integrated SPs, accounting separation obligations can support non-discrimination obligations and prevent unfair cross-subsidies to other services.
- 12.43 In Section 9, ComReg identified potential competition problems associated with possible price-related leveraging to be particularly pertinent in the case of Eircom, which highlights the importance of continuing to ensure a transparent and effective mechanism of accounting separation, which was previously imposed under the 2015 FACO Decision. In respect of the Regional FACO Markets, the main objective of accounting separation is to provide sufficient visibility over the allocation of costs across FACO products, services and facilities, and other horizontally and vertically-related input services. ComReg therefore considers it proportionate and justified to continue to impose an obligation on Eircom to maintain separated accounts.

## FACO Statement of Compliance Obligations

- 12.44 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 proposed position as SMP SP. It is ComReg's preliminary view 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, an 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.
- 12.45 It is ComReg's preliminary view that the introduction of this statement of compliance obligation will ensure Eircom's adherence with each of the other proposed 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.

### 12.3.3 Step 3: Determine the Impacts on FACO Stakeholders

- 12.46 Given that ComReg has proposed to designate Eircom with SMP in the Regional FACO Markets, it is ComReg's preliminary view, as outlined in paragraphs 12.24 and 12.26 above, that there is no option of regulatory forbearance in this case. Regulatory forbearance is therefore discounted when considering the impact on stakeholders.
- 12.47 Having regard to the proposed SMP designation in Section 6 (which requires ComReg to impose at least some level of regulation),<sup>941</sup> as well as the review of competition problems and remedies in Sections 8 and 9 respectively, ComReg has, on an incremental basis, identified why a range of remedies are necessary, proportionate and justified, while at the same time discounting other remedies, where appropriate.
- 12.48 Having regard to the analysis and 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;

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<sup>941</sup> Pursuant to Regulation 8(1) of the Access Regulations and Regulation 27(4) of the Framework Regulations.

**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.

- 12.49 Having set out the four potential options for regulation in the Regional FACO Markets, ComReg sets out below in Table 78 to Table 81 below, a summary of the impacts of each of the four options on the three sets of stakeholders outlined in paragraph 12.1.

**Table 78: 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 would benefit from a reduced regulatory burden, compared to the 2015 FACO Decision.</p> <p>With the introduction of an SoC obligation, there would be a greater onus on Eircom to demonstrate compliance with the obligations imposed under the proposed 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 them 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 would, absent other obligations, have 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>Eircom's incentives to innovate (including via retail pricing plans) 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>	<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>



**Table 79: 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
<p>Eircom would benefit from a reduced regulatory burden relative to 2015 FACO Decision.</p> <p>With the introduction of an SoC obligation, there would be a greater onus on Eircom to demonstrate compliance with the obligations imposed under the proposed 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>While risk of impeding access to FACO may be moderated, effective FACO may still be 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>Availability of FACO would enable subscribers of other networks to contact Eircom's subscribers. However, high risk 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>

**Table 80: 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>With the introduction of an SoC obligation, there would be a greater onus on Eircom to demonstrate compliance with the obligations imposed under the proposed 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>

**Table 81: 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>Existing regulatory burden on Eircom (per 2015 FACO Decision) would remain.</p> <p>With the introduction of an SoC obligation, there would be a greater onus on Eircom to demonstrate compliance with the obligations imposed under the proposed 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 proposed 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>

#### 12.3.4 Step 4: Determine the Impacts on Competition in the provision of FACO

- 12.50 ComReg's preliminary view 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.<sup>942</sup> 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.
- 12.51 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 ultimately benefit Service Providers by allowing them to compete fairly at RFTS level.

#### 12.3.5 Step 5: Assess Likely Impacts and Choose Best Option in respect of FACO

- 12.52 In its proposed approach to remedies in this Consultation, ComReg has taken full account of its obligations under Regulation 8(6) of the Access Regulations,<sup>943</sup> as well as its relevant objectives as set out under Section 12 of the Communications Regulation Act 2002 (as amended).
- 12.53 ComReg's preliminary view is that, absent regulation, Eircom, as the proposed 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.
- 12.54 Based on its assessment above and throughout this Consultation, 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 preliminary view that Option 4 represents the most justified, reasonable and proportionate of the approaches to regulation of the Regional FACO Markets.

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<sup>942</sup> See discussion in paragraphs 9.7 to 9.45 above.

<sup>943</sup> As mirrored at Article 68(4) of the EECC.

- 12.55 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 proposes to apply 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.
- 12.56 The proposed regulatory obligations do not unduly discriminate against Eircom, in that the obligations are proposed to address specific competition problems, and are proportionate, in that they are the least burdensome means of achieving this objective.
- 12.57 ComReg considers that it has met its transparency obligations by setting out the remedies which it proposes to impose on Eircom, outlining the justification for the proposed obligations, and issuing a detailed and reasoned public consultation on these matters.

## 12.4 Urban FACO Markets and RFTS Markets

- 12.58 As noted in Sections 6 and 7, ComReg's preliminary view is that both the Urban FACO Markets and the three Relevant RFTS Markets are likely to fail the 3CT. In particular, ComReg's preliminary view 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 the 3CT implies that the Urban FACO Markets and RFTS Markets are no longer susceptible to *ex ante* regulation and, therefore, regulation is no longer warranted on those markets.
- 12.59 On that basis, ComReg proposes to remove regulation from the Urban FACO Markets and the Relevant RFTS Markets. Therefore, ComReg's regulatory options in each of these markets are limited to the timing of the withdrawal of existing obligations. ComReg does not propose to levy any sunset period in respect of the deregulation of the Relevant RFTS Markets.

- 12.60 As set out in Section 10, ComReg has proposed a staggered approach to the removal of obligations in the Urban FACO Markets. An 18-month sunset period is proposed with respect only to the Access Obligations imposed on Eircom, pursuant to the 2015 FACO Decision. For the avoidance of doubt, this stipulates that 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. A 9-month sunset period is proposed for the removal of all other existing regulatory obligations imposed on Eircom in the Urban FACO Markets, again, pursuant to the 2015 FACO Decision. This will allow Access Seekers sufficient time in which to make any necessary preparations for the new market environment, arising from the deregulation process, thereby preserving continuity in the supply of both wholesale and retail services (were Eircom to withdraw, or significantly alter, its SB-WLR terms and conditions following deregulation).<sup>944</sup> To ultimately ensure the protection of end user interests, ComReg also proposes to continue to monitor the effectiveness of competition within the Urban FACO Markets and Relevant RFTS Markets, notwithstanding the proposed removal of regulation. In this respect, ComReg reserves its right to re-examine competitive conditions within these markets and, if appropriate, to intervene accordingly.
- 12.61 ComReg also proposes that, from the effective date of the Response to Consultation and final Decision arising from this Consultation, Eircom will no longer be obliged by means of regulation to meet new requests for access in the Urban FACO Markets (although is free to do so commercially). ComReg believes that this is appropriate, given that it would be illogical to maintain this requirement for a short period which, having expired, would then be subject to commercial negotiation. ComReg considers that regulatory certainty would be better preserved for all parties by not requiring access pursuant to regulation during the sunset period.
- 12.62 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.

**Q. 12. Do you agree with ComReg's preliminary conclusions on the Regulatory Impact Assessment? 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 position.**

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<sup>944</sup> ComReg would not expect Eircom to significantly alter its terms and conditions given the presence of competition.

## 13 Next Steps

- 13.1 The consultation period will run to 17.30 on Wednesday, August 12<sup>th</sup>, 2020, providing an 8-week consultation period. ComReg encourages all interested parties to comment on the issues set out in this Consultation. The task of analysing responses will be greatly facilitated if all comments are referenced to the specific question numbers set out above in this Consultation.
- 13.2 As noted in this Consultation, a Separate Consultation on Pricing of Eircom's Wholesale Fixed Access Services (the '**Separate ANM Pricing Consultation**') will also be published in Q3 2020.
- 13.3 Having analysed and considered the comments received, ComReg will review the proposals set out in this Consultation, consult with the CCPC, and maintain or amend its proposals, as appropriate, including with respect to the draft measures set out in the draft Decision Instruments.
- 13.4 ComReg will then notify these final draft measures to the EC, other NRAs and BEREC, pursuant to Regulation 13 of the Framework Regulations (which provision is mirrored at Article 32 of the EECR). Taking utmost account of any comments received from the EC as well as from other aforementioned parties, ComReg will then adopt and publish the final decision in its subsequent Response to Consultation and final Decision.
- 13.5 In order to promote further openness and transparency, ComReg will publish all responses to this Consultation, subject to the provisions of ComReg's guidelines on the treatment of confidential information in ComReg Document No. 05/24.
- 13.6 ComReg appreciates that many of the issues raised in this Consultation may require respondents to provide confidential information. As it is ComReg's policy to make all responses available on its website, and for inspection generally, respondents to this Consultation are requested to clearly identify confidential material within their submissions and place any such confidential material in a separate document to their response, with this also being provided by the date referred to in paragraph 13.1 above.
- 13.7 Confidential elements of responses must be clearly marked, using the following format: [✂ text deemed to be confidential ✂], and be set out in a separate document which must also be provided to ComReg by the date referred to in paragraph 13.1 above.
- 13.8 Such information will be treated subject to the provisions of the guidelines on the treatment of confidential information as set out in ComReg Document No. 05/24. In submitting comments, respondents are also requested to provide a copy of their submissions in an unprotected electronic format in order to facilitate their subsequent publication by ComReg.



# Annex: 1 2019 Residential Market Research

A 1.1 The 2019 Residential Market Research conducted for ComReg by RedC Research & Marketing Ltd is published alongside this Consultation in ComReg Document 20/46a.

## **Annex: 2 2019 SME Market Research**

- A 2.1 The 2019 SME Market Research conducted for ComReg by RedC Research & Marketing Ltd is published alongside this Consultation in ComReg Document 20/46b.

## Annex: 3 Proposed Eircom voluntary commitments

- A 3.1 A non-confidential version of the proposed voluntary commitments (the '**Commitments**') made by Eircom to ComReg in February 2020 is published alongside this Consultation in ComReg Document 20/46c.

# Annex: 4 Fixed & Mobile Voice Packages

## Introduction

A 4.1 This Annex outlines the retail voice packages which are offered by the primary Service Providers (Digiweb, Magnet, Imagine, Virgin Media, Vodafone, Eircom, Sky, Three, Tesco, Lycamobile, 48, GoMo and Pure Telecom) in the industry. The specific service offerings, through both fixed and mobile networks, are separately assessed with the primary distinction made between bundles/packages for either business or residential customers.

## Residential and Business Fixed Voice Packages offered by SPs

### Digiweb

A 4.2 Digiweb provides retail telephony and broadband packages to both residential and business customers using DSL (via Eircom's Bitstream product and Digiweb's own supply via LLU), VDSL (FTTC), Fixed Wireless Access and Satellite. Digiweb offer a total of 15 residential packages and five business packages.

#### Residential Packages

A 4.3 Digiweb offers four standalone voice packages, varying each package by the number of minutes offered for both mobile and landline calls:<sup>945</sup>

**Table A3.1: Digiweb Residential - Standalone Fixed Telephony Services**

Package Title	Talk Off-peak	Talk Anytime	Talk Mobile	Talk Unlimited
<b>Contract Length</b>	12 months	12 months	12 months	12 months
<b>Price (incl. VAT) per month</b>	€29.47	€35.57	€37.60	€39.95
<b>Line Rental</b>	Included in plan	Included in plan	Included in plan	Included in plan
<b>Once-off Charges</b>	None	None	None	None
<b>Other Services included</b>	Inclusive local fixed calls at evening & weekends, Inclusive national fixed calls at evening & weekends, Inclusive UK fixed calls at evening & weekends, Free landline rental worth over €250 per year	1,500 anytime minutes to any Irish/UK landline number, Free landline rental worth over €250 per year	30 minutes of landline calls to any Irish/UK mobile network, 1,500 anytime minutes to any Irish /UK landline number, Free landline rental worth over €250 per year	Unlimited calls to mobiles in Ireland & UK, Unlimited calls to landlines in Ireland & UK, Free landline rental worth over €250 per year

<sup>945</sup> <https://digiweb.ie/talk/>

A 4.4 Digiweb has three bundles available through their fibre to the home (FTTH) network.<sup>946</sup> Table A3.2 below describes their various components:

**Table A3.2: Digiweb Residential FTTH & Fixed Telephony Bundles**

Package Title	Ultrafast 150	Ultrafast 300	Ultrafast 1000
<b>Contract Length</b>	12 months	12 months	12 months
<b>Price (incl. VAT) per month</b>	€54.95 (additional €10 for voice services)	€64.95 (additional €10 for voice services)	€74.95 (additional €10 for voice services)
<b>Download Speed</b>	150 Mbps download speed	300 Mbps download speed	1,000 Mbps download speed
<b>Upload Speed</b>	30 Mbps upload speed	50 Mbps upload speed	100 Mbps upload speed
<b>Download Allowance</b>	Unlimited	Unlimited	Unlimited
<b>Once-off Charges</b>	€199 activation fee	€199 activation fee	€199 activation fee
<b>Other Services included</b>	Unlimited calls to mobiles and landlines in Ireland & UK, Includes Parental Control features as standard and F-Secure SAFE Internet Security. Free FritzApps available for remote access to Fritz!Box	Unlimited calls to mobiles and landlines in Ireland & UK, Includes Parental Control features as standard and F-Secure SAFE Internet Security. Free FritzApps available for remote access to Fritz!Box	Unlimited calls to mobiles and landlines in Ireland & UK, Includes Parental Control features as standard and F-Secure SAFE Internet Security. FREE FritzApps available for remote access to Fritz!Box

A 4.5 Table A3.3 outlines each of the three bundles<sup>947</sup> offered by Digiweb, through its Fibre to the Cabinet (FTTC) network:

**Table A3.3: Digiweb Residential FTTC Broadband Packages**

Package Title	Fibre Home	Fibre Home	Fibre Unlimited
<b>Contract Length</b>	12 months	12 months	12 months
<b>Price (incl. VAT) per month</b>	€42.95	€39.95	€44.95
<b>Download Speed</b>	100 Mbps	100Mbps	100 Mbps
<b>Upload Speed</b>	20 Mbps	20 Mbps	20 Mbps
<b>Download Allowance</b>	Unlimited	Unlimited	Unlimited
<b>Once-off Charges</b>	€49 activation fee	€24.95 activation fee	€24.95 activation fee
<b>Other Services included</b>	Talk Off Peak (1,500 off-peak call minutes to any Irish/UK landline numbers and 30 off-peak call minutes to any Irish/UK mobile numbers per month)	Talk Off Peak (1,500 off-peak call minutes to any Irish/UK landline numbers and 30 off-peak call minutes to any Irish/UK mobile numbers per month)	Talk Unlimited (6,000 anytime minutes to any Irish/UK landline numbers and 1,500 anytime minutes to any Irish/UK mobile numbers per month)

<sup>946</sup> <https://digiweb.ie/ultrafast-ftth-broadband/>

<sup>947</sup> <https://digiweb.ie/fibre-broadband/>

A 4.6 Both DSL (fixed line)<sup>948</sup> and Metro (wireless)<sup>949</sup> delivered Voice and Broadband Bundles are outlined in Table A3.4 below:

**Table A3.4: Digiweb Residential - DSL & Metro Broadband and Fixed Telephony Packages**

Package Title	DSL Unlimited Broadband	Metro Freedom Broadband + Talk Unlimited (Wireless)	Metro Starter Broadband (Wireless)
<b>Contract Length</b>	12 months	12 months	12 months
<b>Price (incl. VAT) per month</b>	€59.95	€54.95	€34.95
<b>Download Speed</b>	25 Mbps	30 Mbps	5 Mbps
<b>Upload Speed</b>			
<b>Download Allowance</b>	Unlimited	Unlimited	30GB
<b>Once-off Charges</b>	None	None	€29.95 activation fee
<b>Other Services included</b>	Talk Unlimited (6,000 anytime minutes to any Irish/UK landline numbers and 1,500 anytime minutes to any Irish/UK mobile numbers per month)	Talk Unlimited (6,000 anytime minutes to any Irish/UK landline numbers and 1,500 anytime minutes to any Irish/UK mobile numbers per month)	Free Metro to Metro calls, Talk Off Peak (1,500 off-peak call minutes to any Irish/UK landline numbers and 30 off-peak call minutes to any Irish/UK mobile numbers per month)

A 4.7 Table A3.5 describes two 'NextGen', Voice and Broadband Packages<sup>950</sup> available from Digiweb:

