An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation

Market Reviews

Wholesale Local Access (WLA) provided at a fixed location

Wholesale Central Access (WCA) provided at a fixed location for mass-market products

Annex 15: Oxera Price Control Reports prepared for ComReg

Non-confidential

Oxera Price Control Reports

Reference: ComReg 24/07F
Version: FINAL
Date: 18 January 2024

An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation
1 Lárcheantar na nDugaí, Sráid na nGildeanna, BÁC 1, Éire, D01 E4X0.
One Dockland Central, Guild Street, Dublin 1, Ireland, D01 E4X0.
Teil | Tel +353 1 804 9600 Suíomh | Web www.comreg.ie

Content

Section Page

1 Oxera Updated Part 1 Report 3

2 Oxera Updated Part 3 Report 51

3 Oxera Part 1 Report 108

4 Oxera Part 3 Report 177

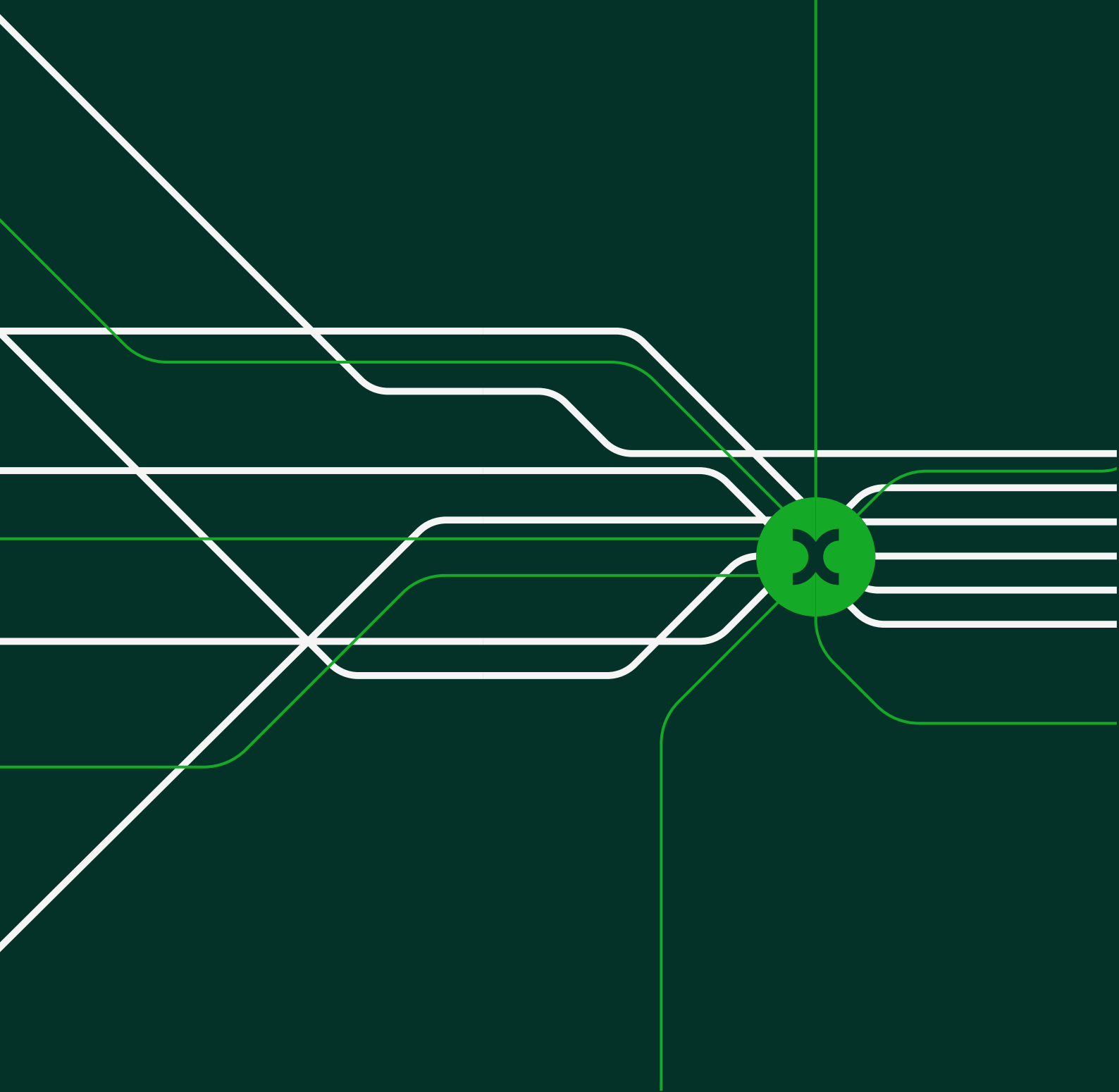
An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation
1 Lárcheantar na nDugaí, Sráid na nGildeanna, BÁC 1, Éire, D01 E4X0.
One Dockland Central, Guild Street, Dublin 1, Ireland, D01 E4X0.
Teil | Tel +353 1 804 9600 Suíomh | Web www.comreg.ie

WCA/WLA market review: Oxera Updated Part 1 Report [Non-confidential version]

—

Prepared for the Commission for Communications Regulation

11 January 2024



Contents

Introduction and summary 3

2 FTTC Pricing continuity 9
2.1 Summary of respondents' views 9
2.2 Oxera's response 11
2.3 Oxera's final recommendation 16

3 FTTH pricing flexibility 17
3.1 Summary of respondents' views 17
3.2 Oxera's response 18
3.3 Oxera's final recommendation 21

4 The Emulated service 22
4.1 Summary of respondent's views 23
4.2 Oxera's response 24
4.3 Oxera's final recommendation 26

5 Price floor 28
5.1 Summary of respondents' views 29
5.2 Oxera's response 30
5.3 Oxera's final recommendation 34

6 FTTH commercial offers 36
6.1 Summary of respondent's views 37
6.2 Oxera's response 40
6.3 Oxera's final recommendation 43

7 FTTH Connection/Migration charges 44
7.1 Summary of respondent's views 45
7.2 Oxera's response 45

Figures and Tables

Box 2.1 Summary of position to date 9
Box 3.1 Summary of position to date 17
Box 4.1 Summary of position to date 22
Box 5.1 Summary of position to date 28
Box 6.1 Summary of position to date 36
Box 7.1 Summary of position to date 44

Introduction and summary

1.1 In January 2023, The Commission for Communications Regulation (ComReg) published the provisional findings of its market review of the wholesale local access (WLA) and wholesale central access (WCA) markets.[1] Oxera supported ComReg in reaching its provisional conclusions by providing recommendations on the most appropriate wholesale price control and MST obligations for the next five years, in relation to those services over which ComReg provisionally concluded that Eircom holds SMP. We produced two Expert Economic Reports:

- The 'Oxera Part 1 Report' [2] in which focussed on wholesale price controls to address concerns about excessive pricing and exclusionary behaviours. Specifically, we considered the need for and—where appropriate the design of—wholesale price control obligations for the monthly rental fees for FTTC VUA and FTTH[3] VUA services (NGA services) in the Commercial NG WLA Market.
- The 'Oxera Part 3 Report'[4] which focussed on the need for ex ante obligations to address the concerns of a margin squeeze occurring and the options available to ComReg. Specifically, we considered the need for and, where appropriate, the design of ex ante MSTs for FTTC VUA and FTTH VUA services (NGA services) in the Commercial NG WLA Market.

1.2 Following our assessment, our recommendation to ComReg was that price regulation of NG VUA services, in the WLA market where Eircom has SMP, should follow an anchor pricing approach. We recommended that this approach should include:

[1] ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision; ComReg 23/03', 9 January, paras 9.502–9.520. Hereafter referred to as 'ComReg 23/03'.
[2] Oxera (2022), 'WCA/WLA market review; Oxera report: Part 1', 16 December. Hereafter referred to as the 'Oxera Part 1 Report'.
[3] We note that in the 2023 Consultation ComReg used the term FTTH, as did Oxera in the Oxera Part 1 and Part 3 reports. In its Decision, ComReg has adopted the term FTTP on the basis that this is more appropriate as refers to fibre to all premises, homes and businesses. In this report, we use the terms FTTH and FTTP interchangeably.
[4] Oxera (2022), 'WCA/WLA market review; Oxera report: Part 3', 16 December. Hereafter referred to as the 'Oxera Part 3 Report'.

- pricing continuity of FTTC VUA services, taking as a starting point the current price from the BU LRIC+ model (which in July 2023 will be €19.12), with any future price increase limited to no more than inflation (CPI-0%)—i.e. a flat, real price cap;
- pricing freedom on FTTH VUA services;
- a requirement on Eircom to make available a FTTC-like service over its FTTH network and to provide this service at the regulated price of FTTC in line with the above recommendation. This service would be made available in advance of the implementation of copper switch off at the point when new FTTC connections are no longer available, including in those areas where FTTC is not currently available, but FTTH is.

1.3 In addition to our recommendations for controls to protect against excessive monthly rental prices, we considered whether the current regulatory approach to wholesale commercial offers (e.g. discounts and promotions) needed to be revised, in line with ComReg's objective to promote competition and encourage investment, including by ensuring that investment by other operators is not jeopardised (e.g. were Eircom to set prices too low).

1.4 In recognition of the fact that lower wholesale prices could lead to good outcomes for consumers,[5] we recommended that, instead of banning wholesale promotions and discounts, as is currently the case (subject to an exceptional circumstances review), it would be more proportionate to allow Eircom to launch price reductions or other wholesale offers in certain circumstances. However, in order to safeguard against exclusionary behaviours, including pricing practices that might impair investment by alternative network operators, we recommended that any wholesale commercial offers (e.g. discounts and promotions) would need to be first assessed and approved by ComReg on an ex ante case by case basis and in line with a number of key principles.

[5] We use the term consumers to refer to users downstream of Eircom wholesale, which could include wholesale access seekers and ultimately end users. Ultimately, policies designed to prevent excessive pricing are to protect consumers as end users, in line with ComReg's objectives.

1.5 Specifically, ComReg must be satisfied that Eircom's wholesale pricing practices:

- are unlikely to have a material impact on economically efficient alternative investment by alternative network operators that are either investing or planning to invest in very high capacity networks (VHCNs);
- will generate clear and demonstrable benefits, in terms of being a critical element of Eircom's investment plans, and/or that the prices will deliver benefits for consumers.

1.6 At the time of the Oxera Part 1 Report, we also recommended that a price floor should be imposed on FTTH VUA services, with the intention of preventing Eircom from setting prices below the costs of provision.

1.7 In the Oxera Part 1 Report, we also assessed the need for the continuation of controls on FTTH connection and migration charges, which are currently required to be set at the same level.[6] We observed that Eircom has lowered its connection (and migration) charges to zero. We commented that if this charging behaviour were to continue and become the norm during the market review period, concerns about the level of connection charges affecting customers' decisions to take up FTTH, and any potential distortions to competition resulting from above-cost migration charges, may continue to be unwarranted.[7] However, we also noted that as the number of customers connected to Eircom's FTTH network increases over time such that the large majority of customers changing RSP would face migration charges (if the wholesale charges increase above zero and these are passed on to end-users), and as a result, there could be a distortion to competition whereby customers face a higher cost to switching through high migration charges being passed through at the retail level. In this case, we stated that ComReg could consider requiring migration charges to be set in line with their incremental costs.

1.8 ComReg took the recommendations from the Oxera Part 1 Report into account in reaching its provisional conclusions, as

[6] Provided that, together, the price does not exceed the level that would allow Eircom to recover its customer-specific connection-related investment over the lifetime of the underlying assets.
[7] As we set out in section 7 below, Eircom has extended the zero FTTH Connection/Migration Charge. ComReg Information Note 23/29. Available at: https://www.comreg.ie/media/2023/03/ComReg-2329.pdf.

set out in its consultation and draft decision.[8] ComReg largely accepted our recommendations, but with some amendments, proposing to take a different approach on some issues, namely:

- Where the 'emulated' service should be introduced and on what terms—ComReg proposed that the emulated service only be required to be provided in those areas where FTTC is currently present and only introduced in an exchange area from the time that Eircom 'initiates the withdrawal of FTTC in the exchange area'.[9]
- The approach to connections and migrations—ComReg proposed that connection/migration charges should be equal and subject to a cap of €100.

1.9 As part of the consultation process, ComReg received comments from 10 interested parties who commented on its proposals, including those set out above. [10]

1.10 To support ComReg in reaching its final Decision, we have prepared this report (the 'Oxera Updated Part 1 Report') as an addendum to the Oxera Part 1 Report. In this report, we consider the views of respondents provided to the Consultation and consider the implications for the recommendations presented to ComReg in the Oxera Part 1 Report, before providing our final recommendations to ComReg.

1.11 To the extent that consultation responses focus on the specific proposals of ComReg that took a different position to our recommendation in the Oxera Part 1 Report, we do not provide a direct response to those comments.

1.12 In this report, we take each of the key recommendations in turn and assess the responses received and our position on the same. Specifically, we consider:

- FTTC pricing continuity
- FTTH pricing flexibility
- The emulated service
- Price floor

[8] ComReg 23/03.
[9] ComReg 23/03, para 9.279.
[10] ComReg received responses from: ALTO, BT, Eircom, Imagine, NBI, SFG (ENET), Siro, Sky, Virgin Media, and Vodafone. ComReg also received consultant reports from Copenhagen Economics (on behalf of Eircom) and SPC Network (on behalf of Virgin Media).

- Commercial offers
- Connection/migrations charges

1.13 For each, we provide a brief summary of the recommendation set out in the Oxera Part 1 Report, the provisional position adopted by ComReg in its consultation, and a high level summary of the position of the respondents to that issue. We then set out our, position, including any direct responses to specific points raised by respondents, and set out our final recommendation.

1.14 Having considered the submissions to ComReg's consultation, our final recommendations are as follows:

- Maintain the FTTC pricing continuity proposals, with a starting price of €19.12 and a ceiling on price rises in line with CPI-0%,
- Maintain pricing flexibility on FTTH, with the FTTC service acting as an anchor.
- Maintain the requirement for an emulated FTTC service to be made available in a given exchange area on copper switch off (i.e. from the time Eircom ceases to offer FTTC connections or migrations in any part of that Exchange Area.[11])
- Maintain the recommendation for a price floor on FTTH VUA pricing with the FTTC VUA price as a 'proxy' for the floor (in the absence of an FTTH cost model), and Eircom should be allowed to reduce this price floor conditional on providing evidence of its own costs to demonstrate its pricing is not set below costs. ComReg should also consider requiring FTTC prices to be lowered to match any reductions in FTTH pricing below the level of FTTC VUA prices, particularly in areas where there is not (yet) FTTH
- Maintain recommendation to relax the ban on commercial offers, but with safeguards in place, with proposals assessed on a case-by-case basis. We also recommend ComReg seek inputs from stakeholders to broaden the assessment beyond information provided by Eircom,

[11] This corresponds to 'Milestone 1' (where Stop Sell is implemented) or 'Milestone 2' (where Stop Sell is not implemented) of the Decision on Migration from Legacy Infrastructure to Modern infrastructure. See: ComReg (2023), 'Framework for the Migration from Legacy Infrastructure to Modern Infrastructure, Response to Consultation and Decision, ComReg 23/102, Decision D09/23', 1 November.

where this could provide valuable additional evidence on the potential impact of the offers on alternative network operators.

2 FTTC Pricing continuity

Box 2.1 Summary of position to date

Oxera Part 1 Report recommendation:

We recommend pricing continuity of FTTC VUA services, taking as a starting point the current price from the BU LRIC+ model (which in July 2023 will be €19.12), with the price allowed to increase in future by no more than inflation (CPI-0%)—i.e. a flat, real price cap

In the presence of the proposed wholesale price control on FTTC VUA, ex ante margin squeeze obligations should not be imposed on FTTC VUA.

ComReg consultation proposal:

To apply a price cap of 'CPI-0' to the currently cost oriented FTTC VUA prices post 30 June 2024. This approach, referred to as "pricing continuity", allows for changes to underlying costs to be reflected in prices while mitigating the risk to end users of excessive prices, both directly for FTTC and indirectly for FTTH.

Source: Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, Box 4.1; ComReg 23/03, para 9.220(b).

2.1 Summary of respondents' views

2.1 Eircom and SIRO agreed with the approach of real pricing continuity. Eircom considered that a price cap (subject to CPI adjustment) provides a balance between allocative and dynamic efficiencies, 'which should be of key concern to ComReg at this particular juncture'.[12] SIRO agreed that the real pricing continuity approach 'allows for changes to underlying costs to be reflected in prices while mitigating the risk to end users of excessive prices, both directly for FTTC and indirectly

[12] Eircom 'Response to ComReg Consultation and Draft Decision: Market Reviews – WLA provided at a fixed location and WCA provided at a fixed location' [Non-confidential version], 3 March, Annex 3, para. 196.

for FTTH.'[13] SIRO also recognised that the approach was appropriate given 'the level of uncertainty that currently exists in respect of cost and demand forecasts due to the ongoing transition from copper to fibre networks, and recognising the extent that this uncertainty is further compounded by the continuing economic uncertainty in respect of future cost trends, that its proposed pricing continuity approach (applying CPI-0 price cap annually to the currently cost oriented FTTC VUA prices post 30 June 2024) is the most appropriate form of price control for a review period where investment by network operators in the expansion of their FTTH network footprints is expected to continue.'[14]

2.2 Virgin Media was also supportive of the proposals, noting that it is right to move away from an approach based on strict cost orientation, where determined prices are set by reference to detailed cost modelling. It commented that allowing reasonable returns to be made gives a good signal to investors in VHCN and using inflation as a proxy for movement in costs protects consumers from excessive pricing.[15]