<sup>948</sup> <https://digiweb.ie/dsl-broadband/>

<sup>949</sup> <https://digiweb.ie/metro-broadband/>

<sup>950</sup> <https://digiweb.ie/nextgen-broadband/>

**Table A3.5: Digiweb Residential - 'NextGen' Broadband and Fixed Telephony Bundles**

Package Title	NextGen Home Broadband + Talk	Next Gen Unlimited Broadband and Calls
<b>Contract Length</b>	12 months	12 months
<b>Price (incl. VAT) per month</b>	€39.95	€49.95
<b>Download Speed</b>	24 Mbps	24 Mbps
<b>Upload Speed</b>	Unknown	Unknown
<b>Download Allowance</b>	Unlimited	Unlimited
<b>Once-off Charges</b>	€49 activation fee	€49 activation fee
<b>Other Services included</b>	Talk Off Peak (1,500 off-peak call minutes to any Irish/UK landline numbers and 30 off-peak call minutes to any Irish/UK mobile numbers per month)	Talk Unlimited (6,000 anytime minutes to any Irish/UK landline numbers and 1,500 anytime minutes to any Irish/UK mobile numbers per month)

### **Business Packages**

A 4.8 There is one FTTC Voice and Broadband Bundle<sup>951</sup> targeted toward business consumers. The primary components of this package are outlined in Table A3.6 below:

**Table A3.6: Digiweb Business - FTTC Voice and Broadband Bundle**

Package Title	Business Fibre (FTTC)
<b>Contract Length</b>	12 months
<b>Price (incl. VAT) per month</b>	€55
<b>Download Speed</b>	100 Mbps
<b>Upload Speed</b>	20 Mbps
<b>Download Allowance</b>	Unlimited
<b>Line Rental</b>	None
<b>Once-off Charges</b>	€49 activation fee
<b>Other Services included</b>	Talk Anytime (1,500 anytime minutes to any Irish landline numbers and 100 anytime minutes to any Irish mobile numbers per month)

A 4.9 Digiweb's standalone fixed telephony bundles<sup>952</sup> for business users are outlined in Table A3.7 below:

**Table A3.7: Digiweb Business - Standalone Fixed Telephony Services**

Package Title	Shared Office Plan A	Shared Office Plan B	Shared Office Plan C	Shared Office Plan D
<b>Contract Length</b>	12 months	30 day rolling contract	12 months	12 months
<b>Price (incl. VAT) per month</b>	€24	€49	€89	€129

<sup>951</sup> <https://digiweb.ie/product/business-fibre-broadband/>

<sup>952</sup> <https://digiweb.ie/product-category/business/shared-office-plans/>



<b>Line Rental</b>	Standard lines at €25.78 per line and the high-speed lines at €32.50	Standard lines at €25.78 per line and the high-speed lines at €32.51	Standard lines at €25.78 per line and the high-speed lines at €32.52	Standard lines at €25.78 per line and the high-speed lines at €32.53
<b>Once-off Charges</b>	N/A	N/A	N/A	N/A
<b>Other Services included</b>	1,500 anytime call minutes to Irish/UK landline numbers per month, 200 anytime call minutes to Irish/UK mobile numbers per month	1,500 anytime call minutes to Irish/UK landline numbers per month, 400 anytime call minutes to Irish/UK mobile numbers per month	3,000 anytime call minutes to Irish/UK landline numbers per month, 800 anytime call minutes to Irish/UK mobile numbers per month	3,000 anytime call minutes to Irish/UK landline numbers per month, 1,200 anytime call minutes to Irish/UK mobile numbers per month

## Eircom

A 4.10 Eircom offers a range of packages, catering for both residential and business voice and broadband users. Through mobile networks, current generation technology, and the new fibre network, Eircom provides circa twenty packages to residential consumers and ten packages for their business consumer counterparts. Their fixed service offerings are discussed in the following sections.

### Residential Packages

A 4.11 On the residential side, Eircom offers five voice and broadband packages, delivered through their fixed line networks. Table A3.8<sup>953</sup> outlines two of Eircom's Fibre Broadband packages and Table A3.9 describes three of the available fixed line voice and broadband packages:<sup>954</sup>

**Table A3.8: Eircom Residential – eir Fibre Broadband packages**

Package Title	Broadband and International Calls	Broadband and Off-Peak Calls
<b>Download Limit</b>	Unlimited	Unlimited
<b>Internet Speed</b>	100Mb	100Mb
<b>Contract Length</b>	12 months	12 months
<b>Price incl. VAT p/m</b>	€69.98	€59.99
<b>Once-off charges</b>	none	none
<b>Other services included</b>	Unlimited Superfast fibre broadband, eir broadband talk mobile world, Unlimited calls to Irish landlines & mobiles and to top international landlines & mobiles, Free eir sport pack	Unlimited Superfast fibre broadband, eir broadband talk Unlimited off-peak calls to Irish landlines, Free eir sport pack

<sup>953</sup> <https://www.eir.ie/forlife/bundles/>

<sup>954</sup> <https://www.eir.ie/broadband/>

**Table A3.9: Eircom Residential – ‘eir Bundles’ broadband and calls**

Package Title	Broadband + Sim Only	Broadband and Landline	Broadband and Mobile
<b>Download Limit</b>	Unlimited	Unlimited	Unlimited
<b>Internet Speed</b>	100 Mb	100 Mb	
<b>Contract Length</b>	12 months	12 months	12 months
<b>Price incl. VAT p/m</b>	€79.98	€59.99	€104.98
<b>Once-off charges</b>	none	none	none
<b>Other services included</b>	Unlimited Off-Peak local & national calls Unlimited Irish calls & texts, No Limits Data, FREE eir sport pack, now includes Virgin Media Sport	FREE unlimited access to eir sport, Unlimited off-peak calls to Irish landlines.	Unlimited Off-Peak local & national calls Unlimited Irish calls & texts, No Limits Data FREE eir sport pack, now includes Virgin Media Sport

### **Business Packages**

- A 4.12 Eircom offers both fibre broadband packages<sup>955</sup>(which include broadband and telephony services), and standalone fixed telephony bundles<sup>956</sup> to business consumers. The components of each bundle are described in Table A3.10 and Table A3.11 below:

<sup>955</sup> <https://business.eir.ie/shop/bundles/broadband-landline/>

<sup>956</sup> <https://business.eir.ie/product/eir-talktime-for-business/>

Table A3.10: Eircom Business – Fibre Broadband

Package Title	Advantage Boost 150Mb	Advantage Boost 300Mb	Advantage Boost 1000 Mb
<b>Download Limit</b>	Unlimited	Unlimited	Unlimited
<b>Download Speed</b>	150Mb	300Mb	1000Mb
<b>Upload Speed</b>	30Mb	50Mb	100Mb
<b>Type</b>			
<b>Contract Length</b>	12 months	12 months	12 months
<b>Price incl. VAT p/m</b>	€74.99	€79.99	€99.99
<b>once off charges</b>	€99.99 installation fee	€99.99 installation fee	€99.99 installation fee
<b>Other services</b>	Unlimited Local, National, Mobile and International calls	Unlimited Local, National, Mobile and International calls	Unlimited Local, National, Mobile and International calls

**Table A3.11: Eircom Business – eir Business Packages (Standalone voice)**

<b>Basic telephony line monthly price</b>	€27.26	€37.23	€48.77	€67.65	€96.50	€129.02	€161.54
<b>Basic ISDN monthly price</b>	€38.81	€48.78	€60.32	€79.20	€108.05	€140.57	€173.09
<b>level</b>	1	2	3	4	5	6	7
<b>local and National minutes</b>	150	400	700	1200	2000	3000	4000
<b>Landline to eir mobile minutes</b>	600	600	600	600	600	600	600
<b>eir phone services</b>	eir mailbox	eir mailbox	eir mailbox and 4 all forwarding	eir mailbox and 4 all forwarding	eir mailbox and 4 all forwarding	eir mailbox and 4 all forwarding	eir mailbox and 4 all forwarding

## Magnet

A 4.13 Magnet offers a range of voice and broadband packages that are tailored specifically for residential and business consumers. These include eight packages for residential users and seven business packages.

### Residential Packages

A 4.14 The residential packages are split between FTTC<sup>957</sup> and FTTH.<sup>958</sup> Both are described in Table A3.12 and Table A3.13 below:

**Table A3.12: Magnet Residential FTTC Broadband and Fixed Telephony**

Package Title	24Mb Fatpipe Fibre	Fatpipe Fibre 24	Fatpipe Fibre 100	Fatpipe Fibre 100	Fatpipe Fibre 100
<b>Contract Length</b>	18 months	No Contract	18 months	No contract	2 months
<b>Price (incl. VAT) per month</b>	€30 for broadband, *€10 or **€20 phone add-on	€41.99 for broadband *€10 or **€20 phone add-on	€49.99 for broadband, *€10 or **€20 phone add-on	€57.99 for broadband, *€10 or **€20 phone add-on	€45 for broadband, *€10 or **€20 phone add-on
<b>Download Speed</b>	24 Mb	24 Mb	100 Mb	100 Mb	100 Mb
<b>Download Allowance</b>	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
<b>Once-off Charges</b>	Connection fee €50, Router Delivery €7.99	Connection fee €50, Router Delivery €7.99	Connection fee €50, Router Delivery €7.99	Connection fee €50, Router Delivery €7.99	Connection fee €50, Router Delivery €7.99
<b>Other Services included</b>	*Unlimited Irish Landline Calls, **Anytime Unlimited Mobile & Landline Calls		*Unlimited Irish Landline Calls, **Anytime Unlimited Mobile & Landline Calls	*Unlimited Irish Landline Calls, **Anytime Unlimited Mobile & Landline Calls	*Unlimited Irish Landline Calls, **Anytime Unlimited Mobile & Landline Calls

\*'Simply Phone' voice add-on for €9.99 per month, featuring anytime unlimited free calls to Irish Landlines.

\*\*'Infinity Phone' voice add-on for €19.99 per month, featuring anytime unlimited mobile and landline calls

<sup>957</sup> <https://www.magnet.ie/residential/>

<sup>958</sup> <https://www.magnet.ie/residential/>

**Table A3.13: Magnet Residential FTTH Broadband and Fixed Telephony Bundles**

Package Title	Fibre Broadband 60	Fibre Broadband 100	Fibre Broadband 60
<b>Contract Length</b>	12 months	12 months	12 months
<b>Price (incl. VAT) per month</b>	€29.99	€49.99	€29.99
<b>Download Speed</b>	60 Mb	100 Mb	60 Mb
<b>Download Allowance</b>	Unlimited	Unlimited	Unlimited
<b>Once-off Charges</b>			
<b>Other Services included</b>	*Unlimited Irish Landline Calls, **Anytime Unlimited Mobile & Landline Calls	*Unlimited Irish Landline Calls, **Anytime Unlimited Mobile & Landline Calls	*Unlimited Irish Landline Calls, **Anytime Unlimited Mobile & Landline Calls

**Business Packages**

A 4.15 Table A3.14 provides an overview of the three standalone voice packages<sup>959</sup> which are offered by Magnet and are primarily aimed towards business consumers:

**Table A3.14: Magnet Business Standalone Voice (over broadband)**

Package Title	Magnet Talk (over broadband)	Magnet Talk Extra	Magnet Talk Evolve
<b>Contract Length</b>	24 months	24 months	24 months
<b>Price (incl. VAT) per month</b>	€9.95	€16.95	€28.95
<b>Line Rental</b>	Included	Included	Included
<b>Once-off Charges</b>			
<b>Other Services included</b>	Voicemail to email: Send voice mails directly to an email address, Call Forwarding, Call Transfer, Music on Hold, Call Parking, 3-Way Conferencing, Online User Portal	Call Logs/Call History, Auto-Attendant, Time based call flow, Customisable hold music, Hunt Groups, Online user portal, Admin Control Portal	Audio Conference Rooms, Video Conferencing, Admin Feature Control, Skillsets Groups, Call Queuing, Agent Availability Management, Call Recording

<sup>959</sup> <https://www.magnetnetworks.com/business/talk/>

A 4.16 Table A3.15 outlines four fixed broadband and telephony packages for business consumers. Both ‘Small Office Fibre’<sup>960</sup> bundles use VDSL technology, which delivers high speeds using DSL connectivity. ‘Bespoke Fibre’ utilises ‘fibre to the office (FTTO)’<sup>961</sup> technology, whilst Office in a box<sup>962</sup> is a standalone voice package, compatible with an array of different technologies:

**Table A3.15: Magnet Business Voice and Broadband Services**

Package Title	Office in a box	Bespoke Fibre	Small Officer Fibre	Small Officer Fibre
<b>Price (incl. VAT) per month</b>	Varies based on number of users	Varies based on number of users	Varies based on number of users	Varies based on number of users
<b>Contract duration</b>	24 months	24 months	24 months	24 months
<b>Download Speed</b>	Up to 100 Mb	Up to 1000Mbps	24Mb	100Mb
	Unlimited	Unlimited	Unlimited	Unlimited
<b>Line Rental</b>	Included	Included	Included	Included
<b>Once-off Charges</b>	none	none		
<b>Other Services included</b>	Unlimited Calls to Irish, UK & USA Landlines, Unlimited Calls to Irish, UK & USA Mobiles, Unlimited landline Calls to 18 Top Countries	High speed, contention free Internet access, LAN to LAN service, Voice telephony service, International high-speed connections	Up to 24Mb Incl. Unlimited Calls to Irish, UK, USA Landlines Unlimited Calls to Irish UK, USA Mobiles Unlimited Calls to 18 other Top Countries	Unlimited Calls to Irish, UK, USA Landlines Unlimited Calls to Irish UK, USA Mobiles Unlimited Calls to 18 other Top Countries

<sup>960</sup> <https://www.magnetnetworks.com/business/products/small-office-fibre/>

<sup>961</sup> <https://www.magnetnetworks.com/business/products/business-fibre/>

<sup>962</sup> <https://www.magnetnetworks.com/business/products/office-in-a-box/>

## Imagine

A 4.17 Imagine offers one residential and one business Voice and Broadband bundle.

### **Residential Packages**

A 4.18 The Voice and Broadband<sup>963</sup> bundle, aimed at residential consumers, is outlined in Table A3.16 Below:

**Table A3.16: Imagine Residential - LTE Fibre Speed Broadband & Call Pack**

Package Title	Broadband & Calls
Contract Length	24 months
Price (incl. VAT) per month	€59.99
Download Speed	150Mbps
Upload Speed	
Download Allowance	Unlimited
Once-off Charges	€150 connection charge
Other Services included	Free local, national and UK landline calls, Free 60 minutes to Irish mobiles, Massive savings

### **Business Packages**

A 4.19 Table A3.17 defines the Voice and Broadband<sup>964</sup> bundle available to business users:

**Table A3.17: Imagine Business – Voice and Broadband Bundles**

Package Title	Broadband & Calls
Contract Length	24 months
Price (incl. VAT) per month	€48.77
Line Rental	N/A
Once-off Charges	€150 installation charge
Other Services included	Unlimited Download, Free local, national and UK landline calls, Free minutes to Irish Mobiles

<sup>963</sup> <https://www.imagine.ie/residential/home-broadband/#>

<sup>964</sup> <https://www.imagine.ie/business/business-broadband/>



## Pure Telecom

### Residential Packages

A 4.20 Pure Telecom offers a number of residential packages, as outlined on their website.<sup>965</sup> Table A3.18 below outlines two of their fixed broadband and telephony bundles, while Table A3.19 describes their three standalone voice deals:<sup>966</sup>

**Table A3.18: Pure Telecom Residential – Fibre Broadband and Telephony Bundle**

Package Title	Instant Speed	Premium Speed
<b>Contract Length</b>		
<b>Price (incl. VAT) per month</b>	€75	€55
<b>Download Speed</b>	150 Mb	300 Mb
<b>Upload Speed</b>	30 Mb	50Mb
<b>Download Allowance</b>	Unlimited	
<b>Line Rental</b>	Included	Included
<b>Other Services included</b>	Unlimited Local and National calls, Unlimited Fibre Broadband	Unlimited Local and National calls, Unlimited Broadband

**Table A3.19: Pure Telecom Residential – Standalone Voice Packages<sup>967</sup>**

Package Title	Irish Landline	Irish Mobiles	USA, Australia, UK +
<b>Contract Length</b>			
<b>Price (incl. VAT) per month</b>	€3.50	€10	€5
<b>Line Rental</b>	€25.50	€25.50	€25.50
<b>Other Services included</b>	Unlimited Irish Landline Calls	Unlimited Irish Mobile Calls	Unlimited International Calls to specified countries

### Business Packages

A 4.21 Table A3.20 describes three of Pure Telecom's standalone voice packages,<sup>968</sup> with the option of a fibre broadband add-on for an extra €27 per month:

<sup>965</sup> <https://www.puretelecom.ie/>

<sup>966</sup> <https://www.puretelecom.ie/fibre-broadband>

<sup>967</sup> <https://www.puretelecom.ie/landline-service>

<sup>968</sup> <https://www.puretelecom.ie/business/voice-deals>

**Table A3.20: Pure Telecom Residential – Fibre Broadband and Telephony Bundle**

Package Title	Voice - 1 Line	Voice - 2 Line	Voice - 3 Line
<b>Contract Length</b>			
<b>Price (incl. VAT) per month</b>	€38	€72	€95
<b>Line Rental</b>	Included	Included	Included
<b>Other Services included</b>	Local and National calls, Mobile Calls, 1 x PSTN Line Rental * Fibre Broadband may be added for extra €27 p/m	Local and National calls Mobile Calls 2 x PSTN Line Rental* Fibre Broadband may be added for extra €27 p/m	Local and National calls Mobile Calls 3 x PSTN Line Rental* Fibre Broadband may be added for extra €27 p/m

### Virgin Media

A 4.22 Virgin Media offers a range of broadband and telephony services as part of a bundle and as a standalone service. These service offerings encompass nine residential packages and four business packages.