2.3 There was also general agreement for the idea in principle from others, but some concerns were raised about the starting price level and the link to CPI for price rises:

- NBI noted that allowing the price to rise by CPI is 'quite generous'. In this regard, it argued that ComReg has not explained what costs are likely to change in the future, or why and suggested it may be more appropriate for ComReg to require some justification for any increase in FTTC prices, while capping the maximum increase at CPI.[16]
- Sky and SFG considered that linking to CPI is risky as prices will rise quickly to a point where they may not provide an effective constraint on pricing/profits on

[13] SIRO (2023), 'WLA/WCA Market Review Response' [Non confidential version], March, response to question 8, p. 20.
[14] SIRO (2023), op. cit., response to question 8, p. 20.
[15] Virgin Media (2023), 'Virgin Media response to: ComReg's Wholesale Local Access and Wholesale Central Access Market Reviews' [Non-confidential version], March, pp. 26-27
[16] NBI (2023, 'Wholesale Local Access provided at a fixed location and Wholesale Central Access provided at a fixed location for mass-market products. Response to ComReg's Consultation and Draft Decision 23/03' [Non-confidential version], 3 March, response to question 8, p. 10

prevalent FTTC services and may impact on the effectiveness of the anchor on FTTH[17]

- Virgin Media stated concerns that the starting price is too low as the ANM would have had lower inflation assumptions that have been observed in practice.[18]

2.2 Oxera's response

2.4 The objective of the proposal for real pricing continuity on FTTC VUA services (for which Eircom has been found to have SMP) was to provide a constraint on the extent to which Eircom's prices of FTTC VUA could rise, without the need to continue using and updating the current cost models ComReg used to inform the cost oriented prices for FTTC-based services up to June 2024,[19] which would not be proportionate in a world where take up of FTTC is declining.

2.5 As considered in detail in the Oxera Part 1 Report, the benefits of engaging in an exercise to further update the existing FTTC cost models or undertake the construction of a new FTTC BU LRIC+ model (or models) to calculate costs/prices beyond 2024[20] need to be set against the costs, in time and resources, of the exercise, notwithstanding the practicalities of obtaining information on copper-based VDSL assets at this stage.[21] Furthermore, it is not clear whether there are large benefits to engaging in an exercise whose core assumption is that an HEO would continue to invest in an FTTC network as a modern equivalent asset at a time when both Eircom and alternative network operators are rolling out FTTH networks. Over time, telecoms services will be increasingly provided over FTTH networks, calling into question a costing approach based on a hypothetical steady-state FTTC network. In this regard, if the current FTTC prices are deemed already to be in line with modelled costs, a simpler approach to setting prices for FTTC VUA to prevent excessive pricing on FTTC VUA (given Eircom has

[17] Sky (2023), 'Sky's response to ComReg's Consultation and Draft Decision: Market Review of Wholesale Local Access and Wholesale Central Access' [Non-confidential version], 3 March, response to Question 8, p. 5. SFG (2023) response to question 8, pp. 27 – 28.
[18] Virgin Media, op. cit., p. 27.
[19] To inform the cost oriented prices for FTTC-based services up to June 2024 ComReg has relied on three related cost models: The ANM, the NGN Core Model, the NGA Cost Model. See ComReg 23/03 para 9.246.
[20] The current FTTC prices are set until 2024 only. See ComReg (2021), 'Regulated Wholesale Fixed Access Charges – Review of the Access Network Model – response to consultation and final decision', D11/21, December 20, Table 3.
[21] Oxera (2022), 'WCA/WLA market review; Oxera report: Part 1', 16 December. Paragraph 4.33 – 4.38.

SMP) and also limit FTTC price rises, so they can still provide an effective anchor on the FTTH VUA prices, which are otherwise unconstrainted (as discussed in section 3 below) would be to adopt 'pricing continuity'- i.e. to allow no price increases over the existing FTTC prices (beyond inflation).

2.6 Starting with the latest price from the FTTC cost model, as an indication that prices are cost oriented, and then indexing it forward by CPI to ensure continued recovery of costs is a simple way of operationalising this. Given current FTTC prices are already cost-oriented and if general inflation trends are a reasonable predictor of how the costs in a hypothetical FTTC model may be expected to evolve, then real pricing continuity can be appropriate. As recognised by Virgin Media in its response, 'By using inflation as a proxy for the movement of costs, the approach also aims to maintain (albeit less intrusively) the relationship between price and cost'.[22]

2.7 However, some respondents raised a concern that by allowing the FTTC VUA price to rise in line with inflation, particularly in the current high inflationary period, this could lead to large price increases that would weaken the constraint on both FTTC VUA pricing (allowing Eircom to make greater returns on the legacy network) and its role as a constraint on FTTH prices via the anchor.

2.8 Given, the starting level of prices for FTTC VUA in 2024 will come from the modelled regulated, cost-oriented prices, which as noted by Virgin Media, will not capture the full extent of the observed inflation in recent years, and that the rate of inflation may be slowing, the scope for significant price rises may be less of a concern going forward. However, to the extent that there are concerns about how high price rises could be in a high inflationary environment with a CPI-0% cap, ComReg could consider using an alternative index, or to abate CPI by the historical difference between it and new build costs. However, we recognise the challenge that such an index is not readily available and that gathering sufficiently detailed evidence would be a complex exercise.

[22] Virgin Media, op. cit., pp. 26-27

2.9 Alternatively ComReg could consider imposing mechanisms that can be put in place to limit price rises to the lower of CPI or a set percentage, however, any percentage chosen would likely be arbitrary.[23] In that case, it would be overly simplistic to simply establish a lower percentage on which prices can increase (for example, by just limiting price increases to 2%) without considering the underlying cost base and how that could be expected to evolve over-time . In this regard, seeking to take a more detailed assessment of different indexes to apply to different costs in a way to have a more direct relationship between prices and costs can become complex and even require further assumptions or modelling to implement, which raises questions of proportionality, when considered alongside the alternative of the simple CPI+0% approach.

2.10 While recognising that maintaining the simple approach of continuing with a general CPI+0% allowance may be expected to produce a slightly higher price path than compared to a hypothetical BU LRIC+ model for FTTC prices (particularly if CPI rises at a level higher than the costs of network provision), this approach is aligned with ComReg's objectives and published strategy statement.[24]. Indeed, this approach would tilt the balance slightly towards incentivising investment between competing network infrastructures, while still providing protection for consumers by limiting the extent to which prices can rise to general inflation levels. Virgin Media recognised this in its response, commenting that, 'By allowing reasonable returns to be made from the regulated price, this approach gives a good signal to organisations investing / planning to invest in VHCN networks (including Eircom, SIRO, and Virgin Media) that they should be able to make a reasonable return in the medium term for their investments, which will be crucial for ComReg to meet its objective of fostering investment in VHCN networks.'[25]

[23] For example, in the Netherlands the national regulatory authority (ACM) recently approved a pricing commitment from KPN for the next 8 years, in which regulated tariffs have been lowered by c. 10% and thereafter are allowed to rise in accordance with a 'moderated' CPI-inflation index. For example, for recently and newly built networks: (i) if the CPI rate is below 4%, a maximum of 2% applies; (ii) if the CPI rate is above 4%, the maximum indexation is CPI minus 2%. For 2023 and 2024, the indexation is capped at 3.5%.
[24] For example see ComReg (2023),Electronic Communications Strategy Statement: 2023-2025, ComReg 23/34. Section 3.4.3.
[25] Virgin Media, op. cit., p. 27

2.11 For similar reasons, in the Oxera Part 1 Report we also argued that a pricing continuity approach may incentivise a speedier migration towards FTTH services (where they are available), provided that FTTH prices stay constant or increase at a lower rate than general inflation.[26] This may not be an unreasonable assumption given that for networks already being built, some of the costs would have been secured in advance of the high inflation, and so the costs of building the Eircom FTTH network, for example, may not have been exposed to the full price increases indicated by CPI.

2.12 Further, we note that the cap at CPI+0% is a ceiling on the possible price rises of Eircom for FTTC VUA and Eircom is not required to price up to this level. The concern for excessive pricing on FTTC may be more prevalent in areas where FTTH is not (yet) available, and customers do not have the choice of migrating onto a better service. However, in areas where FTTH is being introduced, or already present, as discussed in the context of the price floors below (see section 5 below) if Eircom wanted to lower its FTTH prices below the FTTC price in (e.g. to respond to competition) then it would have to demonstrate FTTH costs are lower than the FTTC price. In this case, there may be a good case to require the FTTC price to also fall, and to do so nationally.[27] This would provide a mechanism to add some additional protection on excessive pricing for FTTC VUA even in areas where FTTH is not present.

2.13 While the FTTC price will also act as an Anchor pricing constraint on FTTH prices, SFG noted that a rising anchor would allow 'the price of what it was supposed to restrain to also continually rise'.[28] Contrary to what SFG argue, we do not consider this to be a "floating anchor", given the anchor is fixed in real terms. It is the case that we need a simple method for keeping the anchor fixed in real terms, for which CPI can be a reasonable approximation. While some other respondents also

[26] Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December. Para 4.42 – 4.43
[27] In areas where there is no FTTH yet, and only FTTC VUA, customers of FTTC in those areas should be protected from FTTC pricing continuing to rise above cost. If Eircom demonstrates that FTTH costs are lower than the proxy price floor (FTTC VUA), then a requirement to also lower FTTC prices could be justified (if the "true" costs of FTTH are lower than the existing FTTC price floor, then it is likely that the "true" costs of FTTC are also lower than this). Without this requirement, there may be adverse incentives that would slow roll out of FTTH to areas where there is currently only FTTC, which is constrained only to real pricing continuity. Having a requirement for any reduction in FTTH prices to be met by a reduction in FTTC prices could re-enforce a restriction on excessive pricing on FTTC only areas.
[28] SFG, op. cit., pp 27 - 28.

questioned the impact of rising FTTC prices on the constraining effect on FTTH prices, we note that the idea that the 'anchor' would be weaker, all else equal, cannot be denied. However, there will still remain a constraint as long as the FTTC price is below the FTTH price. We also note that increases in the FTTH price may be limited given the introduction of what Eircom refers to as a 'price guarantee', which may limit the degree of price increases Eircom applies to FTTH VUA.[29]

2.14 With regard to the starting price for FTTC VUA being taken from the current regulated FTTC cost-oriented pricing, Virgin Media expressed concerns that this could be 'too low' if inflation has been higher than what was included in the model. It commented that a starting price that is 'too low' could slow down migration to FTTH if it keeps the FTTC price artificially low. We recognise that the starting price for FTTC VUA (based on the current cost models) may be lower than had the modelling included inflation assumptions that were more aligned with the high inflationary environment in recent years. However, for this to have an impact on migration from FTTC to FTTH, it would have to be the case that the costs of FTTH roll out have also been increasing over time (during the inflationary period) and that these may have risen at a greater rate than regulated FTTC prices. In this case, it could be possible that Eircom and others may have to increase the price of FTTH services at a greater rate than FTTC prices, to reflect the higher costs, and if this widens the 'gap' between FTTC and FTTH prices, could have an impact on the speed of migration. However, we note that Eircom has published a 'price guarantee' that holds its FTTH VUA price increases to 1.5% annually for from 3 July 2023 to 30 June 2029 and CPI thereafter for 4 years until June 2033.[30]

2.15 Further, for the reasons considered above, we consider that using the starting price taken from regulated, cost-oriented FTTC prices and allowing FTTC prices to rise with CPI+0% strikes a balance between encouraging investment incentives and providing some degree of protection to FTTC customers

[29] We note that Eircom's 'price guarantee' is not a legally-binding regulatory commitment, but rather a self-imposed pricing policy. Eircom explains that the price guarantee will limit FTTH VUA price increases to 1.5% annually for from 3 July 2023 to 30 June 2029 and CPI thereafter for 4 years until June 2033. See, Eircom's Access Reference Offer document, pp. 60-61. Available at: https://www.openeir.ie/wp-content/uploads/2023/07/ARO-Price-List-V26_0-Unmarked-05072023.pdf

[30] Eircom's Access Reference Offer document, pp. 60-61. Available at: https://www.openeir.ie/wp-content/uploads/2023/07/ARO-Price-List-V26_0-Unmarked-05072023.pdf

(especially when considered together with other protections in place).

2.3 Oxera's final recommendation

2.16 Given the current high inflationary environment, some respondents expressed concern that the FTTC price will be set at too low a level (to start with), while others consider the FTTC price will rise too quickly and thus not provide a good constraint on FTTC prices (or on FTTH prices via the anchor). On balance, across the comments put forward, and in line with our assessment at the time of the Oxera Part 1 Report, and consistent with our comments above, we consider to maintain the approach, of real pricing continuity (CPI+0%).

2.17 This recognises the complexity of adopting alternative approaches, while also noting that the approach taken can have the benefit of incentivising investment between competing network infrastructures, while still providing protection for consumers by limiting the extent to which prices can rise to general inflation levels. Consumers are further protected by the link between reductions in FTTH pricing and FTTC pricing proposed under the price floors (as set out in section 5) and this may be strengthened by Eircom's 'price guarantee' on FTTH VUA prices.

3 FTTH pricing flexibility

Box 3.1 Summary of position to date

Oxera Part 1 Report recommendation:

Oxera's recommendation is for ComReg to continue with pricing flexibility on FTTH VUA services, subject to maintaining an 'anchor' based on flat, real prices (pricing continuity) for FTTC VUA services, taking the regulated FTTC VUA price at the end of the current price review period (2023) as the starting point.

ComReg consultation proposal:

ComReg proposes to continue its policy of allowing pricing flexibility to Eircom in respect of FTTH, and in particular, proposes not to impose an obligation of cost orientation as regards FTTH.

ComReg proposes to continue permitting pricing flexibility for FTTH VUA subject to maintaining a pricing anchor based on a regulated FTTC VUA price.

Source: Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, para 4.110; ComReg 23/03, para 9.224.

3.1 Summary of respondents' views

3.1 Alto and BT agreed with the approach noting that the FTTC anchor product approach should potentially provide some certainty of pricing to assist the end-user migration from copper to fibre.[31]

3.2 Virgin agreed with the approach, noting that 'It helps to underpin the separate strategy of giving price flexibility to Eircom in relation to FTTP VUA (provided that the prices are above a price floor), whilst helping to prevent the risk of FTTP VUA prices becoming excessive.' It also considered that, at this

[31] See BT, op. cit., p. 9 and ALTO (2023), Consultation: WLA and WCA Market Reviews – Ref: 23/03 Submission By ALTO' [Non-confidential version], 3 March, p.9.

point in time, FTTC VUA is a credible anchor, provided the anchor remains relevant, which may require monitoring by ComReg.[32]

3.3 Eircom agreed with the general approach but proposed that it may not be needed in areas where there are sufficient constraints on FTTH, and that a low priced anchor could reduce flexibility.[33]

3.4 NBI, considered that there would be no anchor at CSO and raised the concern that this would mean no constraints on FTTH pricing beyond that point.[34]

3.2 Oxera's response

3.5 We consider that continuing with an FTTC anchor pricing approach with pricing flexibility on FTTH is still warranted during the next five-year market review period. In particular, we consider that the anchor pricing approach will strike the most appropriate balance between:

- offering protection to customers from the risk of excessive prices (due to the fact that FTTC and FTTH services are in the same market and will be substitutable, and hence will act as a constraint on the pricing of FTTH services), and
- providing investors in FTTH networks with an opportunity to earn fair returns by not directly capping FTTH prices too early, which could undermine the investment incentives.

3.6 Specifically, while no direct price control is proposed for FTTH VUA, the risk of excessive pricing, is nevertheless appropriately addressed by the constraint arising from price controlled FTTC VUA (which continues to be a substitutable product for lower bandwidth FTTH). We note that Eircom has also recently published a 'price guarantee' on wholesale services, such that this may limits the rate at which FTTH VUA prices will be allowed to rise.[35]

[32] Virgin Media, op. cit., pp. 25 - 26.
[33] Eircom, op. cit, para. 195
[34] NBI, op. cit. response to question 8, p. 10
[35] Eircom's Access Reference Offer document, pp. 60-61, setting out that Eircom's FTTH VUA pricing would be limited to increases of 1.5% annually for from 3 July 2023 to 30 June 2029 and CPI thereafter for 4 years until June 2033. See: https://www.openeir.ie/wp-content/uploads/2023/07/ARO-Price-List-V26_0-Unmarked-05072023.pdf

3.7 In addition, pricing flexibility for FTTH supports dynamic efficiency which may enable a competitive constraint to emerge in future due to the increased availability of alternative FTTH services from rival platforms.

3.8 Eircom flagged that 'there is a risk that an anchor based on FTTC VUA price (at low levels) may not offer sufficient flexibility for FTTH prices to encourage efficient competitive investment and outcomes.'[36] However, in the Oxera Part 1 Report, we set out an extensive discussion on the degree to which the price levels of the anchor product could or would have an impact of undermining the incentives to invest in FTTH, including a clear acknowledgment that the price of the FTTC anchor needs to be compared with the estimated costs of providing FTTH services.[37] We recognised that the anchor should not be set so tightly as to undermine the viability of the FTTH investment, but also not too loosely such that consumers face excessive prices.