#### **Residential Packages**

A 4.23 Table A3.21 below outlines fixed broadband and telephony<sup>969</sup> bundles offered by Virgin Media:

**Table A3.21: Virgin Media Residential – Fixed Broadband and Telephony services (a)**

Package Title	Virgin Full House 500	Virgin Mix 500	Virgin Mix 250	Limitless 250Mb World Talk	Limitless 500MB World Unlimited Talk
<b>Contract Length</b>	12 months	12 months	12 months	12 months	12 months
<b>Price (incl. VAT) per month</b>	€99	€94	€89	€59	€69
<b>Download Speed</b>	500Mb Broadband	500Mb Broadband	250Mb Broadband	250 Mb	500 Mb
<b>Upload Speed</b>				25 Mb	50Mb
<b>Once-off Charges</b>	€30 activation fee	€30 activation fee	€30 activation fee	€30 activation fee	€30 activation fee

<sup>969</sup> <https://www.virginmedia.ie/bundles/broadband-tv-phone/>

<b>Other Services included</b>	World unlimited talk home phone, 100+ TV Channels, Virgin Media Sport & eir Sport 1	Virgin Mix TV Virgin Media Sport. World Unlimited Talk Home Phone	World Talk Home Phone, Virgin Mix TV Virgin Media Sport.	Unlimited calls to Irish landlines, mobiles and 400 minutes to 22 countries.	Unlimited minutes to landlines and mobiles in Ireland and 22 International countries.
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A 4.24 Further to Table A3.21, Table A3.22 outlines fixed broadband and telephony<sup>970</sup> bundles:

**Table A3.22: Virgin Media Residential – Fixed Broadband and Telephony services (b)**

Package Title	500Mb + Home Phone	360Mb + Home Phone	250Mb + Home Phone	250Mb Broadband with Home Phone and Freedom TV
<b>Contract Length</b>	30-day contract	30-day contract	30-day contract	30-day contract
<b>Price (incl. VA72 p67 m62th)</b>	€69	€64	€59	€79
<b>Download Speed</b>	500 Mb	360 Mb	250 Mb	250 Mb
<b>Upload Speed</b>				25Mb
<b>Download Allowance</b>				
<b>Once-off Charges</b>	€30 activation fee	€30 activation fee	€30 activation fee	€20 activation fee
<b>Other Services included</b>	Virgin Media TV Anywhere Sports Pass 500Mb Broadband Home Phone Unlimited minutes to landlines and mobiles in Ireland	Unlimited minutes to landlines and mobiles in Ireland	Free Virgin Media TV Anywhere Sports Pass	Home Phone with World Talk, Freedom TV, Unlimited calls to Irish landlines, mobiles and 400 minutes to 22 countries

### **Business Packages**

A 4.25 The various packages available for small businesses<sup>971</sup> are outlined below in Table A3.23. As with many of the other providers, medium to large enterprises require bespoke packages, therefore, are not listed below:

<sup>970</sup> <https://www.virginmedia.ie/bundles/broadband-and-homephone/>

<sup>971</sup> <https://www.virginmedia.ie/business/>

**Table A3.23: Virgin Media Business- Broadband and Phone Line (for SMEs)**

Package Title	Business 100	Business 200	Business 300	Business 400
<b>Contract Length</b>	12 months	12 months	12 months	12 months
<b>Download Limit</b>	100Mb	200Mb	300Mb	400Mb
<b>Download Speed</b>	100 Mbps	200Mbps	300Mbps	400Mbps
<b>Upload Speeds</b>	10 Mbps	20Mbps	30Mbps	40Mbps
<b>Price (incl. VAT) per month</b>	€45	€55	€65	€75
<b>Line Rental</b>	none	none	none	none
<b>Once-off Charges</b>				
<b>Other Services included</b>	200 minutes to Irish mobiles, calls to Irish and UK landlines included	200 minutes to Irish mobiles, calls to Irish and UK landlines included	200 minutes to Irish mobiles, calls to Irish and UK landlines included	200 minutes to Irish mobiles, calls to Irish and UK landlines included

## Sky

A 4.26 Sky offers telephony packages to residential consumers only and has no bundles available for businesses. There are two options available, both of which may be purchased as part of a bundle with tv and/or broadband services.

### Residential

A 4.27 Table A3.24 describes the two standalone voice services offered<sup>972</sup> by Sky. Both are offered with the option to 'add-on' Sky's TV and/or Broadband Bundles:

**Table A3.24: Sky Residential – Standalone Fixed Telephony Packages**

Package Title	Sky Talk Freetime	Sky Talk Anytime
<b>Contract Length</b>	12 months	13 months
<b>Price incl. VAT p/m</b>	€0	€7.50
<b>Once-off charges</b>		
<b>Line Rental</b>	€30 p/m	€30 p/m
<b>Other services included</b>	Calls to Sky Customer Service, Inclusive evening and weekend calls of up to an hour to the Republic of Ireland local and national landline numbers only	Calls to Sky Customer Service, anytime calls of up to an hour to the Republic of Ireland and Northern Ireland local and national landline numbers only, anytime international geographic landline calls of up to an hour to 20 countries,

A 4.28 Further to the two telephony packages outlined above, Table A3.25 describes three of the broadband packages available as an add-on<sup>973</sup> to the fixed telephony services:

<sup>972</sup> <https://www.sky.com/ireland/broadband-talk/talk-compare/>

<sup>973</sup> <https://www.sky.com/ireland/broadband-talk/#section-2>

Table A3.25: Sky Residential – Broadband add-ons

Package Title	Sky Broadband Essential	Sky Broadband Superfast	Sky Broadband Gigafast
Download Limit	Unlimited	Unlimited	Unlimited
Download Speed	24 Mb/s	100 Mb/s	1 Gb/s
Contract Length	12 months	12 months	12 months
Price incl. VAT p/m	€51	€55	
Once-off charges	€50	€50	€50
Line Rental	Included	Included	Included
Other services included	Sky Broadband Buddy		

### Three

#### Business Packages

A 4.29 Three offers a number of fixed line packages, all of which are aimed towards business users. Table A3.26 outlines the fixed line offerings which encompass both standalone voice<sup>974</sup> and packages<sup>975</sup> which include both voice and broadband:

Table A3.26: Three Business - Landline Plans (Voice and Broadband Bundles)

Package Title	Business Line Lite	Business Line Extra	Business Line Ultra	*Single Line PSTN	*Single Line ISDN
Download Limit	Unlimited	Unlimited	Unlimited		
Download Speed	100MB	100MB	100MB		
Contract Length					
Price incl. VAT p/m	€40	€50	€60	€39.99	€69.99
Once-off charges					
Other services included	150 mins - Calls to Irish & UK landlines, 150 mins - Calls to Irish mobiles	1500 mins - calls to Irish & UK landlines (includes international), 500 mins Calls to Irish mobiles, 8 Hour SLA Included	Unlimited calls to Irish & UK landlines (includes international) Unlimited Calls to Irish mobiles, 8 Hour SLA Included	Unlimited Landline to national & UK landlines calls, Unlimited (ROI only) Landline to national mobile calls	Unlimited Landline to national & UK landlines calls, Unlimited (ROI only) Landline to national mobile calls

\*Standalone Voice Bundles

### Vodafone

A 4.30 Vodafone offers fixed line voice and broadband packages to both residential and business users.

<sup>974</sup> <https://www.three.ie/business/solutions/landline-plans/>

<sup>975</sup> <https://www.three.ie/business/solutions/landline-plans/>

### **Residential Packages**

A 4.31 Table A3.27 describes six of the broadband and telephony bundles offered by Vodafone to residential customers:<sup>976</sup>

**Table A3.27: Vodafone Residential - Landline Plans (Voice and Broadband Bundles)**

	Vodafone Fibre Broadband 150 and Landline	Vodafone Fibre Broadband 300 and Landline	Vodafone Fibre Broadband 1000 and Landline	Vodafone Fibre Broadband 150 and Landline	Vodafone Fibre Broadband 300 and Landline	Vodafone Fibre Broadband 1000 and Landline
<b>Contract Length</b>	12 months	12 months	12 months	12 months	12 months	12 months
<b>Download Speed</b>	150 Mbps	300 Mbps	1000 Mbps	150 Mbps	300 Mbps	1000 Mbps
<b>Download Allowance</b>	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
<b>Price (incl. VAT) per month</b>	€60	€65	€90	€70	€75	€100
<b>Other Services included</b>	Unlimited calls to Irish landlines, Gigabox Modem included	Unlimited calls to Irish landlines, Gigabox Modem included	Unlimited calls to Irish landlines, Gigabox Modem included	Unlimited calls to Irish landlines and mobiles, Gigabox Modem included	Unlimited calls to Irish landlines and mobiles, Gigabox Modem included	Unlimited calls to Irish landlines and mobiles, Gigabox Modem included

### **Business Packages**

A 4.32 Table A3.28 outlines three of the voice and broadband packages<sup>977</sup> available for business consumers, while Table A3.29 details three of Vodafone's voice-only plans:

**Table A3.28: Vodafone Business - Landline Plans (Voice and Broadband Bundles)**

	Office Essentials	Office Professional	Office Unlimited
<b>Contract Length</b>	24 months	24 months	24 months
<b>Price (incl. VAT) per month</b>	€45	€50	€60
<b>Download Speed</b>	100 Mbps	100 Mbps	100 Mbps
<b>Download Allowance</b>	Unlimited	Unlimited	Unlimited
<b>Other Services included</b>	Line Rental, 200 any network minutes, Unlimited calls to Irish landlines	Unlimited calls to Irish landlines, unlimited calls to Irish mobiles, line rental	Unlimited calls to Irish and UK landlines and mobiles, line rental, 1TB of cloud storage, Unlimited calls to international landlines

<sup>976</sup> <https://n.vodafone.ie/shop/broadband/gigabit-plans.html>

<sup>977</sup> <https://n.vodafone.ie/business/products-and-solutions/fixed-communications/single-line.html>

**Table A3.29: Vodafone Business – Voice-only Landline Plans**

	Office Essential Voice	Office Unlimited Voice	Office Control ISDN
<b>Contract Length</b>	24 months	24 months	24 months
<b>Price (incl. VAT) per month</b>	€32	€42	€64.99
<b>Other Services included</b>	Line rental, unlimited calls to Irish landlines, 200 minutes to Vodafone mobiles	Line rental, unlimited calls to Irish and UK landlines, unlimited calls to Irish and UK mobiles	Line rental, unlimited calls to Irish and UK landlines, unlimited calls to Irish and UK mobiles

## Residential and Business Mobile Voice Packages Offered by SPs

### Eircom

#### Residential Packages

A 4.33 15 of Eircom's residential and/or personal packages are delivered through its mobile network. Eight of the bundles are for bill-pay customers and are outlined in Table A3.30,<sup>978</sup> Table A3.31<sup>979</sup> and Table A3.32<sup>980</sup> below:

**Table A3.30: Eircom Residential – Mobile Broadband – Bill Pay**

Package Title	with sim only	with device	with device
<b>Download Limit</b>	15Gb	25Gb	50Gb
<b>Type</b>	3G & 4G	3G & 4G	3G & 4G
<b>Contract Length</b>	1 month	6 months	6 months
<b>Price incl. VAT p/m</b>	€15	€20	€30
<b>Once-off charges</b>			
<b>Other services included</b>			

**Table A3.31: Eircom Residential – Mobile Broadband – Bill Pay Plans**

Package Title	eir mobile essential	eir mobile connect	eir mobile complete
<b>Download Limit</b>	10 GB	Unlimited	Unlimited
<b>Type</b>			
<b>Contract Length</b>	30 days	30 days	30 days
<b>Price incl. VA59p/m</b>	€39.99	€54.99	€69.99
<b>once off charges</b>			
<b>Other Services</b>	Unlimited texts 200 Irish minutes Use your data at home	Unlimited Irish calls Unlimited texts 40GB of your data to	Unlimited Irish calls Unlimited texts 600 international

<sup>978</sup> <https://www.eir.ie/mobile/broadband/>

<sup>979</sup> <https://www.eir.ie/mobile/bill-pay/>

<sup>980</sup> <https://www.eir.ie/mobile/simonly/>



	or in the EU Free eir sport pack on your mobile	use in the EU Free eir sport pack on your mobile	minutes and texts 60GB of your data to use in the EU Free eir sport pack on your mobile
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**Table A3.32: Eircom Residential – Mobile Broadband – Bill Pay (Sim Only)**

Package Title	eir mobile connect	eir mobile complete
Download Limit	Unlimited	Unlimited
Type	4G	4G
Contract Length	30 day	30 day
Price incl. VAT p/m	29.99	34.99
Once off charges		
Other services	Unlimited texts, Unlimited Irish calls, 30GB of your data to use in the EU, Free eir sport pack on your mobile	Unlimited texts, Unlimited Irish calls, 200 international minutes and texts, 50GB of your data to use in the EU, Free eir sport pack on your mobile

A 4.34 Table A3.33 and Table A3.34 outline the six pre-pay plans<sup>981</sup> available from Eircom:

**Table A3.33: Eircom Residential – Mobile Broadband – Pre-pay**

Mobile Broadband - Pre-pay				
Package Title	1-day pass	7-day pass	30-day pass	30-day pass
Download Limit	1 Gb	2.5Gb	15GB	50 Gb
Type	4G	4G	4G	4G
Contract Length	None	None	None	
Price incl. VAT p/m	€2.99	€7.99	€19.99	29.99
Once-off charges				

**Table A3.34: Eircom Residential – Mobile Broadband – Pre-pay Plans**

Package Title	Pre-pay Plan	Pre-pay Plan	Pre-pay Plan
Download Limit		Unlimited	Unlimited
Type	4G	4G	
Contract Length	30 day	30 day	30 day
Price incl. VAT p/m	€10	€20	€30
Once off charges			
Other services	Unlimited Calls	Unlimited calls OR Unlimited texts, 7.3GB of roaming in the EU	Unlimited texts & calls, 10.9GB of roaming in the EU

<sup>981</sup><https://www.eir.ie/mobile/broadband/prepay/>

<https://www.eir.ie/mobile/prepay/>

## Virgin Media

### Residential Packages

A 4.35 Table A3.35 describes two of Virgin Media's mobile broadband and telephony packages:

**Table A3.35: Virgin Media Residential - Mobile Broadband Packages**

Package Title	*Virgin Mobile Unlimited Plan	*Virgin Mobile 2GB
<b>Contract Length</b>	30 days	30 days
<b>Price (incl. VAT) per month</b>	€25	€15
<b>Download Speed</b>	4G	4G
<b>Upload Speed</b>		
<b>Download Allowance</b>	Unlimited (subject to fair usage policy)	2GB
<b>Once-off Charges</b>	n/a	n/a
<b>Other Services included</b>	Unlimited call minutes, Unlimited Texts, Unlimited GB data, EU Roaming Included	250 minutes, 250 texts, EU Roaming

\* Exclusive to current Virgin Media customers

### Three

A 4.36 Three offers a total of six residential/personal mobile telephony<sup>982</sup> packages and 14 business mobile/landline packages.<sup>983</sup>

### Residential

A 4.37 The personal bundles are divided into prepay and bill pay, and are described in Table A3.36 and Table A3.37 below:

**Table A3.36: Three Residential - Pre-pay Mobile Voice and Broadband Bundles (Sim Only and Phone Plans)**

Package Title	3 Pre-pay 15	3 Pre-pay 20	3 Pre-pay 30
<b>Download Limit</b>	1GB	Unlimited	Unlimited
<b>Type</b>	4G	4G	
<b>Contract Length</b>	28 days	28 days	28 days
<b>Price incl. VAT p/m</b>	€15	€20	€30
<b>Once-off charges</b>			
<b>Other services included</b>	60 texts, unlimited calls	Unlimited texts, unlimited Three to Three calls, 10GB EU data, 60 minutes any network calls	Unlimited texts, 14GB EU data, unlimited Three to any network calls, 30 minutes international calls

<sup>982</sup> <https://www.three.ie/plans/phone/prepay/> and <https://www.three.ie/plans/phone/bill-pay/>

<sup>983</sup> <https://www.three.ie/business/solutions/mobile-plans/>

**Table A3.37: Three Residential - Bill Pay Mobile Voice and Broadband Bundles (Sim Only and Phone Plans)**

	Bill Pay Sim Only		Bill Pay Phone Plans	
<b>Package Title</b>	3 Unlimited Flex Max SIMO	3 Mini Flex Max	3 Classic Flex Max	3 Unlimited Flex Max
<b>Download Limit</b>	Unlimited	unlimited	unlimited	unlimited
<b>Type</b>	4G	4G	4G	4G
<b>Contract Length</b>	30 days	24 months	24 months	24 months
<b>Price incl. VAT p/m</b>	€30	€30	€45	€60
<b>Once-off charges</b>				
<b>Other services included</b>	3plus rewards, 11 GB of EU data, unlimited three to three calls, unlimited flexi units (subject to fair usage policies)	11GB EU data, Unlimited three to three calls, 3Plus rewards, 100 Flexi units	11GB EU data, Unlimited three to three calls, 3Plus rewards, 350 Flexi units	11GB EU data, Unlimited three to three calls, 3Plus rewards, unlimited Flexi units