3.9 We noted that, as part of the market review exercises, ComReg has begun to develop a BU LRIC+ model to estimate the costs of providing FTTH services. Based on the preliminary outputs from the draft model that were available at the time of the Oxera Part 1 Report, we considered that the estimated BU LRIC+ costs of providing FTTH VUA services were such that an FTTC anchor product at the existing monthly rental price of €19.12, rising with inflation, would be above the monthly rental costs of providing an FTTH VUA line, and would therefore not undermine investment incentives in FTTH networks.[38] [39] Further, while it is hard to establish causality, there is no suggestion that the BU LRIC+ FTTC prices prevailing in the market since 2018 have prevented investment in fibre, in fact there has been strong investment in fibre.

3.10 Furthermore, the fact that the anchor can increase with CPI (as per the recommendations in Section 2 above)) also ensures that

[36] Eircom, op. cit, para. 195
[37] Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December. Para 4.57 – 4.65.
[38] Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December. Para 4.64
[39] We note that the costs of connections would also need to be recovered. In this regard, it is relevant to note that Eircom is currently not charging a one-off connection fee (but choosing to recover some of the connection costs via the monthly rental costs). Based on preliminary estimates by ComReg, the FTTH VUA wholesale rental costs per line would need to increase by around [✂] to cover the cost of connection. Even adding this to the preliminary estimates of the FTTH VUA rental cost would not be below the proposed FTTC anchor price and thus would not undermine investment incentives in FTTH networks.

the anchor does not overly constrain pricing such that it would undermine investment incentives.

3.11 Virgin Media agreed with the proposed approach: 'Virgin Media agrees with ComReg's anchor product approach. It helps to underpin the separate strategy of giving price flexibility to Eircom in relation to FTTP VUA (provided that the prices are above a price floor), whilst helping to prevent the risk of FTTP VUA prices becoming excessive'.[40] While it considered that FTTC VUA is a credible anchor it noted that this could change over the period of the Market Review if, for example, 'in circumstances where the availability and bandwidths on offer from FTTP grew to such an extent that the typical bandwidths associated with FTTC VUA based services were no longer a credible alternative' in which case, there is a 'risk of the FTTC anchor becoming less effective (or ineffective) over time'.[41]

3.12 We agree that ensuring the anchor product remains relevant is a correct and important principle. We agree that the anchor should remain relevant (i.e. provide a sufficient constraint) over time, absent any other constraints on the FTTH VUA pricing. ComReg may wish to consider keeping the relevance of the anchor under review and whether an alternative (higher speed) anchor would be needed in future to constrain very high fibre services, which may not be constrained by the FTTC anchor. However, the principles set out above (the anchor should not be set so tightly as to undermine the viability of the FTTH investment, but also not too loosely such that consumers face excessive prices) we note that setting an anchor to be a very strong constraint even on higher bandwidth services, could undermine the motivation behind pricing flexibility on FTTH given that during the early stages of roll out very high speed offerings may face greater uncertainties in terms of demand risk etc.

3.13 Therefore, we maintain that the approach currently proposed for this market review period strikes the right balance. Further, we consider that given the introduction of a 'price guarantee' by Eircom in which Eircom has set limits on by how much it can raise FTTH VUA prices, there may be limited concerns about

[40] Virgin Media, op. cit., pp. 25.
[41] Virgin Media, op. cit., pp. 26.

excessive pricing over the market review period, provided this pricing policy remains in place.

3.14 NBI commented that: 'ComReg suggests that FTTC prices act as an indirect constraint on FTTH prices, but that will no longer be the case as CSO proceeds and FTTC is withdrawn'.[42] This is why we recommend the introduction of an emulated 'FTTC-like' service provided over FTTH on CSO, because there would otherwise be no "anchor". We consider the requirement to introduce an emulated 'FTTC-like' service from the time Eircom ceases to offer FTTC connections or migrations in any part of that Exchange Area[43] directly addresses this issue raised by NBI and is discussed in more detail in the next section.

3.3 Oxera's final recommendation

3.15 We maintain our recommendation that ComReg continue with pricing flexibility on FTTH subject to the FTTC anchor pricing constraint, including the need for an emulated FTTC-like service provided over FTTH upon CSO (as discussed below).

[42] NBI, op. cit. response to question 8, p. 10
[43] This corresponds to 'Milestone 1' (where Stop Sell is implemented) or 'Milestone 2' (where Stop Sell is not implemented) of the Decision on Migration from Legacy Infrastructure to Modern infrastructure. See: ComReg (2023), 'Framework for the Migration from Legacy Infrastructure to Modern Infrastructure, Response to Consultation and Decision, ComReg 23/102, Decision D09/23', 1 November.

Box 4.1 Summary of position to date

Oxera Part 1 Report recommendation:

To ensure that FTTH services continue to be constrained by an anchor product at the point when the FTTC network is switched off, Oxera recommended that ComReg require Eircom to provide an emulated 100Mbit/s FTTC-like product on the FTTH network at a price consistent with the FTTC anchor. We recommended that this emulated FTTC-like product should be made available in advance of the implementation of copper switch off, such that the emulated product is available during the transition from FTTC to FTTH services.

This approach will ensure that where the FTTC network is not present, the prices of FTTH continue to be constrained by the presence of an anchor. It also has the added benefit of providing protection to users who, at the point of the FTTC switch off, would have an equivalent service available on the FTTH network. They would therefore not face the prospect of being force-migrated onto a higher-priced, higher-speed FTTH product, which they may not wish to purchase.[44]

ComReg consultation proposal:

ComReg considered that in order to maintain consumer choice and having regard to the potential price differences between FTTC-based VUA services and FTTH-based services, among the conditions that it may impose to withdrawal of FTTC provision by Eircom will be required to make available an "emulated", FTTC-like, service on its FTTH network in those areas where FTTC-based VUA services are being withdrawn. Although such an emulated FTTC VUA service is to be provided on the FTTH network, it is to be designed to deliver at least an equivalent level of service typical of a FTTC-based VUA, and priced at no more than the relevant regulated maximum price for FTTC based VUA.

Source: Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, para 4.111 to 4.114; ComReg 23/03, para 9.55 - 9.56.

4.1 Summary of respondent's views

4.1 Virgin Media supports the proposal that Eircom be required to offer an emulated FTTC product in circumstances where FTTC would not be available because, for example, it is being withdrawn as part of CSO, and agreed that the emulated should be designed to deliver, at least, an equivalent level of service (including the bandwidths available) as typical FTTC VUA. However, it requested further explanation as to why ComReg would not require Eircom to offer the emulated FTTC service in FTTP-only areas where FTTC has never been available.[45]

4.2 BT and ALTO consider that it may have been easier to set an entry level FTTH price at circa the FTTC level, thus removing the complexity of creating emulated FTTC products and trying to manage customers at an individual level when copper is no longer available to their premises, given that copper withdrawal appear to be happening by premises not area.[46]

4.3 NBI noted it is possible that FTTC and FTTH prices might converge to the point where a higher quality FTTH service would be available at the same or lower price than the FTTC offering. Further it was concerned that if the 'FTTC-like' service is poorly defined, this proposal could mean premises currently served by high-speed broadband (i.e. a 100Mbps FTTC service)may have their broadband service degraded or discontinued if the emulated services were to match the 'average' rather than 'best' service.[47]

4.4 Eircom considered that if the emulated service is still required, it should be offered at a slight price premium compared to FTTC VUA prices, given the better quality of services of FTTH services over FTTC, and that any such premium cannot be so low as to as to undermine potential revenues from higher speed profiles.[48] Eircom also considered that the FTTC-like emulated service should not be available to existing FTTH customers and only those migrating from the legacy network.[49]

[45] Virgin Media, op. cit. p. 28.
[46] See BT, op. cit., p. 9 and ALTO, op. cit, p.9
[47] NBI, op. cit., response to question 8, p.10.
[48] Eircom, op. cit., para 134.
[49] Eircom, op. cit., para 134.