A 4.38 Table A3.38 below describes the mobile telephony and broadband bundles<sup>984</sup> offered to business users:

**Table A3.38: Three Business - Mobile Voice (Sim Only)**

Package Title	Starter SIM only	SIM Only	Plus SIM Only
<b>Download Limit</b>	Unlimited	Unlimited	Unlimited
<b>Type</b>	4G	4G	4G
<b>Contract Length</b>	12 Months	30 days	12 Months
<b>Price incl. VAT p/m</b>	€25	€30	€40
<b>Other services included</b>	Unlimited ROI and EU calls and texts, 3Plus rewards and discounts, 12 GB EU Data	Unlimited ROI and EU calls and texts, 3Plus rewards and discounts, 12 GB EU Data	Unlimited ROI and EU calls and texts, 3Plus rewards and discounts, USA / Canada Roaming 200 mins, 200 texts & 2GB of Data, International 300 mins & 300 Texts, 18 GB EU Data

A 4.39 Three also has a number of mobile voice offerings<sup>985</sup> which are scalable depending on the number of users. These bundles are outlined in Table A3.39 below:

<sup>984</sup> <https://www.three.ie/business/solutions/mobile-plans/>

<sup>985</sup> <https://www.three.ie/business/solutions/mobile-plans/>

**Table A3.39: Three Business - Mobile Voice (SIM Only)**

	1-4 employees			4+ employees		
Package Title	Starter	Plus	Unlimited	Multi Starter	Multi Extra	Multi Plus
Download Limit	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
Type	4G	4G	4G	4G	4G	4G
Contract Length	24 months	24 months	24 months	24 months	24 months	24 months
Price incl. VAT p/m	€45	€59	€80	€30	€35	€45
Other services included	12GB of EU Data, Unlimited ROI and EU Calls & Texts	18GB of EU Data, Unlimited ROI and EU Calls & Texts, USA / Canada Roaming 200 mins, 200 Texts & 2GB of Data, International 300 mins & 300 texts	29GB of EU Data, Unlimited ROI and EU Calls & Texts, USA / Canada Roaming 200 mins, 200 Texts & 2GB of Data, International unlimited minutes & texts	12 GB of EU data, Unlimited ROI and EU Calls & Texts, 3Plus rewards and discounts	16 GB of EU data, Unlimited ROI and EU Calls & Texts, 3Plus rewards and discounts, International - Unlimited calls and texts to the UK	18 GB of EU data, Unlimited ROI and EU Calls & Texts, 3Plus rewards and discounts, USA & Canada Roaming 200 mins, 200 texts & 2GB of Data

**48****Residential Packages**

A 4.40 48 offers two mobile telephony bundles available to residential users.<sup>986</sup> These bundles are described in Table A3.40 below:

**Table A3.40: 48 Residential - Mobile Telephony Bundles**

Package Title	20GB	40GB
Download Limit	20GB	40GB
Type		
Contract Length	30 day	30 day
Price incl. VAT p/m	€9.99	€14.99
Once-off charges		
Other services included	7GB international roaming, 300 call minutes, unlimited texts to Irish mobiles and landlines	9GB international roaming, 300 mobile and landline minutes, unlimited texts to Irish mobiles and landlines

<sup>986</sup> <https://48.ie/memberships>

## GoMo

### Residential Packages

A 4.41 GoMo has one sim-only package<sup>987</sup> available to residential users. The various components of this package are outlined in Table A3.41 below:

**Table A3.41: GoMo Residential – Pre-pay Bundle**

Package Title	GoMo
Download Limit	Unlimited
Type	4G
Contract Length	
Price incl. VAT p/m	€12.99
Once-off charges	
Other services included	Unlimited Calls, Unlimited Texts, 10GB data roaming

## Lycamobile

A 4.42 Lycamobile has a number of national and international packages available to residential consumers

### Residential Packages

A 4.43 Table A3.42 describes five of the national bundles<sup>988</sup> available to consumers:

**Table A3.42: Lycamobile – National Mobile Telephony Bundles**

Package Title	Ireland Plus	National S	All in One L	All in One M	Talk and Text S
Download Limit	25 GB	1GB	Unlimited	35 GB	
Type	4G	4G	4G	4G	4G
Contract Length	30 days	30 days	30 days	30 days	30 days
Price incl. VAT p/m	€15	€9	€25	€20	€9
Once-off charges					
Other services included	Unlimited calls, unlimited texts, EU Roaming, unlimited Poland and Romania Lycamobile calls	300 national minutes, 300 national texts, unlimited Lyca to Lyca calls, EU Roaming	Unlimited minutes, unlimited texts, 100 international minutes to 34 countries, EU Roaming	Unlimited minutes, unlimited texts, 100 international minutes to 34 countries, EU Roaming	450 National Mins, 450 National Text, Unlimited Lyca to Lyca Calls, unlimited Lyca to Lyca Texts, EU Roaming

A 4.44 There are seven ‘international’ bundles available to residential consumers.<sup>989</sup> These bundles are listed in Table A3.43 below:

<sup>987</sup> <https://gomo.ie/>

<sup>988</sup> <https://www.lycamobile.ie/en/bundles/#/national%20bundles>

<sup>989</sup> <https://www.lycamobile.ie/en/bundles/#/national%20bundles>

**Table A3.43: Lycamobile – International Mobile Telephony Bundles**

Package Title	Europe Plus	International Red	Asia Plus	Nigeria Plan	Pakistan Plus	Pakistan Plan M	Pakistan Plan S
Download Limit	5 GB	1GB	3GB	3GB	1GB		
Type							
Contract Length	30 days	30 days	30 days	30 days	30 days	30 days	30 days
Price incl. VAT p/m	€10	€12	€10	€12	€10	€20	€12
Other services included	300 International & National Minutes, Unlimited Poland & Romania Lycamobile Calls, EU Roaming	800 India and Europe minutes, Unlimited Poland & Romania Lycamobile Calls, EU Roaming	500 International & National Minutes, EU Roaming	100 Nigeria minutes, EU Roaming	EU Roaming, 300 Pakistan & National Minutes	1000 Pakistan Minutes	500 Pakistan Minutes

**Tesco****Residential Packages**

A 4.45 Tesco offers eight mobile telephony plans to residential users. Table A3.44 outlines the various Bill Pay options<sup>990</sup> available to users:

**Table A3.44: Tesco Residential – Bill Pay**

Package Title	Bill Pay Sim Only				Bill Pay Plans		
	€20 monthly	€25 monthly	€10 monthly	€30 Monthly	€20 monthly	€40 monthly	€50 monthly
Download Limit	20 GB	20 GB	1GB	15 GB	5 GB	20 GB	30 GB
Type	4G	4G	4G	4G	4G	4G	4G
Contract Length	12 months	30 days	30 days	24 months	24 months	24 months	25 months
Price incl. VAT p/m	€20	€25	€10	€30	€20	€40	€50
Once-off charges							
Other services included	Unlimited calls, 300 International minutes, Unlimited texts	Unlimited Calls, Unlimited Texts	100 minutes, 100 texts	Calls - 500 minutes, 500 texts	Calls - 250 minutes, 250 texts	Calls - 2000 minutes, 2000 texts, 200 international minutes	Unlimited minutes, unlimited texts, 300 international minutes

<sup>990</sup> <https://www.tescomobile.ie/bill-pay-plans.aspx> and <https://www.tescomobile.ie/sim-only-plans.aspx>

A 4.46 Tesco also has one prepay plan<sup>991</sup> available to users. This is described in Table A3.45 below:

**Table A3.45: Tesco Residential – Pre-pay**

Package Title	€15 top-up
Download Limit	15GB
Type	4G
Contract Length	28 days
Price incl. VAT p/m	€15
Once-off charges	
Other services included	Unlimited minutes, unlimited Tesco mobile texts, €5 bonus credit

## Vodafone

A 4.47 Vodafone offers a number of personal, as well as business telephony and broadband packages. As with Virgin Media, business packages are formulated based on a number of variables, thus only ‘out-of-the-box’ personal packages are outlined below.

### Personal

A 4.48 Table A3.46 below provides an overview of the Bill Pay - Sim Only plans<sup>992</sup> available from Vodafone:

**Table A3.46: Vodafone Personal - Bill Pay Plans**

Package Title	Red Complete Sim Only	RED Max SIM Only	Red Plus
Download Limit	20GB	50GB	5 GB
Internet Speed	4G+	4G+	4G
Contract Length	12 months	12 months	12 months
Price incl. VAT p/m	€35	€45	€20 (free when bought in conjunction with 2 other plans)
Once-off charges	n/a	n/a	n/a
Other services included	Unlimited calls and texts to any network, 100 International minutes and texts, Roaming across Europe, 3-month free trial of Secure Net Weekly	Unlimited any network calls and texts, 500 International minutes and texts, Roaming across Europe, 3-month free trial of Secure Net Weekly	Unlimited Vodafone to Vodafone calls, 60 any network minutes Unlimited any network texts, RedProtect

A 4.49 Described in Table A3.47 are four prepay bundles<sup>993</sup> available to individual consumers:

<sup>991</sup> <https://www.tescomobile.ie/prepay-plans.aspx>

<sup>992</sup> <https://n.vodafone.ie/shop/bill-pay-plans.html>

<sup>993</sup> <https://n.vodafone.ie/shop/pay-as-you-go-plans.html> and <https://n.vodafone.ie/shop/pay-as-you-go-plans/vodafone-x.html>



Table A3.47: Vodafone Residential - Pre Pay Plans

Package Title	Chat Extra	Smart Extra	Extra	Vodafone X Unlimited
<b>Download Limit</b>	1GB	6GB	8GB	Unlimited
<b>Internet Speed</b>	4G+	4G+	4G+	4G
<b>Contract Length</b>	n/a	n/a	n/a	n/a
<b>Price incl. VAT p/m</b>	€20	€20	€30	€20
<b>Once-off charges</b>	n/a	n/a	n/a	n/a
<b>Other services included</b>	Unlimited any network calls and texts, Data Rollover Roaming across Europe	Unlimited Vodafone calls and texts, Weekly rewards Data Rollover 100 Any network minutes & texts Roaming across Europe	Unlimited any network calls and texts, Data Rollover 100 International minutes Roaming across Europe	100 and network texts and unlimited minutes from Fridays until Sundays. Includes roaming across Europe

# Annex: 5 Retail Price Sensitivity

## Introduction

- A 5.1 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 4<sup>994</sup> and 5<sup>995</sup> (in context of indirect constraints) of this Consultation.
- A 5.2 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 Consultation.
- A 5.3 Residential and SME respondents' sensitivities to cost were examined separately, with four SSNIP questions asked in each case.<sup>996</sup> 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 5.4 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.

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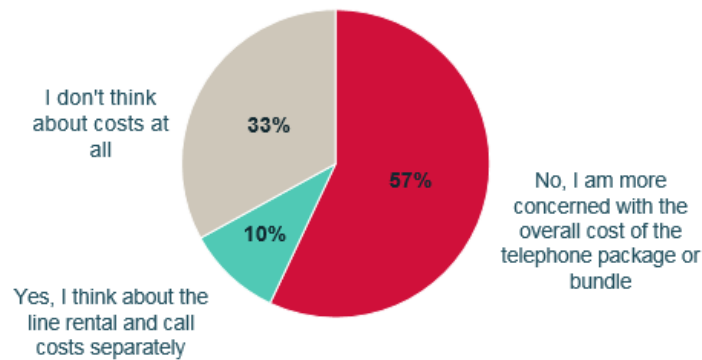
<sup>994</sup> See paragraph 4.122 and subsequent paragraphs.

<sup>995</sup> See paragraphs 5.173 to 5.290.

<sup>996</sup> 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.

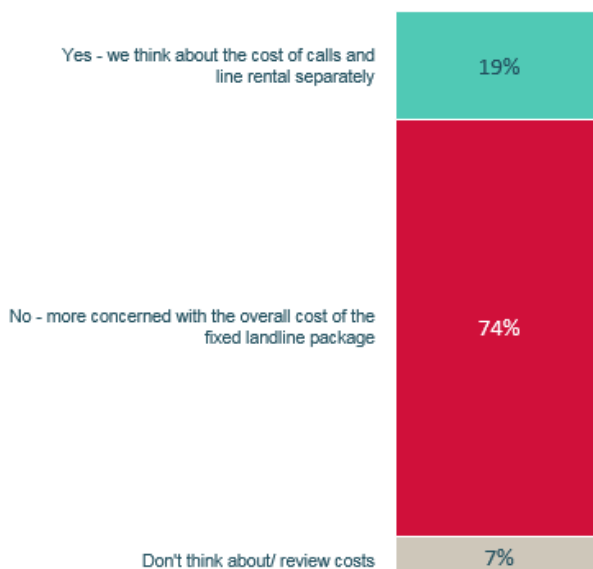
A 5.5 Figure A4.1 below suggests that the majority of residential respondents (57%) think of the overall cost of the RFTS package, rather than the costs of the components separately, 10% stated that they do monitor the price of RFVA and RFVC separately, while the remaining 33% did not think about costs at all.

**Figure A4.1: Consumer perspective when assessing the costs of line rental and telephone calls<sup>997</sup>**



A 5.6 Further to the above, Figure A4.2 shows that SME respondents also mostly thought about the overall cost of the RFTS package, and not the cost of individual components.

**Figure A4.2: SME perspective when assessing costs of line rental & telephone calls<sup>998</sup>**



<sup>997</sup> 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?”

<sup>998</sup> 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?”

A 5.7 ComReg further summarises the responses provided in the 2019 Market Research survey by the above cohorts of residential<sup>999</sup> and SME respondents.<sup>1000</sup> 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 5.8 Residential respondents with a fixed line telephone<sup>1001</sup> 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
- (b) purchase their fixed landline service as part of a broader bundle from their SP.

A 5.9 Results, in the case of both scenarios, are detailed below.

### Respondents who purchase Standalone RFTS

A 5.10 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.<sup>1002</sup>

A 5.11 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.<sup>1003</sup> 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 A4.3 below.<sup>1004</sup>

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<sup>999</sup> 2019 Residential Market Research slides 32-44.

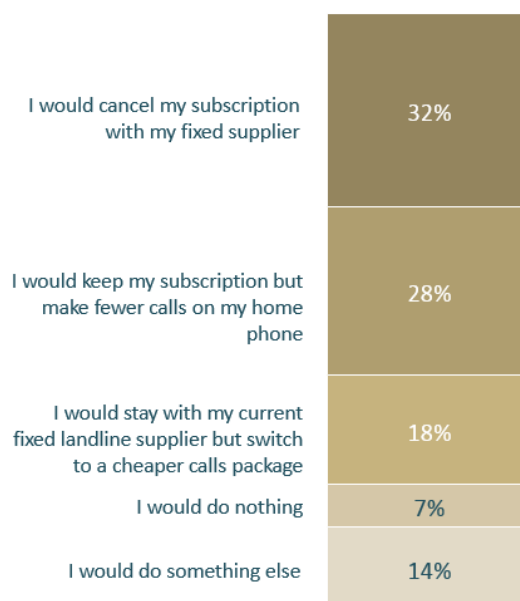
<sup>1000</sup> 2019 SME Market Research slides 37-51.

<sup>1001</sup> 2019 Residential Market Research slides 90-95

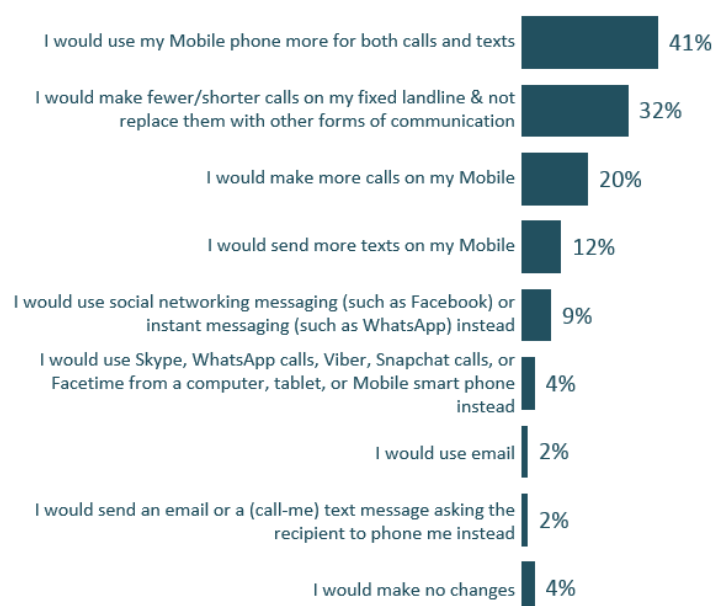
<sup>1002</sup> 2019 Market Research – Slide 90. 171 respondents, taken as a percentage of overall number surveyed, and as a percentage of total respondents with a Standalone Landline not as part of a bundle.