4.2 Oxera's response

4.5 We maintain that there is a need for an emulated 'FTTC-like' service, provided over FTTH to be made available at the point where the FTTC service is no longer available for new sales. Specifically, we consider that in a given exchange area, as soon as Eircom ceases to offer FTTC connections or migrations in any part of that Exchange Area.[50] Consistent with our recommendation in the Oxera Part 1 Report, this 'emulated service' would serve two purposes:[51]

- continuation of an indirect pricing constraint on FTTH prices (through continuation of the anchor pricing constraint imposed by regulation of FTTC VUA services, even when those services are no longer available); and
- provide protection to users who, at the point of CSO would otherwise face the prospect of being force-migrated onto a higher-price/higher-speed FTTH product that they may not wish to purchase.[52]

4.6 At the time of the Oxera Part 1 Report, we did also consider that this emulated service could also be made available now in areas where there are currently only CGA services in addition to FTTH.[53] We considered that may be appropriate given the absence of FTTC in these areas, and the proposals to deregulate CG services, such that the absence of an emulated service would mean there would be no anchor to constrain FTTH pricing in those areas. However, with national pricing on FTTH, the risk of FTTH prices rising in the few areas where FTTC is not present (currently) may be limited. Furthermore, given the specific circumstances of the 'rural commercial area' in which CG prices are already higher than the existing entry-level FTTH 150 Mbit/s service, consumers can in fact already benefit from migrating to FTTH. While not necessarily needed now, we do consider that, it would be appropriate for the emulated-service to be brought into play in all exchanges (including in the 'rural commercial area'), and be made available to all premises connected to the

[50] This corresponds to 'Milestone 1' (where Stop Sell is implemented) or 'Milestone 2' (where Stop Sell is not implemented) of the Decision on Migration from Legacy Infrastructure to Modern infrastructure. See: ComReg (2023), 'Framework for the Migration from Legacy Infrastructure to Modern Infrastructure, Response to Consultation and Decision, ComReg 23/102, Decision D09/23', 1 November.
[51] Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, para 4.47
[52] Customers who value higher-speed FTTH services would still be able to upgrade to higher-bandwidth FTTH services at prices that would still be subject to a retail pricing constraint.
[53] Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, para 4.114

FTTH network, from the time Eircom ceases to offer FTTC connections or migrations in any part of that Exchange Area.[54]

4.7 The proposal to introduce an emulated service is equivalent to suggesting that Eircom make available an 'entry level' FTTH service (albeit equivalent to the FTTC service) at the same price as the FTTC service. In this regard, we consider that this proposal does not differ significantly from the BT and ALTO proposal to set an entry level FTTH price at the FTTC level. Furthermore, given that the proposal is for the emulated service to become available throughout the exchange area, to all premises covered by FTTH, upon CSO (i.e. from the time Eircom ceases to offer FTTC connections or migrations in any part of that Exchange Area), we do not consider there to be issues with the need to make different services available to different users within an exchange area on a premise, by premise basis. We recommend that all premises in the exchange area where FTTH is available should have the emulated service made available to them.

4.8 While NBI comment that FTTC and FTTH prices might converge to the point where a higher quality FTTH service would be available at the same or lower price than the FTTC offering,[55] we recognise that prices may become equivalent—if the FTTC prices continued to rise (up to a price in line with CPI, as per the pricing continuity proposals) while FTTH prices did not—but FTTH prices could not be below FTTC prices consistent with the price floor discussion in Section 5 below and the recommendation that should FTTH prices be lowered upon justification of lower costs, the FTTC price should also fall). [56]In any case, if it turned out that customers could get a better speed service (on FTTH) for an equivalent price to FTTC, then this could lead to positive outcomes for consumers. For similar reasons, we consider that there should not be a premium added

[54] This corresponds to 'Milestone 1' (where Stop Sell is implemented) or 'Milestone 2' (where Stop Sell is not implemented) of the Decision on Migration from Legacy Infrastructure to Modern infrastructure. See: ComReg (2023), 'Framework for the Migration from Legacy Infrastructure to Modern Infrastructure, Response to Consultation and Decision, ComReg 23/102, Decision D09/23', 1 November.
[55] NBI, op. cit., response to question 8, p.10.
[56] In the situation described by NBI, Eircom's higher speed VUA prices would fall below the proxy price floor (which is based on the FTTC anchor price) and thus would trigger a further investigation. We address this issue in the discussion on price floors below.

to the price of the emulated service, over the FTTC price, as suggested by Eircom.

4.9 NBI also implies that the requirement to provide an FTTC-like service over the FTTH network could lead Eircom to discontinue providing 'high-speed' broadband in that area.[57] There should be no risk of degradation of high speed services as a result of the emulated service, as the intention of the emulated service is to make sure that there is an equivalent 'FTTC-like' service offered at an equivalent price, after CSO. There is no suggestion that Eircom should remove other higher speed FTTH service or 'degrade' any existing services in this way—it would simply have to introduce a new product (at equivalent speed to the FTTC service[58]), if it is not already offering this. Furthermore, having made the investment in FTTH in that area, Eircom will be incentivised to continue to sell FTTH services over the network and provide the range of differentiated services to encourage take up, and is not clear why it would degrade the quality of its FTTH offerings.

4.10 We disagree with Eircom's suggestion that the emulated service should only be available to migrating customers, not existing customers. If this were the case, it would address the second purpose of the anchor (i.e. to provide protection to users who, at the point of CSO would otherwise face the prospect of being force-migrated onto a higher-price/higher-speed FTTH product that they may not wish to purchase), this would not support the primary objective (i.e. the continuation of an indirect pricing constraint on FTTH prices).

4.3 Oxera's final recommendation

4.11 We maintain our recommendation that ComReg ensure that FTTH services continue to be constrained by an anchor product at the point when the legacy network is switched off.

4.12 Specifically, we recommend that in a given exchange area, when Milestone 1 (Stop Sell) is reached, Eircom should be required to make available an emulated FTTC-like product on the FTTH network at a price consistent with the FTTC anchor

[57] NBI, op. cit., response to question 8, p.10.
[58] Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, para 4.111.

from the time Eircom ceases to offer FTTC connections or migrations in any part of that Exchange Area.[59]

[59] This corresponds to 'Milestone 1' (where Stop Sell is implemented) or 'Milestone 2' (where Stop Sell is not implemented) of the Decision on Migration from Legacy Infrastructure to Modern infrastructure. See: ComReg (2023), 'Framework for the Migration from Legacy Infrastructure to Modern Infrastructure, Response to Consultation and Decision, ComReg 23/102, Decision D09/23', 1 November.

5 Price floor

Box 5.1 Summary of position to date

Oxera Part 1 Report recommendation:

In reviewing price reductions for FTTC/H VUA, we recommended that ComReg could consider adopting the following two-step process.

- Step 1: assess whether the proposed price is below the FTTC price; if it is, proceed to step 2.
- Step 2: allow prices below the floor only if Eircom provides evidence demonstrating that the FTTC/H VUA prices charged by other network operators (e.g. SIRO) are below the FTTC price. However, there should be a strong presumption that Eircom should not be allowed to set prices below a proper measure of the cost of its own network, including all sunk costs. This presumption is rebuttable in some circumstances (as set out in more detail in Box 5.1).

ComReg consultation proposal:

Eircom has faced restrictions on its ability to reduce FTTC VUA and FTTH VUA prices below a price floor, specified by ComReg, since the 2018 review of the WLA and WCA markets.

ComReg proposes to formalise further this constraint such that, in applying for approval to lower the price floor for FTTC/H VUA services on a geographically limited basis, Eircom should demonstrate that:

a) it is not in the position to compete on the basis of applicable prices, providing evidence of loss of market share in the geographic area concerned; and
b) that its proposed reduction of the FTTC/H VUA price floor (including any Connection/Migration Charges for FTTH) in the area concerned is not less than the higher of either:
    i. An alternative operator's wholesale VUA price or equivalent VUA price (e.g., its retail price minus retail costs and relevant network costs); or

ii. Eircom's full deployment costs for FTTC/H VUA in the specific geographic area concerned (including, for the avoidance of doubt, customer specific connection costs), calculated on the basis of a BU-LRAIC+ costing methodology and with Eircom's RAB applied to Reusable Assets.

Source: Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, Box 5.1; ComReg 23/03, para 9.330 – 9.334, 9338 – 9.340, 9.343.

5.1 Summary of respondents' views

5.1 Virgin Media and SIRO agree with the proposals. In particular, Virgin Media considered, 'whilst it is right that ComReg gives Eircom some upwards pricing flexibility for FTTP VUA, it should not grant Eircom pricing flexibility to the extent that Eircom is able to engage in exclusionary practices that could prevent and / or arrest the growth of network-based competition, to the detriment of consumers and investment'.[60] SIRO support the ComReg proposal commenting that, 'adopting a price floor for FTTH VUA that references FTTC VUA prices, which have formed the basis of build or buy decisions for FTTH investment since the 2018 Pricing Decision should better support the objective of promoting competition and encouraging investment by commercial operators than would be the case if the price floor was based, in a context of significant uncertainty, on an estimate of future FTTH costs and demand derived from Eircom's own business case for FTTH'.[61]

5.2 Eircom and Sky opposed the proposal on the basis that they consider this favours SIRO and Virgin over Eircom, meaning Eircom cannot compete:

- Sky commented that: 'It would seem unreasonable for SIRO or Virgin Media to be able to respond to any reductions in price that Eir may offer the market but for Eir to be unable to respond in kind to any moves that their competitors may make in the market. ComReg's role in this regard should be focused on promoting competition for the benefit of consumers and end users.'[62]

[60] Virgin Media, op. cit., p. 27
[61] SIRO, op. cit., p. 21
[62] Sky, op. cit., p. 6.

- Eircom commented that: 'Such asymmetric conditions and restrictions create an unfair advantage for Siro and Virgin Media. ComReg is effectively shielding Siro and Virgin Media from competition from eir…The condition of regulatory intervention is that eir's wholesale price must always be higher than that of its competitors. Equally, irrespective of the rival operator's wholesale FTTH VUA price (which is protected from competition from eir in all scenarios) the condition also requires eir to calculate its network cost to demonstrate its prices are above cost.'[63]

5.3 Eircom also expressed concern with the burden of proving costs of provision: 'The need to also demonstrate that a price reduction is not less than full deployment costs with reference to a cost model is not proportionate. It would require significant effort to develop a cost model let alone a model that can accurately capture the costs of specific geographies (the difficulty of developing such a model is also recognised by ComReg in the Consultation).'[64]

5.2 Oxera's response

5.4 Having reviewed the responses, we consider that the principles set out in the Oxera Part 1 Report, behind why Eircom's FTTH VUA prices should not be set below costs, are well justified and represent a proportionate intervention.

5.5 It is not 'unreasonable' or 'unfair' that Eircom is subject to these rules but rivals such as SIRO and Virgin Media are not—as argued by Eircom and Sky in their responses. The asymmetric regulation is a function of Eircom having been designated as having SMP. Indeed, the market is at a key stage of development, and infrastructure competition could be severely negatively impacted if Eircom had complete commercial freedom.

5.6 It is also not the case that Eircom's wholesale price must always be higher than that of its competitors (as Eircom suggests). Eircom can match or even price below rivals, provided Eircom's prices are not (1) below the floor (FTTC VUA acting as a proxy)

[63] Eircom, op. cit., Annex 3, para. 182
[64] Eircom, op. cit., Annex 3, para. 184.

and (2) if below the floor, not below the costs of provision for FTTH VUA.[65]

5.7 As currently written in Step 2 of Box 5.1 of the Oxera Part 1 Report, and in the ComReg consultation document,[66] it could be read that Eircom cannot lower prices unless it is responding to competition. However, we consider that there is benefit in further clarifying that Eircom can lower prices whenever it wants (even if not in direct response to a reduction in prices from competition) as long as these prices are above the price floor, and the lower price has been notified appropriately to ComReg. This is consistent with paragraph 5.17 of the Oxera Part 1 Report.

5.8 Specifically, the purpose of a price floor is to prevent harm arising from Eircom setting FTTH VUA prices below costs such that this would prevent entry or expansion of rival wholesale network operators. However, Eircom should be permitted to lower its wholesale VUA prices, if doing so reflects reductions in costs; or allows it to react to other commercial prices in the market such that it is not at a competitive disadvantage to any new offers emerging.[67]

5.9 Eircom has raised concerns with the requirement set by ComReg in the consultation that it would need to demonstrate its costs with reference to a BU LRIC+ model, and the burden associated with developing such a model. Specifically, it commented, 'It would require significant effort to develop a cost model let alone a model that can accurately capture the costs of specific geographies (the difficulty of developing such a model is also recognised by ComReg in the Consultation)'.[68] However, we note

[65] Specifically in the Oxera Part 1 report, we stated: 'If the alternative network operator is setting prices below the FTTC anchor price because the operator faces costs which are lower than the FTTC anchor, then it should be allowed to take advantage of these efficiencies. If Eircom would have to price below its own costs to match the rival's price, this would negate the efficiency advantage of the alternative network operator and thus have an impact on the operator's investment case and its ability to establish itself in the market. Eircom's pricing below its own costs would not constitute competition on the merits and, in such a case, Eircom should not be allowed to match the rival's price. Hence, in this scenario, Eircom should only be allowed to match the rival's prices if it can provide evidence that its own costs are also lower than the FTTC anchor, as well as being lower or equal to the rival's prices. If the alternative network operator does not have lower costs than Eircom but is pricing below the FTTC anchor and below Eircom's costs, then Eircom may be allowed to respond if it can be shown that this level of pricing is the efficient market-wide pricing in the short run due to demand conditions. In other words, it must be demonstrated that below cost pricing is economically efficient, rather than a strategy to enhance and maintain market power.' Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, Box 5.1.
[66] ComReg 23/03, para. 9.343.
[67] Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, para 5.17.
[68] Eircom, op. cit, Annex 3, para. 184

that Oxera recommended that Eircom should be allowed to lower prices if it can provide evidence that its **own costs** are also lower than the FTTC anchor,[69] whereas the wording of ComReg in the consultation was that Eircom would be required to show deployment costs for FTTH VUA calculated on the basis of a BU-LRAIC+ costing methodology.[70]

5.10 We consider that the burden of requiring Eircom to construct a BU-LRIC+ model would not be proportionate, when it could provide evidence on its own costs. Therefore, we recommend ComReg provides further clarity on how exactly Eircom could demonstrate the costs of provision.

5.11 However, in so doing, we recommend that any provision of costs by Eircom should be subject to careful review of the underlying assumptions on volumes and allocation of costs. We note that in reporting its own costs Eircom could adopt a cost allocation methodology and market share/volume assumptions that provides more favourable/lower costs than it faces or is likely to face in reality. However, it is also the case that any cost model would need to make assumptions about market shares and take up, which could be set at levels to show much lower unit costs. We note this is an inherent difficulty with unit cost estimation in the presence of substantial elements of fixed costs. In such cases, take up/volume assumptions are critically important and it is possible for cost estimation to be gamed by agents wishing for particular outcomes. The key point is that forecasts should be realistic and, where possible, supported by evidence. The scenario accepted should be one in which there is no assumption that all competing operators have exited the market, so all volumes are captured by the firm subject to the pricing rule.

5.12 Without a requirement for realism and an ongoing presence of at least a rival operator, undesirable outcomes could be generated as Eircom could present very low unit cost estimates—a price might be accepted as above unit cost because all volumes flow to the network in question and such a low price could pass the test in practice simply because the firm has been successful in its strategy of exclusion. Therefore, any provision of costs by Eircom should be subject to careful review

[69] Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, Box 5.1.
[70] ComReg 23/03, para 9.343

of the underlying assumptions on volumes and allocation of costs.

5.13 We also note that the issue of Eircom having to 'prove' its costs are lower than the FTTC VUA price (as a proxy for the floor) is likely to be increasingly relevant over time, if Eircom chooses to increase the FTTC VUA price in line with CPI+0%. It may be that the FTTC VUA price (and thus the FTTH VUA price floor) raises to a level above the reasonable cost of FTTH provision, but under the proposed rules, Eircom would be required to show its FTTH pricing is still above the cost of providing FTTH. In this case, Eircom should be able to price FTTH below this level (provided it is not below the FTTH cost of provision).

5.14 However, if in this case, Eircom shows that the costs of FTTH VUA are then below the price of FTTC VUA services, ComReg ought to consider whether Eircom should also be required to lower its FTTC VUA prices to this new level. We consider that this could be rationalised given that the FTTC floor is being used as a proxy for the FTTH costs (in the absence of a cost model). If the "true" costs of FTTH are lower than the existing FTTC price floor, then it is likely that the "true" costs of FTTC are also lower than this.

5.15 This may be particularly relevant for areas where there is FTTC, but no FTTH (yet).[71] In such areas, customers of FTTC should be protected from FTTC pricing continuing to rise above cost. While there is some protection from the pricing continuity rules (as discussed in section 2), if Eircom demonstrates that FTTH costs are lower than the proxy price floor (FTTC VUA), then a requirement to also lower FTTC prices could also be justified—as noted above, if the "true" costs of FTTH are lower than the existing FTTC price floor, then it is likely that the "true" costs of FTTC are also lower than this.

5.16 Without this requirement, there may be adverse incentives that would slow roll out of FTTH to areas where there is currently only FTTC, especially if higher margins could be made on FTTC VUA services. Having a requirement for any reduction in FTTH

[71] Note, in areas where the FTTC and FTTH are available in parallel, an FTTH price below that of FTTC could be justified on the basis that as volumes shift from FTTC to FTTH the unit costs on FTTH may fall, while those on FTTC will rise. This pricing structure would also stimulate migration to FTTH, which would be aligned with policy goals. There may be less need for an 'equivalence' requirement on FTTC and FTTH pricing in those areas.

prices to be met by a reduction in FTTC prices could re-enforce a restriction on excessive pricing on FTTC only areas.

5.17 However, if ComReg chooses to enforce such an equivalence rule, it should be mindful that in the presence of such an obligation, Eircom would also then factor the implications of this into any decision on whether to lower FTTH prices, potentially weakening any incentive to do so. This is the trade-off that would need to be considered in any decision to adopt this 'equivalence' condition.

5.18 Notwithstanding the above, as acknowledged in the Oxera Part 1 Report, ideally ComReg would review whether FTTH VUA prices are below the costs of provision with respect to its own estimate of the efficient costs of provision (i.e. a ComReg BU-LRIC+ FTTH cost model).[72] Any price below this level would indicate a price that would prevent an efficient operator from competing with Eircom at this price level. We understand that ComReg is in the process of constructing a BU-LRIC+ FTTH cost model, and this could be a good basis on which to set the price floor for FTTH.