<sup>1003</sup> 2019 Residential Market Research, Slide 90.

<sup>1004</sup> 2019 Residential Market Research, Slide 91.

**Figure A4.3:** Reaction to a €4 increase in the total cost of bill

- A 5.12 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 5.13 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 A4.4 below outlines these changes.

**Figure A4.4: Behavioural change if staying with current SP**

A 5.14 As shown in Figure A4.4 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.

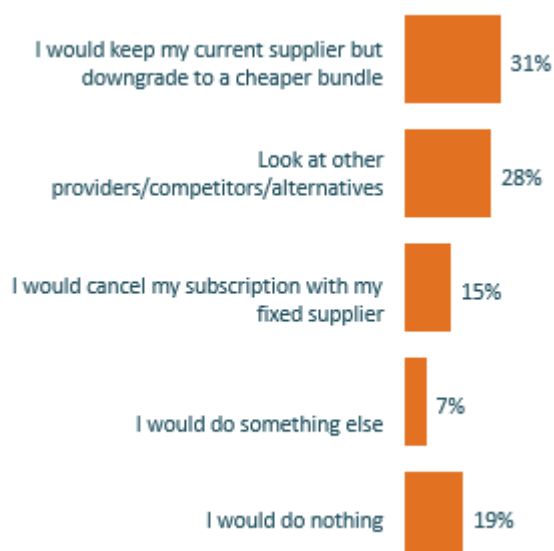
### Respondents who purchase RFTS in a bundle

A 5.15 Of the 979 respondents who own a landline, 77% purchase their landline as part of a bundle.<sup>1005</sup>

A 5.16 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 A4.5 below.

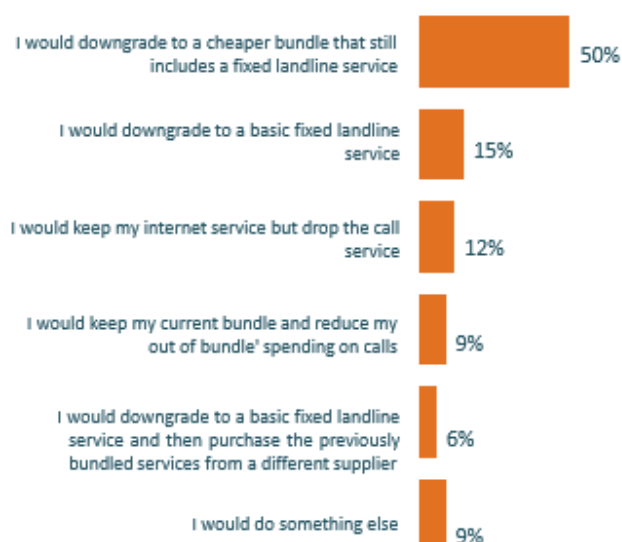
<sup>1005</sup> 2019 Residential Market Research, Slide 108.

**Figure A4.5: Reaction to a €2 increase in the total cost of bill<sup>1006</sup>**



A 5.17 As outlined in Figure A4.6, 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.<sup>1007</sup> However, 15% of respondents said they would downgrade to a basic standalone fixed landline service.

**Figure A4.6: Respondents who do not purchase RFTS in a bundle - change in purchasing behaviour when remaining**



<sup>1006</sup> 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.

<sup>1007</sup> 2019 Residential Market Research, Slide 95.



# Annex: 6 Market Definition: Assessing Potential Substitutes

## Approach to Assessing Potential Substitutes for Market Definition purposes

- A 6.1 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 6.2 These analytical concepts are briefly described below.

### Demand-Side Substitution

- A 6.3 Demand-side substitution measures the extent to which a purchaser of services would, in response to the levying by a HM of a SSNIP<sup>1008</sup> 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 6.4 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”.*<sup>1009</sup>

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<sup>1008</sup> Typically, a long-term ‘non-transitory’ price increase in the range of 5% to 10%.

<sup>1009</sup> See paragraph 15 of the Notice on Market Definition.

- A 6.5 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 6.6 In this regard, the SMP Guidelines state<sup>1010</sup> 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 6.7 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”.*<sup>1011</sup>

### Supply-Side Substitution

- A 6.8 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.<sup>1012</sup>
- A 6.9 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 6.10 In such circumstances, the Notice on Market Definition indicates that supply-side substitutes can be included within the product market:<sup>1013</sup>

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<sup>1010</sup>SMP Guidelines, paragraph 33.

<sup>1011</sup> Notice on Market Definition, paragraph 2.

<sup>1012</sup> See paragraph 41 of the SMP Guidelines.

<sup>1013</sup> 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 term<sup>1014</sup> 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 6.11 The Notice on Market Definition also notes that:<sup>1015</sup>

*“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 case, the effects of supply-side substitutability and other forms of potential competition would then be examined at a later stage.”*

A 6.12 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 6.13 The SMP Guidelines also suggest that, when defining a relevant market, mere hypothetical supply-side substitution is not sufficient.<sup>1016</sup>

*“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 6.14 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 2014 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;

<sup>1014</sup> That is, such a period that does not entail a significant adjustment of existing tangible and intangible assets.

<sup>1015</sup> See paragraph 23 of the Notice on Market Definition.

<sup>1016</sup> 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 6.15 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.

# Annex: 7 Critical Loss Test for Indirect Constraints

## Introduction

- A 7.1 In this Annex, ComReg outlines the computation of the Critical Loss Test ('CLT') set out in paragraphs 5.202 to 5.206 above. The CLT provides further evidence in assessing the extent to which indirect retail constraints might impact upon the definition of 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 (in this case, the pass-through of a wholesale SSNIP) to make the increase in price of the focal product unprofitable.
- A 7.2 The CLT utilises data on prices of RFTS purchased both on a standalone basis, and as part of a bundle (as outlined in A 7.12 to A 7.15), FACO prices and costs, and subscriber numbers. These data, alongside other relevant information, support the overall preliminary conclusions set out in this Consultation.
- A 7.3 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 7.4 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 7.5 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 7.6 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 7.7 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  $\pi$  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 7.8 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  $\alpha$  is the ratio of marginal cost to price.

A 7.9 Alternatively, the critical loss can be computed as:<sup>1017</sup>

$$\frac{s}{(1 - \alpha) + s}$$

or

$$\frac{s}{m + s}$$

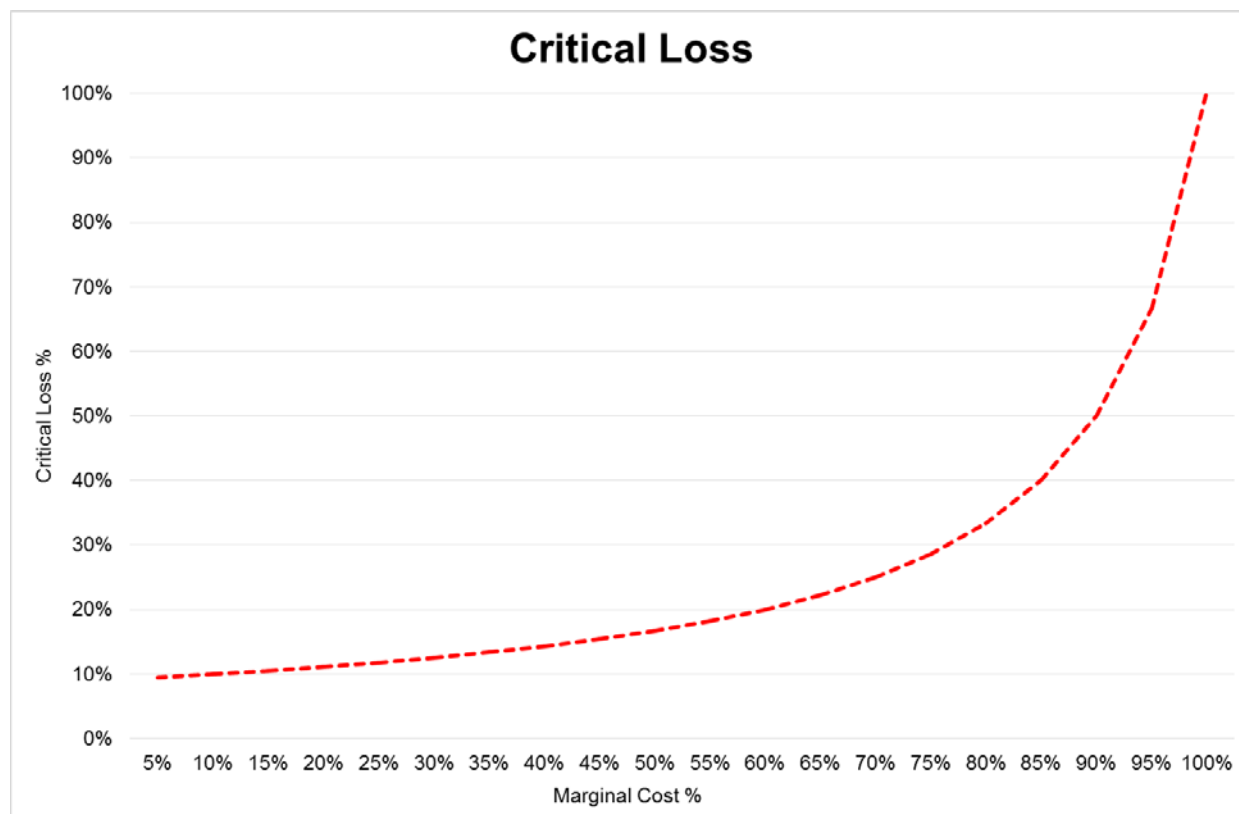
Where  $m = (1 - \alpha)$  i.e. the margin as opposed to the ratio of marginal cost to price.

A 7.10 Figure A6.1 below plots the critical loss if a number of assumptions for  $\alpha$  are made (i.e. that it is as low as 5%, or as high as 100%). If  $\alpha$  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.

<sup>1017</sup>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 7.11 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 A6.1: Critical Loss with assumed values for  $\alpha$**



## Price and cost data

A 7.12 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 indirect 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 7.13 The relevant RFTS prices are outlined in detail in Annex 3 by SP and type of package. In Figure A6.2 and Figure A6.3 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.<sup>1018</sup>

A 7.14 For bundled fixed voice packages (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:

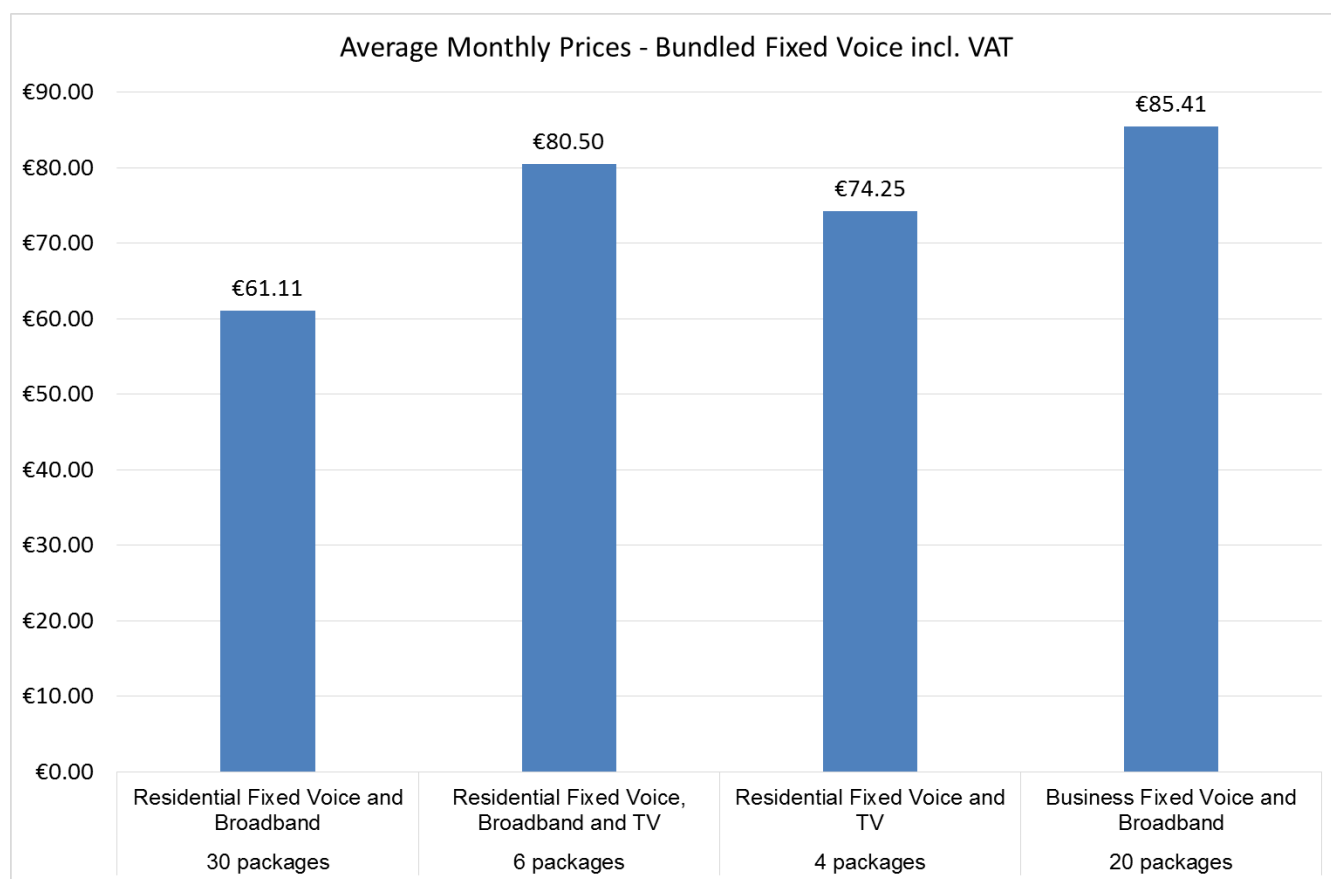
**Figure A6.2: Average Monthly Prices – Standalone Fixed Voice**



**Source: ComReg calculations based on tariff data from SP websites, accessed June 2019**

<sup>1018</sup> See 2019 Market Research in Annex: 1.

**Figure A6.3: Average Monthly Prices – Bundled Fixed Voice**



Source: ComReg calculations based on tariff data from SP websites, accessed June 2019

A 7.15 Monthly wholesale line rental charges are outlined in Table A6.1 below, for PSTN and ISDN BRA, FRA and PRA respectively, as set out in the open eir RIO:

**Table A6.1: FACO Costs**

WLR Service	Monthly Wholesale Rental Charge
PSTN	€16.59
ISDN BRA	€27.95
ISDN FRA	€143.18
ISDN PRA	€238.25

## FACO Market CLT

- A 7.16 ComReg has used Eircom's Historical Cost financial statements for June 2019 to estimate Eircom's margins for FACO products, i.e.  $m=(1-\alpha)$ , and has calculated critical loss estimates accordingly.<sup>1019</sup> 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 7.17 The estimates in Table A6.2 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 7.18 Table A6.2 estimates the critical loss for SB-WLR at 11-12% for a 5% SSNIP, and 18-22% 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 18%. 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 A6.2: Estimates of Critical Loss for SSNIP of FACO [REDACTED]**

Inputs	5% SSNIP	10% SSNIP
FACO	€000	€000
Eircom wholesale revenue	██████	██████
Eircom wholesale return	██████	██████
Gross margin	████	████
SSNIP	██	██
Break-even critical loss	████	████
Profit-maximising critical loss	████	████

<sup>1019</sup> [https://www.eir.ie/opencms/export/sites/default/.content/pdf/regulatoryinformation/hca\\_fy\\_1819.pdf](https://www.eir.ie/opencms/export/sites/default/.content/pdf/regulatoryinformation/hca_fy_1819.pdf)

## Annex: 8 Other Criteria for SMP Assessment

A 8.1 As noted in paragraph 7.294, 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 8.2 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 8.3 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 8.4 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 8.5 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 8.6 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: 9 FACO Geographic Market Assessment

## Introduction

- A 9.1 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 9.3 to A 9.39);
  - (b) Assessment of differences in competitive conditions in the Relevant FACO Geographic Markets (paragraphs A 9.40 to A 9.52); and
  - (c) Overall Preliminary Conclusion on Relevant FACO Geographic Market Assessment (paragraphs A 9.53 to A 9.55).
- A 9.2 This Annex should be read in conjunction with the analysis set out in Section 5 of the Consultation.

## Framework for Relevant FACO Geographic Market Assessment

- A 9.3 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 NGA broadband inputs to provide products falling into the Relevant FACO Product Markets (discussed in paragraphs A 9.5 to A 9.33 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 5.407 to 5.425 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 9.34 to A 9.39 below).
- A 9.4 The rationale for the selection of this assessment framework is discussed below.

## The Relevant Geographic Unit for assessment of competitive conditions in the FACO Market

- A 9.5 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 9.6 ComReg has considered the appropriate geographic unit to be employed in undertaking the Relevant FACO Geographic Market assessment.
- A 9.7 In forming its preliminary view, ComReg has taken utmost account of the 2014 Recommendation and the 2014 BEREC Common Position, as well as having regard to EC comments letters on NRA market analyses. The 2014 Explanatory Note<sup>1020</sup> 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 9.8 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 9.9 Having regard to the above, ComReg's preliminary 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 9.10 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.

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<sup>1020</sup> At page 14.

A 9.11 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 NGA 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 A9.1 below illustrates Eircom Exchange Area boundaries, of which there are 1,203:

**Figure A9.1: Eircom Exchange Area boundaries for FNA network [REDACTED]**





A 9.12 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.<sup>1021</sup> 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 9.7 and A 9.8 above.

### Accounting for coverage of NGA broadband networks

A 9.13 In this section, ComReg explains how it accounts for the presence and competitive impact of wholesale NGA 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 9.14 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 (to the extent that it has been built). ComReg considered whether enet's network should be taken into account. enet's FTTP network<sup>1022</sup> currently covers circa [X] 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 NGA broadband networks

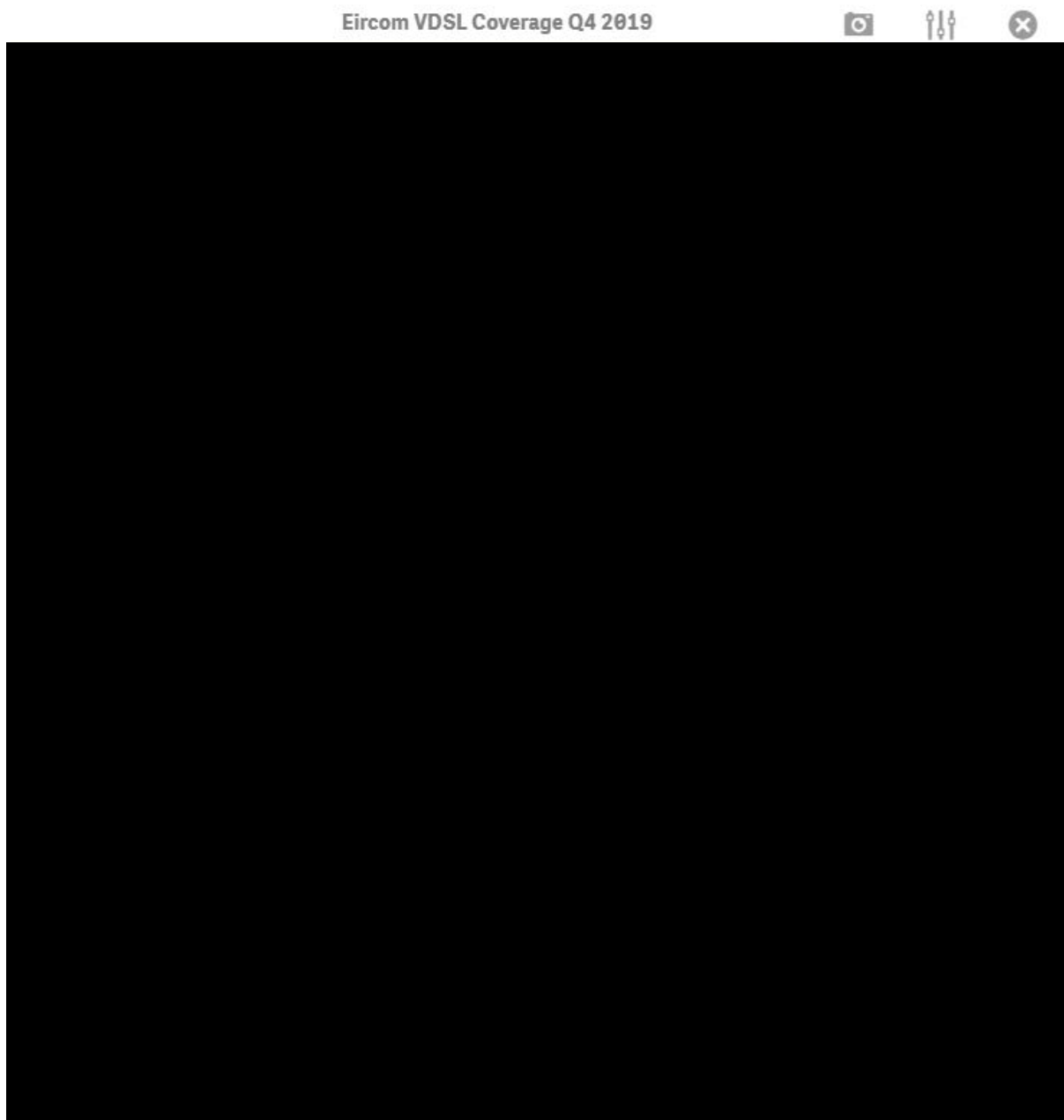
A 9.15 Figure A9.2 below illustrates Eircom VDSL coverage which amounted to [X] premises as of Q4 2019. Eircom has begun upgrading some of its VDSL network to full FTTP in urban areas in the State.<sup>1023</sup>

<sup>1021</sup> 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.

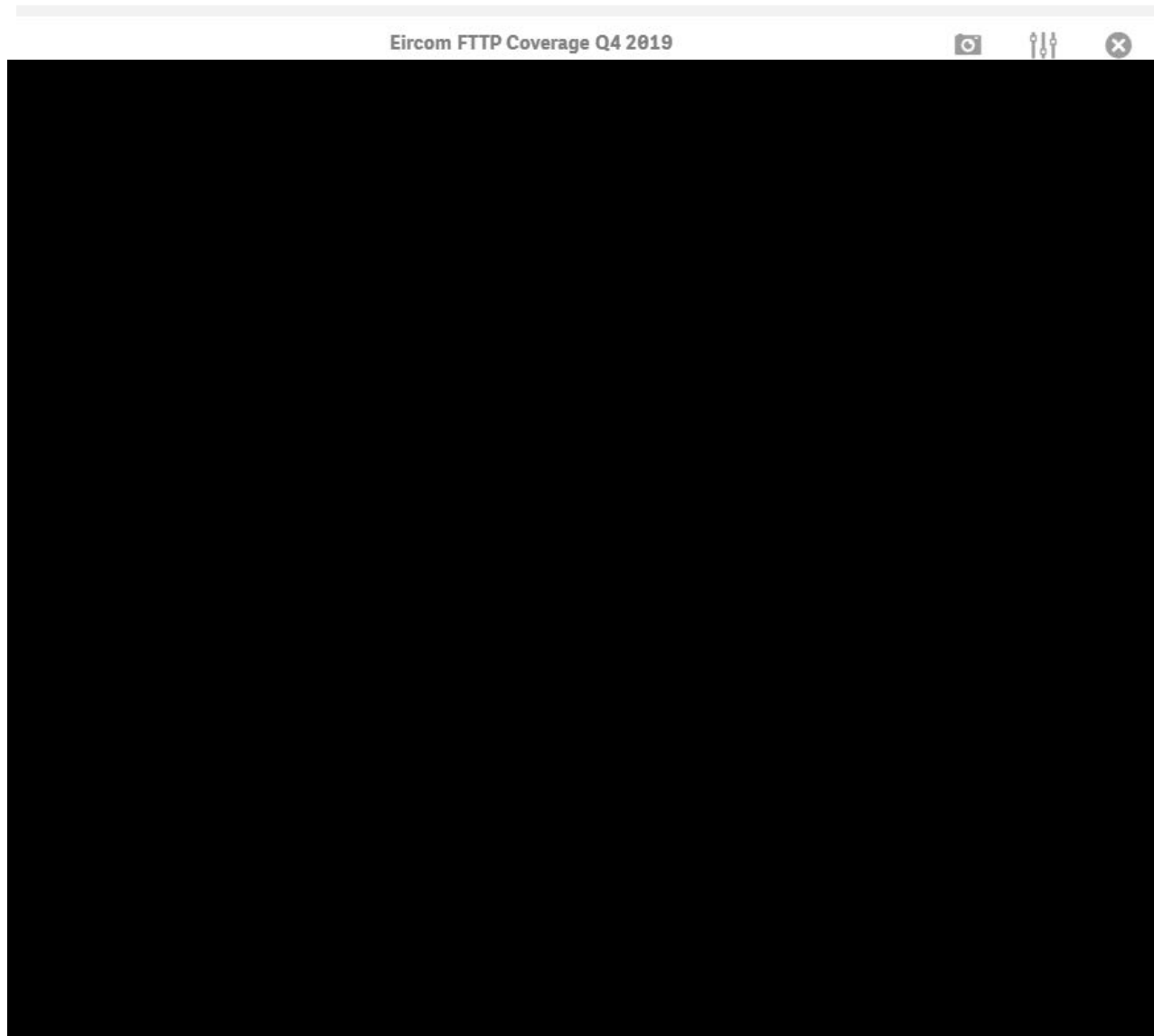
<sup>1022</sup> <https://www.enet.ie/coverage.html>

<sup>1023</sup> <https://www.eir.ie/pressroom/eir-launches-0.5-billion-fixed-network-investment-programme/>

Figure A9.2: Eircom VDSL Coverage as of Q4 2019 [REDACTED]



A 9.16 Figure A9.3 below illustrates Eircom's FTTP network which covered [REDACTED] premises, as of Q4 2019:

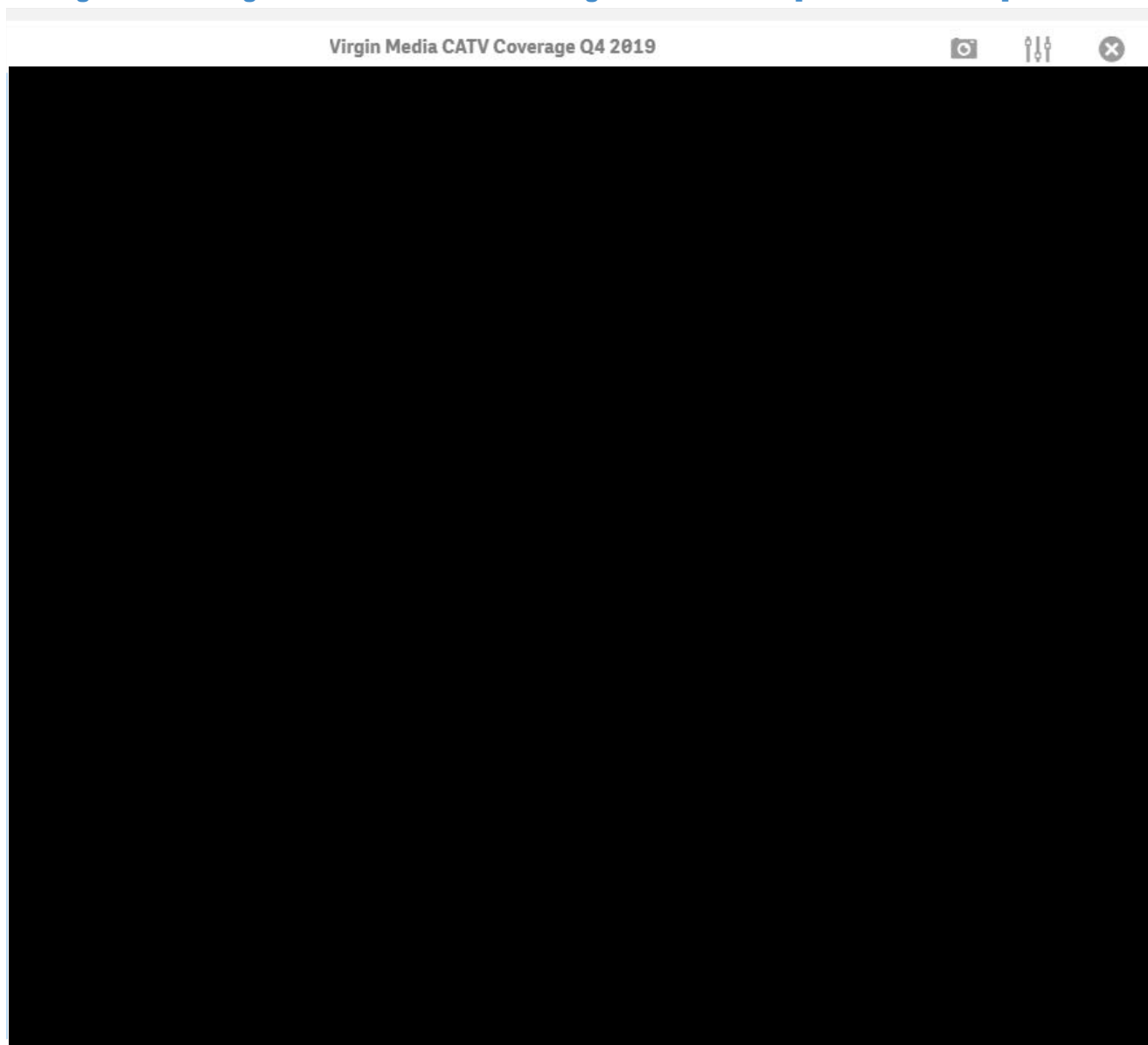
**Figure A9.3: Eircom FTTP Coverage as of Q4 2019 [REDACTED]**

### **Virgin Media**

- A 9.17 Virgin Media's CATV network does not necessarily align with Eircom's network in terms either of network topology or precise coverage. Virgin Media's network covers 939,900 premises (c.39% of total premises nationally), largely homes, with approximately 335,100 RFTS subscribers on its network as at Q4 2019.<sup>1024</sup>
- A 9.18 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 9.19 As shown in Figure A9.4, the Virgin Media network footprint is concentrated in urban areas, in particular, around Dublin, Galway, Limerick and Cork:

<sup>1024</sup> Liberty Global Q4 2019 results: <https://2zn23x1nwzzj494slw48aylw-wpengine.netdna-ssl.com/wp-content/uploads/2020/02/LG-Q4-2019-Press-Release.pdf>

**Figure A9.4: Virgin Media's Network Coverage as of Q4 2019 [REDACTED]**



A 9.20 The Virgin Media network has approximately [REDACTED] nodes, with each node capable of serving approximately [REDACTED]<sup>1025</sup> premises, on average. By comparison, an average Eircom EA within the Virgin Media network footprint contains approximately [REDACTED] connected lines and therefore has a significantly higher density of premises per node/EA.<sup>1026</sup>

### **SIRO**

A 9.21 As set out in Section 3 of this Consultation, SIRO is in the process of rolling out an FTTP network in certain locations in the State. SIRO reports that its FTTP network passed 320,000 premises as of April 2020.<sup>1027</sup>

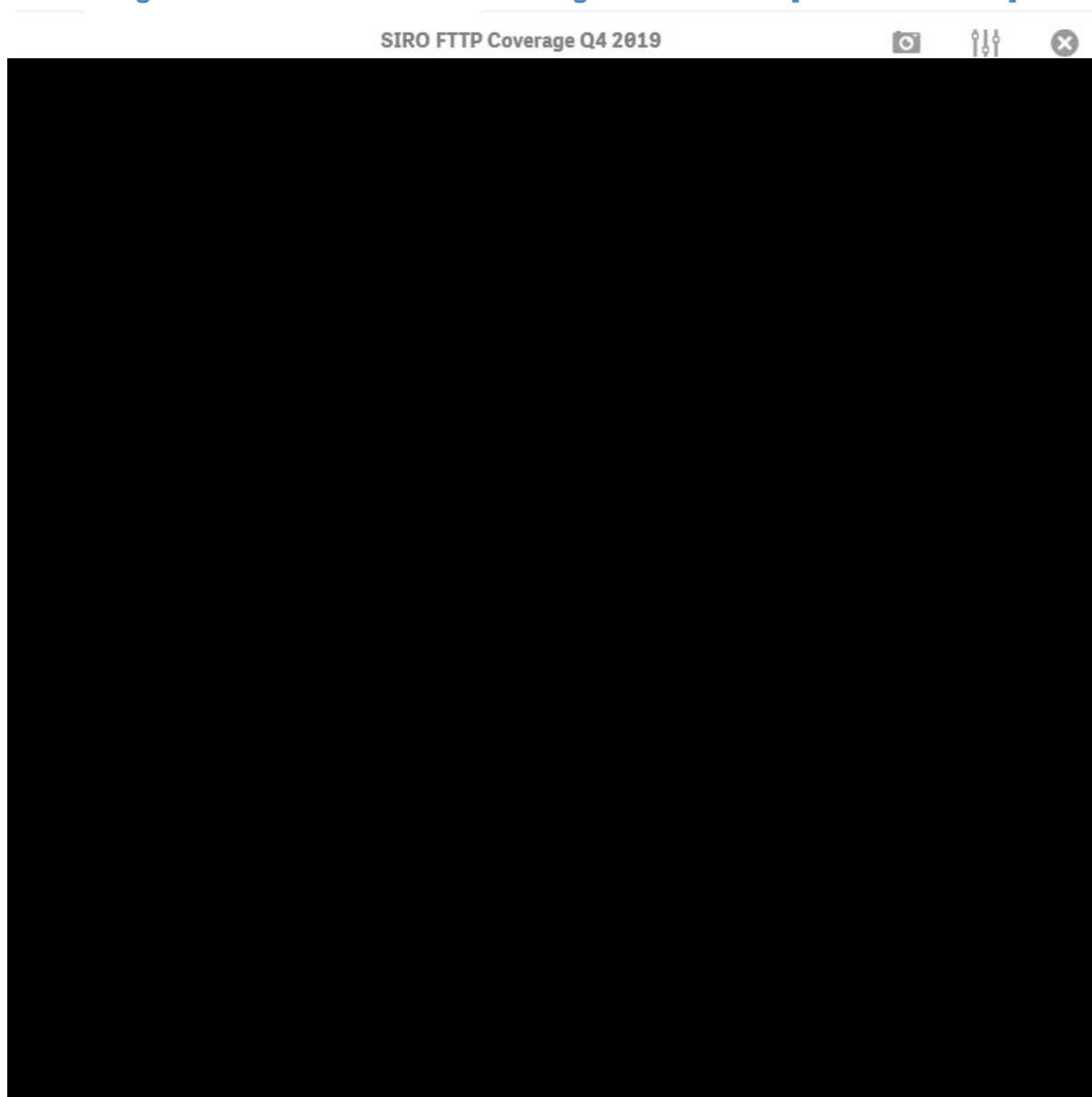
<sup>1025</sup> Fewer than 500 premises.

<sup>1026</sup> These connected lines provide a range of services, including RFTS and broadband.

<sup>1027</sup> [www.siro.ie](http://www.siro.ie). Data collected by ComReg suggest that the number of premises passed by SIRO as of Q4 2019 was [REDACTED].

A 9.22 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.<sup>1028</sup> As shown in Table A9.5, SIRO is present at [REDACTED] EAs, with varying levels of premises coverage within these. Figure A9.5 below shows a map of SIRO's FTTP network:

**Figure A9.5: SIRO's Network Coverage as of Q4 2019 [REDACTED]**



A 9.23 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.

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<sup>1028</sup> [www.siro.ie](http://www.siro.ie)

A 9.24 On the basis of its analysis, ComReg therefore concluded on a preliminary basis 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 9.25 Table A8.1 below outlines proposed NBI coverage in the IA over the 7-year lifespan of the project. ComReg notes there are 535,000 premises in the NBI rollout,<sup>1029</sup> but only [REDACTED] 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 A9.1: Premises to be covered by NBI as of Q4 2019<sup>1030</sup> [REDACTED]**

<b>NBP</b>	<b>Premises</b>
2020: Year 1	[REDACTED]
2021: Year 2	[REDACTED]
2022: Year 3	[REDACTED]
2023: Year 4	[REDACTED]
2024: Year 5	[REDACTED]
2025: Year 6	[REDACTED]
2026: Year 7	[REDACTED]
<b>Total</b>	[REDACTED]

A 9.26 Table A9.2 summarises the coverage of each network as of Q4 2019:

<sup>1029</sup> <https://nbi.ie/rollout-plan/> ComReg notes that the NBI rollout is based on ‘Delivery Points’ as defined by Eircode.

<sup>1030</sup> Initial rollout of NBI network was Q2 2020, with Year 1 ending at Q4 2020.

**Table A9.2: Independent network coverage as of Q4 2019 [PARTIALLY REDACTED]**

	Coverage (premises passed)	% Total premises
<b>Total Premises (postal addresses)</b> <sup>1031</sup>		
Eircom FNA		
Eircom VDSL		
Eircom FTTP		
SIRO FTTP		
Virgin Media CATV	939,900 <sup>1032</sup>	
NBI FTTP (2020)		

### Accounting for coverage of SPs using wholesale NGA broadband inputs

- A 9.27 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 9.28 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, *inter alia*, 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 9.29 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. These EAs cover approximately 1.5 million of the 2.4 million premises in the State.<sup>1033</sup> As of Q4 2019, Eircom supplies Access Seekers with approximately<sup>1034</sup> 222,706 VUA lines, and 134,429 VDSL Bitstream lines.

<sup>1031</sup> 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>.

<sup>1032</sup> Liberty Global Full Year 2019 Results, page 14. <https://2zn23x1nwzzj494slw48aylw-wpengine.netdna-ssl.com/wp-content/uploads/2020/02/LG-Q4-2019-Press-Release.pdf>

<sup>1033</sup> As of Q4 2019, BT had unbundled exchanges capable of serving up to [REDACTED] premises. Vodafone has a local or remote presence at [REDACTED] premises.

<sup>1034</sup> ComReg QKDR Q4 2019, page 39.



- A 9.30 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 2019, SIRO provided [redacted] <sup>1035</sup> VULA subscriptions, of which the significant majority [redacted] were provided to Vodafone (as noted above, Vodafone is one party to the JV that owns SIRO).
- A 9.31 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 preliminary 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.
- A 9.32 ComReg's preliminary 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, <sup>1036</sup> and its Unified Gateway.

#### **Preliminary Conclusion on Relevant Unit for Geographic Assessment**

- A 9.33 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.

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<sup>1035</sup> Less than 60,000.

<sup>1036</sup> 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.

## Analysis of Geographic Criterion

A 9.34 As set out in detail at Section 5 above,<sup>1037</sup> ComReg carried out its analysis of the boundaries of the Relevant FACO Geographic Markets applying a determinative criterion, the presence of wholesale NGA 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. This, the coverage threshold, may be satisfied where a single wholesale NGA broadband network is capable of delivering Managed VoIP at a minimum of 80% of premises in an EA, or where this threshold is satisfied by the non-overlapping coverage of two or more wholesale NGA broadband networks. Table A9.3 below provides a breakdown of the number of EAs by the number of SPs present. 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):

**Table A9.3: Number of SPs by Number of EAs and Premises Covered, Q4 2019**

Number of SPs	No. of Exchanges (N = 1,203)	Premises Coverage
1	75	25,957
2	71	29,658
3	161	73,262
4	174	120,419
5	574	823,770
6	148	1,166,321

A 9.35 Table A9.4 below shows the EA presence by the largest RFTS SPs, including:

- (a) BT (which is also active as a supplier of wholesale products to other SPs), purchases Eircom (WLA and WCA) and SIRO (WLA) inputs (predominantly to supply Managed VoIP to Sky);
- (b) Digiweb purchases Eircom (WLA and WCA) and SIRO (WLA) inputs;
- (c) Eircom operates FNA and NG broadband (VDSL and FTTP) networks;
- (d) Pure Telecom purchases WCA from Eircom;
- (e) Virgin Media operates its own CATV network; and
- (f) Vodafone purchases Eircom (WLA and WCA) and SIRO (WLA) inputs.

<sup>1037</sup> See section 5.2.9 above.

**Table A9.4: EA presence and NG broadband coverage by largest RFTS SPs, Q4 2019**  
 [REDACTED]

SP	Premises Coverage as % of Total National Premises	Eircom EAs where SP is present
BT/Sky	[REDACTED]	[REDACTED]
Digiweb	[REDACTED]	[REDACTED]
Eircom	[REDACTED]	[REDACTED]
Pure Telecom	[REDACTED]	[REDACTED]
Virgin Media	[REDACTED]	[REDACTED]
Vodafone	[REDACTED]	[REDACTED]

A 9.36 Table A8.4 shows the level of coverage of each SP in terms of 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 and the extent of NG broadband availability within the EA. 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 2019, has passed [REDACTED] 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 A9.5: SIRO Network Coverage by EA Q4 2019** [REDACTED]

SIRO Network Coverage	< 25%	25-50%	50-75%	>75%
Number of EAs	[REDACTED] 1038	[REDACTED] 1039	[REDACTED] 1040	[REDACTED] 1041

A 9.37 Table A9.6 below outlines EA presence by the largest RFTS Access Seekers, including EAs where they purchase from Eircom and SIRO.

<sup>1038</sup> Less than 40.

<sup>1039</sup> Less than 30.

<sup>1040</sup> Less than 50.

<sup>1041</sup> Less than 15.

**Table A9.6: EA presence by wholesale NG broadband Access Seeker SPs, Q4 2019**  
 [REDACTED]

	Eircom WLA	Eircom WCA	SIRO WLA	Total EAs where SP present <sup>1042</sup>
<b>BT/Sky</b>	■	■	■	■
<b>Digiweb</b>		■	■	■
<b>Pure Telecom</b>		■	■	■
<b>Vodafone</b>	■	■	■	■
<b>Total Eircom EAs</b>	<b>1,203</b>			

A 9.38 For the purposes of the geographic market assessment, in applying the 80% NGA broadband coverage criterion, as outlined at paragraph A 9.34, the percentage coverage is derived by dividing total available lines in an EA by the total number of premises in an EA.

### Preliminary Conclusion on Analysis of Geographic Criteria

A 9.39 Having regard to the above analysis, ComReg applies the 80% wholesale NGA 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 9.34 above.

## Assessment of Differences in Competitive Conditions in the Relevant FACO Markets using the Geographic Criteria

A 9.40 ComReg has obtained information from SPs relating to:

- (a) Network maps and location of active voice/NG broadband lines; and
- (b) Network coverage.

A 9.41 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 NGA broadband criterion in paragraph A 9.34 above to each EA in the State.

A 9.42 When looking at NGA broadband coverage, ComReg looks at the number of unique premises with NGA 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 NGA broadband network. Table A9.7 shows the overlap between the three NGA broadband networks that provide wholesale access to Access Seeker SPs.

<sup>1042</sup> 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.

**Table A9.7: Overlap of NGA broadband networks Q4 2019** [REDACTED]

Network	Total premises connected	Overlap with Eircom VDSL	Overlap with Eircom FTTP	Overlap with SIRO FTTP	Net premises
Eircom VDSL	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Eircom FTTP	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
SIRO FTTP	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Net NG broadband	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

A 9.43 The data set out at Table A9.8 below are suggestive that there are likely to be differing competitive conditions across two separate geographic areas – as evidence from differences in coverage of NGA 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 NGA 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 (459 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 (744 EAs), 128 EAs have only 2 SPs present and only 12 having 6 SPs present.

A 9.44 As shown in the table below, the Urban FACO market, comprising those EAs with at least 80% NGA broadband availability for Access Seekers, includes 74% of premises, 80% of total RFTS lines (including all SPs in the market and all platforms (FNA and Managed VoIP), and 77% of FNA FACO lines (i.e. SB-WLR and WLW).

**Table A9.8: Differences in competitive conditions by EA, applying 80% coverage criterion, Q4 2019**

FACO Market	No. of EAs	Premises in EAs	% Total premises	Total RFTS lines in EAs	% Total RFTS lines	Total FACO (SB-WLR/WLV) lines in EAs	% Total FACO (SB-WLR/WLV) lines
Urban	459	1,652,480	74%	1,174,426	80%	360,899	77%
Regional	744	586,907	26%	299,981	20%	107,822	23%
<b>Total</b>	<b>1,203</b>	<b>2,239,387</b>	<b>100%</b>	<b>1,474,407</b>	<b>100%</b>	<b>468,721</b>	<b>100%</b>

A 9.45 Table A9.9 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 they have WLA/WCA access, such FACO lines (360,899 lines in the Urban FACO market from Table A9.8 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 NGA 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 A9.9: Market shares in the Urban and Regional FACO Markets, absent FACO regulation, Q4 2019**

	National RFTS Market Share, <u>with regulation</u> in the FACO Market <sup>1043</sup>	Market Shares Urban FACO Market	Market Shares Regional FACO Market
<b>BT</b>	14.6%	15.4%	11.3%
<b>Digiweb</b>	1.0%	1.0%	0.8%
<b>Eircom</b>	43.2%	44.6%	51.5%
<b>Pure Telecom</b>	3.4%	2.4%	7.3%
<b>Virgin Media</b>	21.4%	24.6%	9.2%
<b>Vodafone</b>	12.6%	12.0%	14.7%
<b>OAOs</b>	3.8%	0.0%	5.2%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

A 9.46 Table A9.10 below shows the breakdown of NGA 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.

<sup>1043</sup> 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.

**Table A9.10: Urban and Regional FACO market EAs and breakdown of NGA broadband networks, Q4 2019 [REDACTED]**

FACO Market	No. of EAs	Premises in NBP IA	Premises in Eircom 300k FTTP	SIRO FTTP premises	Eircom VDSL premises
Urban	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Regional	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Total</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

A 9.47 Based on ComReg's assessment, ComReg therefore groups EAs into two Relevant FACO Geographic Market areas:

- (a) The Urban FACO Markets: the 459 EAs where the relevant criterion has been met; and
- (b) The Regional FACO Markets: the 744 EAs where the relevant criterion has not been met.

A 9.48 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 9.49 The list of EA codes that fall into the Urban FACO Markets and Regional FACO Markets are set out in Annex: 10 of this Consultation.



## Premises without 80% NG broadband

A 9.50 In determining the Relevant FACO Geographic Market areas, ComReg has considered the distribution of NG broadband coverage across all 1,203 EAs. Within the 459 EAs that form the Urban FACO market, there will be some premises that do not have NG broadband coverage, as the criterion requires that at least 80% of premises in an EA have NG broadband coverage. This implies that a maximum of 20% of premises of EAs in the Urban FACO Markets may not have NG broadband coverage. In some cases, EAs in densely populated urban areas have close to 100% NG broadband 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%) NG broadband coverage, this means that some FACO lines (SB-WLR/WLV) may not be contestable in the sense that, absent regulation, Access Seekers cannot readily serve these customers with Managed VoIP-based RFTS over NG broadband until it becomes available in the future (from the NBI or expansion by Eircom and/or SIRO). The extent of these non-contestable lines is shown in Table A9.11, 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 A9.11: Urban and Regional FACO markets NG broadband coverage, Q4 2019**  
[REDACTED]

FACO Market	No. of EAs	Number of premises	Total FACO (SB-WLR / WLW) lines	FACO lines with between no NG broadband coverage (estimate)
Urban	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Regional	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Total</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

A 9.51 Table A9.12 shows the distribution of 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, 64 EAs have between 81% and 85% NG broadband coverage, with a total of 104,431 premises in these EAs, and accordingly, 17,852 without NG broadband availability. If the EA had 100% NG broadband coverage, then all of its 104,431 premises would have NG broadband. It follows that in these EAs, 3,587 FACO lines do not have NG broadband available such that it would permit Access Seeker SPs to provide Managed VoIP-based RFTS.

**Table A9.12: Distribution of NG broadband coverage in the Urban FACO market, Q4 2019 [REDACTED]**

Distribution of >80% coverage among Urban EAs	No. of EAs	Total premises in EAs	No. of Premises in EAs not having NG broadband coverage	Total FACO (SB-WLR /WLV) lines in EAs	FACO lines without NG broadband coverage (estimate)
80%	█	███	███	███	███
81% to 85%	█	███	███	███	███
86% to 90%	█	███	███	███	███
91% to 95%	█	███	███	███	███
95% to 99%	█	███	███	███	███
100%	█	███	█	███	█
<b>Total</b>	█	███	███	███	███

A 9.52 The distribution of NG broadband coverage for the Regional FACO market is given in Table A9.13 below. A low number of premises have up to 30% NG broadband coverage, with higher numbers having 60% to 70% NG broadband coverage.

**Table A9.13: Distribution of NG broadband coverage in the Regional FACO market, Q4 2019 [REDACTED]**

Distribution of <80% coverage among Regional EAs	No. of EAs	Total premises in EAs	Premises without NG broadband coverage	Total FACO (SB-WLR /WLV) lines in EAs
0-30%	█	███	███	███
31-40%	█	███	███	███
41-50%	█	███	███	███
51-60%	█	███	███	███
61-70%	█	███	███	███
71-79%	█	███	███	███
<b>Total</b>	█	███	███	███

## Overall Preliminary Conclusion on FACO Geographic Market Assessment

- A 9.53 Having regard to the analysis above, ComReg's overall preliminary 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 9.54 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 9.55 ComReg defines two separate Relevant FACO Geographic Markets, namely:
- (a) The **Urban FACO Geographic Markets**, being those 459 EAs where the coverage criterion has been met; and
  - (b) The **Regional FACO Geographic Markets**, being those 744 EAs where the coverage criterion has not been met.

## Annex: 10 Boundaries of the Urban FACO Markets and Regional FACO Markets

A 10.1 In Annex: 9 ComReg set out its proposed approach to geographic market definition in the Relevant FACO Markets. Based on ComReg's assessment in Annex: 9, 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 10.2 The following EAs are contained within the Urban FACO Market:

ABE, ABX, ABY, ACY, ADR, AFD, AFE, AGN, AGY, AKW, ALW, ANR, ARD, ARL, ART, ARW, ATD, ATH, ATY, AUV, BAI, BAK, BAO, BAR, BAX, BAY, BBH, BBN, BBO, BCL, BCR, BDT, BDY, BFR, BGA, BGE, BGL, BGS, BGT, BGV, BHN, BHS, BIR, BIT, BKD, BKG, BKR, BLA, BLB, BLC, BLD, BLI, BLR, BLS, BLV, BME, BMN, BNC, BND, BNN, BNZ, BOF, BOK, BON, BPO, BRE, BRF, BRI, BRN, BRT, BSE, BSH, BSN, BSZ, BTB, BTM, BTN, BTR, BTT, BTY, BUA, BUN, BUT, BVR, BYD, BYN, BYS, CAB, CAE, CAV, CBA, CBM, CBR, CCH, CCL, CCR, CCS, CDA, CDH, CDN, CDT, CDU, CEE, CEL, CFO, CGA, CGH, CGI, CGL, CGM, CGY, CHD, CHF, CHH, CHR, CHT, CID, CIN, CKA, CKC, CKH, CKN, CKY, CLA, CLD, CLG, CLK, CLM, CLR, CLT, CLX, CLY, CMR, CMS, CNA, CNE, CNS, CNY, COS, COV, COY, CPN, CPO, CRD, CRE, CRI, CRK, CRL, CRO, CRT, CRV, CRW, CRY, CSA, CSL, CSR, CSW, CSY, CTB, CTE, CTH, CTN, CTW, CTY, CUR, CUS, CVN, CVW, CWL, CYG, DAH, DBC, DBN, DBT, DCL, DDA, DDK, DDM, DEZ, DFY, DGE, DGL, DGS, DLA, DLK, DLO, DLR, DMO, DNR, DNU, DNV, DRM, DSN, DUN, DVA, DYX, EDY, EFD, EKY, ENS, ERL, ETY, FBK, FBO, FCA, FDR, FHN, FMY, FNG, FNS, FNT, FOX, FRB, GAL, GAR, GBE, GBH, GBY, GCE, GEY, GMR, GNK, GNO, GRS, GRY, GTS, HBN, HCS, HPL, HYD, INV, INY, ISL, JNN, JTN, KAP, KBK, KBN, KBS, KBY, KCR, KCW, KDK, KDN, KDO, KGD, KGN, KIA, KIC, KIK, KIL, KIM, KLC, KLE, KLK, KLM, KLN, KLO, KMC, KME, KMK, KMU, KMY, KNL, KNY, KOK, KRG, KRH, KRM, KSL, KSN, KTK, KVA, KWH, LBO, LED, LEG, LEX, LGA, LGB, LIF, LIS, LKD, LKY, LMK, LND, LNW, LOD, LTH, LTN, LWD, LYR, MAH, MAL, MBC, MBG, MBT, MBW, MBY, MCN, MDN, MEE, MER, MGN, MGR, MHZ, MIK, MLE, MLH, MLW, MMK, MNK, MNT, MOT, MRO, MRW, MRY, MSK, MSN, MTK,

MUC, MUF, MUK, MVN, MVW, MYN, NAL, NAS, NCM, NHL, NMK, NMN, NNH, NOF, NRS, NRT, NRY, NTF, NUT, NWB, NWL, NWT, OBB, OGO, OGT, OLD, OLE, OME, OMH, OYG, PAL, PAN, PGS, PHB, PKW, PKY, PLL, PLT, PME, PMK, PRP, PRS, PTW, PUA, PWL, PWN, QKR, QPT, QUN, RAY, RBE, RBK, RBT, RCL, RCM, RCR, RDE, RDM, RIS, RLC, RLE, RLH, RMS, RMT, RNG, ROC, ROK, ROM, RPT, RSA, RSC, RSL, RSN, RTD, RTH, RTN, RUS, RUY, RVD, RVN, RWD, RWH, SAN, SAP, SBE, SFN, SGO, SHL, SHN, SHP, SKB, SKL, SKS, SLA, SLS, SND, SNH, SPL, SRD, SRL, STM, STN, TCY, TFN, THS, TLH, TLM, TLN, TLT, TLW, TMD, TME, TMR, TPR, TPY, TRE, TRM, TRR, TSW, TTN, TUM, TWV, TYC, UGM, VGA, WAL, WGL, WGT, WHI, WIS, WLW, WPK, WRD, WST, WTB, WTD, WXA, WXD, YHL.

### A 10.3 The following EAs are contained within the Regional FACO Market:

AUG, MON, ABK, ABP, ACE, ACF, ACL, ADA, ADE, ADG, ADH, ADM, ADN, ADT, ADW, ADY, AFN, AGA, AGH, AGL, AHA, AHC, AHH, AHM, AHO, AHS, ALD, ALE, ALS, AME, ANA, ANN, ANY, ARA, ARC, ARN, ASD, ASG, ASM, ASN, ASQ, ATE, ATL, ATN, ATS, AVA, AVO, AYL, BAA, BAD, BAE, BAH, BAL, BAM, BAN, BAS, BBA, BBE, BBS, BBT, BBY, BCA, BCE, BCG, BCH, BCK, BCN, BCS, BCY, BDA, BDB, BDN, BEE, BEG, BEN, BER, BES, BEY, BFD, BFF, BFN, BFO, BFT, BGH, BGN, BGR, BGW, BGY, BHE, BHG, BHH, BHL, BHM, BHR, BHT, BHY, BIB, BIG, BIN, BIY, BJD, BKA, BKN, BKS, BKT, BLE, BLF, BLG, BLH, BLL, BLN, BLO, BLP, BLT, BLX, BLY, BMA, BMD, BMH, BML, BMO, BMT, BMY, BNA, BNE, BNG, BNR, BNS, BNY, BOH, BOL, BOY, BPC, BPN, BRA, BRD, BRH, BRM, BRS, BRU, BRY, BSA, BSB, BSO, BSP, BTA, BTE, BTH, BTS, BTW, BUB, BUD, BUO, BUY, BVN, BVT, BWG, BWM, BWN, BWR, BXG, BYA, BYB, BYC, BYE, 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, CCE, CCG, CCI, CCM, CDF, CDW, CEA, CEN, CER, CFA, CFD, CFG, CFL, CFN, CFY, CGB, CGE, CGG, CGN, CGS, CHA, CHE, CHG, CHL, CHW, CHX, CIG, CIL, CIM, CIS, CJN, CKE, CKO, CKS, CKW, CLB, CLC, CLE, CLH, CLL, CLN, CLO, CLS, CLU, CLW, CMA, CMK, CML, CMN, CMO, CMP, CMY, CNB, CNG, CNN, CNR, CNV, CNW, CNX, COG, COL, CON, COO, COT, COU, CPH, CPL, CPM, CPT, CPW, CRA, CRC, CRF, CRM, CRN, CRR, CRX, CSB, CSE, CSH, CSJ, CSK, CSO, CSP, CSS, CTD, CTL, CUA, CUB, CUE, CUX, CWN, CWT, CYA, CYE, CYW, DAP, DBG, DBR, DCE, DCK, DCN, 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, DRS, DRW, DUK, DUR, DUW, DVN, DWT, ECT, EFI, EFN, EMJ, EMN, EMV,

EMY, EPT, ERS, ESK, ETN, ETW, FBD, FEH, FES, FET, FFD, FFO, FGE, FGH, FHD, FHX, FIN, FKE, FLH, FMH, FML, FMT, FMX, FNA, FPK, FRS, FVA, FWN, FXD, FXH, FYB, GCF, GCK, GCR, GDH, GDN, GGF, GHL, GIL, GLA, GLC, GLF, GLI, GLN, GLO, GLS, GME, GMH, GMI, GMY, GNA, GNG, GNH, GNY, GRD, GRE, GRT, GSL, GSN, GSX, GTA, GTN, GUE, GUN, GVE, GWH, GWN, 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, ISN, JKN, JSN, JWL, KAE, KAS, KBD, KBE, KCE, KCH, KCK, KCL, KCN, KCO, KCY, KDH, KDT, KDY, KEH, KEK, KEL, KEN, KEY, KFA, KFE, KGL, KGT, KGV, KGX, KHA, KHE, KHN, KIH, KIN, KIR, KKE, KKL, KKY, KLA, KLB, KLG, KLH, KLL, KLR, KLS, KLU, KLY, KMA, KMD, KMG, KML, KMN, KMT, KMW, KNA, KNC, KND, KNE, KNF, KNG, KNK, KNM, KNT, KON, KOR, KQY, KRA, KRN, KRR, KRY, KSA, KSV, KTA, KTH, KTM, KTN, KTR, KTX, KUC, KVN, KYG, KYK, LAG, LAN, LAY, LBN, LBU, LCN, LCY, LDA, LDN, LEP, LET, LGN, LGW, LHA, LHY, LKR, LMB, LME, LMW, LNE, LNF, LNH, LNY, LOS, LPN, LRH, LRN, LSL, LSN, LTM, LTW, LVA, LVH, LVN, LVN, MAM, MAN, MBS, MCH, MCM, MDV, MEN, MFD, MFM, MFR, MGE, MGL, MHL, MHW, MIL, MLA, MLD, MLF, MLN, MNB, MNE, MNH, MNU, 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, NSM, NTC, NTW, NWN, OLA, OLT, ORM, OWN, PGN, PGO, PML, PNE, PRE, PRK, PRT, PSG, PSX, PTN, PWC, QVE, RAN, RCH, RCN, RCS, RCY, RDS, RFN, RFO, RGN, RHS, RIP, RIV, RKE, RKY, RME, RMK, RMN, RMO, RNL, RNV, ROT, RPY, RRN, RRX, RSK, RSM, RSP, RST, RSY, RTO, RUN, RVK, RVY, RWN, RWR, RYN, RYX, SBH, SBK, SBR, SBY, SCF, SCK, SCL, SCN, SCT, SGH, SGN, SHE, SHR, SHY, SIL, SKN, SLE, SML, SNB, 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, TOG, TOO, TOR, TOW, TPN, TSK, TST, TTH, TUR, TUX, TVN, URL, VIS, VMT, VTY, WAP, WFA, WFD, WKW, WLN, WMN, WOL, WTG, WVE.

# Annex: 11 Draft 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 had regard to Regulation 6(1) of the Access Regulations and Regulation 16 of the Framework Regulations;
- (iii) Having, pursuant to Section 13 of the Communications Regulation Act, where applicable, complied with Ministerial Policy Directions;
- (iv) Having taken the utmost account of the 2014 Recommendation and the SMP Guidelines;
- (v) Having had regard to the analysis and reasoning set out in ComReg Document 20/46;
- (vi) 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;
- (vii) Having, in accordance with Regulation 12(4) of the Framework Regulations, considered the representations received in response to ComReg Document 20/46;
- (viii) Having consulted with the Competition and Consumer Protection Commission pursuant to Regulation 27 of the Framework Regulations;
- (ix) 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 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;
- (x) Pursuant to Regulations 25, 26 and 27 of the Framework Regulations;
- (xi) Pursuant to Regulation 8 of the Access Regulations;
- (xii) Pursuant to Regulations 9, 10, 11, 12, and 13 of the Access



Regulations; and

(xiii) 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. XX/XX entitled “[Access Network Model Review. Consultation and Draft Decision]”, dated XX/XX/XXXX;

**“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;

**“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 14.0 dated 9 March 2020)] 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;

**“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 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 FTTN access network architecture where the Node used to house active 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 infrastructure;

**“(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 infrastructure;

**“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 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;

**“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 14.0 dated 9 March 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;

**“PSTN”** means Public Switched Telephone Network;

**“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;

**“Structured Information”** means information that documented and managed through an established business process in a formal manner;

**“(the) Three Criteria Test”** means the test set out in paragraph 2 of the 2014 Recommendation used to identify markets other than those set out in the Annex to the 2014 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 information that is documented and managed in a less formal manner than Structured Information. Unstructured Information includes information passed between individuals or business units through informal communications;

**“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;

**“White Label Voice”** or **“WLV”** means a managed ‘end-to-end’ voice calls

service that includes WLR and FNA FVCO along with other wholesale inputs;

“**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) 2014 Recommendation**” means the European Commission Recommendation of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 295, 11.10.2014, p. 79).

### 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 NGA 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 [10] 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 [10] 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 [10] 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 [10] 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 1b 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 [6.0 dated 2 May 2019] 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); and
- (vi) 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 website, its RIO in the same form and format as [version 6 (dated 2 May 2019)], 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 it 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 falling within the scope of this Decision Instrument and the Relevant Regional FACO Markets. All of the obligations in relation to accounting separation, set out at 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.

## **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 Regional 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 Without prejudice to the generality of Section 14.2 and 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 Without prejudice to the generality of Section 14.2 of this Decision Instrument, 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 charge 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 charge 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.

- 14.9 Eircom shall have an obligation not to cause a margin squeeze in respect of White Label Voice.
- 14.10 Without prejudice to the generality of Section 14.9, Eircom shall have an obligation not to cause a margin squeeze between (a) the charge for White Label Voice, and (b) the charges for the necessary regulated and unregulated components to provide the White Label Voice service. Eircom shall ensure that the charge for White Label Voice it sells or offers for sale in the Regional FACO Markets, on a per unit basis, must be greater than the sum of the following: WLR; FNA FVCO; CG or NG interconnection; and, as relevant, transit.

## **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, in particular:
    - (a) a description and explanation of the relevant reporting structures

- and reporting processes implemented by Eircom; and
- (b) a description of the information relied upon and the process followed by Eircom's management to assess the operation and effectiveness of the processes used to identify and manage risks of non-compliance in their areas of responsibility.
- (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 on an ongoing basis.
    - (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) a description of all the potential regulatory risks identified and the associated activities and business processes, including decision making processes;
  - (b) the basis for concluding that regulatory risks exist, or do not exist, in respect of all the potential issues identified;
  - (c) 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;
  - (d) 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) name of Eircom business unit which is responsible for the Control; and
  - (b) description of the operation of the control, including the frequency of its operation;
  - (c) 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 governance measures referred to in Section 15.1(ii) and/or to the methodology followed to identify regulatory risks and develop associated controls referred to in Section 15.1(iii), to include any material change to the documentation and information referred to in the Statement of Compliance for the purpose of Section 15.1(ii) or Section 15.1(iii), within one (1) month of such change or changes being made;
  - (ii) Where a material change or material changes are made to the description of the regulatory risks and the description of the controls required to address the regulatory risks referred to respectively in Section 15.1(iv) and Section 15.1(v) above, to include any material change to the documentation and information relied on for the purpose of the Statement of Compliance, within one (1) month of such change or changes being made;
  - (iii) 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 IV – 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” PROVISION IN RESPECT OF THE RELEVANT URBAN FACO MARKETS**

- 17.1 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. This obligation is withdrawn with effect from eighteen (18) months from the Effective Date.
- 17.2 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.
- 17.3 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 17.1 and/or 17.2 above, shall be provided at prices no higher than those prevailing for such products, services, facilities or Associated Facilities on the Effective Date for the duration of the eighteen (18) month period and the nine (9) month period respectively.

### **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 are 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 The obligation at Section 9.2(iv) shall come into effect three months after the Effective Date.
- 19.3 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.
- 19.4 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; and

- (v) section 4.5 of the Decision Instrument contained in Annex 2 of ComReg Decision D11/18.

## **21 PUBLICATION AND NOTIFICATION**

- 21.1 This Decision Instrument shall be published on ComReg's website, [www.comreg.ie](http://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.

**GARRETT BLANEY**

**CHAIRPERSON**

**THE COMMISSION FOR COMMUNICATIONS REGULATION**

**THE XX DAY OF XXXX 20XX**

## Annex: 12 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
CPP	Calling Party Pays
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
Eol	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
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
RPP	Receiving Party Pays
RSU	Remote Subscriber Unit
SAB	Standalone Bitstream
SB-WLR	Single Billing-Wholesale Line Rental
SDSL	Symmetric Digital Subscriber Line
SEO	Similarly Efficient Operator
SIP	Session Initiation Protocol
SIP	Session Internet 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

## Annex: 13 Consultation Questions

**Question 1:** Do you agree that the main developments identified in the provision of RFTS are those which are most relevant in informing the assessment of the Relevant Markets? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual/empirical evidence supporting your views.

**Question 2:** Do you agree with ComReg's preliminary conclusions on the product market assessment for the Relevant RFTS 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.

**Question 3:** Do you agree with ComReg's preliminary conclusions on the geographic market assessment for the Relevant RFTS 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.

**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.

**Question 5:** Do you agree with ComReg's preliminary conclusions on the geographic 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.

**Question 6:** Do you agree with ComReg's preliminary conclusions on the 3CT for the Relevant RFTS 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.

**Question 7:** Do you agree with ComReg's preliminary conclusions on the 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.

**Question 8:** Do you agree with ComReg's preliminary conclusions on the market assessment for the RFTS Markets, absent regulation in the Urban 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.

**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.

**Question 10:** Do you agree with ComReg's preliminary conclusions on remedies 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.

**Question 11:** Do you agree with ComReg's preliminary conclusions on the withdrawal of SMP remedies on the Urban 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.

**Question 12:** Do you agree with ComReg's preliminary conclusions on the Regulatory Impact Assessment? 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 position.