5.3 Oxera's final recommendation

5.19 We maintain our original recommendations on the price floor proposals.

5.20 We recommend that ComReg would ideally set the price floor for FTTH VUA services with reference to a clear benchmark for the costs of provision of FTTH VUA services. That is, it would determine whether FTTH VUA prices are below the costs of provision with respect to its own estimate of the efficient costs of provision, based on its own BU-LRIC+ FTTH cost model. However, noting that such a model is still to be finalised, ComReg should allow Eircom to demonstrate the costs of provision with reference to its own costs (including costs of connection where relevant)—supported by transparent overview of the assumptions with regard to volumes used to estimate unit costs, for example.

[72] We stated: 'for FTTH prices, ComReg would ideally assess price levels against the deployment costs indicated in a BU LRIC+ model for the provision of FTTH services. Having a price floor at this level would be effective in ensuring that an efficient operator would be capable of competing with Eircom at this price level, consistent with ComReg's policy objectives'. Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, para 5.20.

5.21 For the avoidance of doubt, we note that any assessment of monthly rental prices against the price floor, should take into account all relevant cost, including FTTH connection costs that are not recovered through connection and migration charges. In particular, we note that Eircom is currently not charging a one-off connection fee (but choosing to recover some of the connection costs via the monthly rental costs).[73] The full cost of connections should also be taken into account in the floor in this instance. This is because, if Eircom maintains a zero price for connections, then lowering its wholesale rental price may mean that this does not cover the full costs of provision. Accounting for costs of connections in the price floor would be consistent with ComReg's position as set out in the Consultation that, 'An assessment of the price floor for FTTH VUA rental services, can also consider the extent to which Eircom is not fully recovering the costs of FTTH connections through once-off charges'[74] and that the estimates of the full deployment costs of FTTH VUA should include 'for the avoidance of doubt, customer specific connection costs'.[75]

5.22 ComReg should also consider the requirement to lower FTTC VUA prices should Eircom lower FTTH prices below the floor (based on FTTC VUA prices). This could be justified particularly in those areas where FTTC is present but FTTH is not (yet) present. This would re-enforce a restriction on excessive pricing on FTTC only areas. However, in making such a decision ComReg should be mindful of the trade-offs involved and consider its policy position on the same.

[73] We understand Eircom has set the wholesale connection charges to zero at the wholesale level for a period of time starting on 1 October 2022, reducing connection/migration charges to €0. Eircom proposed Eircom proposes a Standalone NGA (FTTH) Service Connection and Migration Charge of €0 between 1 October 2022 and 31 March 2023. See Eircom's Reference Access Offer, p. 57, https://www.openeir.ie/wp-content/uploads/2022/09/ARO-Price-List-V23_0-Marked-01102022.pdf. Furthermore, see ComReg Information Note 23/29 which outlines that the Zero charge for Wholesale FTTH connection, migration, and activation continues from 1 April 2023
[74] ComReg 23/03, footnote 672
[75] ComReg 23/03. Para 9.343.

Box 6.1 Summary of position to date

Oxera Part 1 Report recommendation:

We recommended that rather than imposing a ban on wholesale offers by Eircom in the WLA market, as is currently the case, Eircom be allowed to make wholesale offers subject to a case-by-case approval process from ComReg, in line with a number of key principles. These principles should be informed by the dual objectives of promoting competition and encouraging investment, including by ensuring that existing and prospective investment by alternative operators is not jeopardised. Specifically, we stated that ComReg must be satisfied that Eircom's wholesale pricing practices:

- are unlikely to have a material impact on economically efficient alternative investment by other operators that are investing or planning to invest in very high capacity networks; and
- will generate clear and demonstrable benefits, in terms of being a critical element of Eircom's investment plans and/or that the prices will deliver benefits for consumers.

When undertaking its case-by-case assessment, ComReg could consider the following factors:

- The wholesale offers for FTTC/H-based VUA do not prevent new investment by alternative operators or undermine competition through any conditional or loyalty-enhancing offers that would undermine an equally efficient operator's incentive to compete. Long-term discounts that are conditional on volumes or exclusivity may be of particular concern in this regard.
- Any proposals to set different prices for FTTC/H-based VUA services in different geographies can be justified only on the basis of clear and material cost differences between regions. The difference between prices for VUA services in different areas can be only as large as the difference between those areas in the costs of providing the VUA service.

We recommended that ComReg assesses all of these issues in the round, taking into account the particular circumstances and evidence identified by Eircom

ComReg consultation proposal:

ComReg proposed to relax the outright ban on wholesale promotions and discounts (for FTTH services only) and to allow Eircom to introduce wholesale promotions and discounts for FTTH services. However, this is subject to case-by-case prior approval by ComReg, to be granted where ComReg is satisfied that the proposed discount or promotion will not have a detrimental impact on actual or potential economically efficient alternative investment in very high capacity networks, which ComReg will assess having regard in particular to the following.

a) The promotions and discounts for FTTH VUA should not prevent new investment by alternative operators or undermine competition through any conditional or loyalty enhancing effects arising from offers such a retroactive rebates, exclusivity discounts, long-term commitments or volume thresholds undermining an equally efficient operator's incentive to compete or prevent offnet migration;
b) The promotions and discounts for FTTH VUA are not targeted at Eircom retail and can be achieved by a range of Access Seekers; and
c) The promotions and discounts for FTTH-based VUA are not targeted at a specific geographic area. In particular, the wholesale promotions and discounts should not give rise to a geographic differentiation of prices.

ComReg also asked for stakeholders' views as to whether there may be merit in ComReg consulting with industry on any proposed wholesale promotions and discounts as part of ComReg's assessment.

Source: Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, section 5B.2 and 5B.4; ComReg 23/03, para 9.375.

6.1 Summary of respondent's views

6.1 Virgin Media and SIRO expressed concern with the ban on discounts and promotions being removed:

- Virgin Media noted: 'The phase that we are entering into is the crucial transition stage during which VHCN network-based competition in Ireland will either thrive or not

depending on the environment (including, crucially, the regulatory environment). This is precisely the wrong time to be lessening restrictions on a dominant operator that is strongly incentivised to prevent and / or suppress the development of sustainable network-based competition. [...] In other words, the risk of Eircom using FTTP wholesale promotions and discounts to foreclose economically efficient alternative investment is as relevant now as it was when ComReg imposed the ban in the first instance'[76] However, it did also acknowledge that: 'If ComReg does relax the rules on Eircom, it is right that each Eircom request should be assessed on its merits, and subject to obtaining advance approval from ComReg. This is a necessary point of control, since launching a scheme that was subsequently withdrawn could lead to the damage being done.'[77]

- SIRO noted: 'The risk to ComReg in adopting a 'no change' position to its current regulatory ban on discounting for Eircom, is low. However, the benefits of a continued prohibition of wholesale promotions and discount schemes, providing pricing stability and transparency to the market, both retail and wholesale, which is critical for alternative network builders in making long-term investment and planning decisions, are high. Promotions and discounts by a dominant market player can have a distorting impact on the market.'[78]

6.2 Vodafone agreed with the principle of allowing Eircom to offer discounts in areas where ComReg allows pricing flexibility, but highlighted the importance of ComReg carefully assessing the implications of the discount scheme on competition, and it identified a risk that Eircom could structure prices in such a way that undermines competition in both wholesale and retail markets.[79]

6.3 Eircom supported the relaxation of the ban on wholesale promotions and discounts for FTTH VUA and agreed that it is reasonable for these to be non-discriminatory and accessible in

[76] Virgin Media, op. cit., pp. 29 - 30
[77] Virgin Media, op. cit., p. 30.
[78] SIRO, op. cit., p.22.
[79] Vodafone (2023), 'Vodafone Response to Consultation Market Review, Wholesale Local Access (WLA) provided at a fixed location, Wholesale Central Access (WCA) provided at a fixed location for mass-market products' [Non-confidential version], 3 March, pp. 23 - 26

practical terms to other access seekers.[80] It also accepted that promotions and discounts should be clear and not create any market distortions in unfairly benefitting or disadvantaging certain operators depending on their scale, promoting a level playing field for all customers.[81] However, it stated its concerns with the requirement for such commercial offers to only be accepted subject to a case-by-case review and if they are unlikely to have a material impact on economically efficient alternative investment by alternative network operators that are either investing or planning to invest in VHCNs. Eircom considered that such a condition is "completely subjective". It considered that 'ComReg is proposing that eir cannot develop a wholesale promotion which may possibly have "individually and in aggregate" a "material impact" on Siro's business case — but in the knowledge that Siro (and possibly in future Virgin Media) already have no such restrictions they can specifically target promotions that may conversely "individually and in aggregate" have a "material impact" on eir's business case.'[82]

6.4 Several respondents asked for more detail of how offers would be reviewed:

- Virgin noted: 'the principles lack specificity, and could in practice lead to a potentially wide range of deals being waived through. The principles would be strengthened by some additions, for example, by ComReg stating for the avoidance of doubt that loyalty inducing schemes (including schemes that reward volume commitments) will not be permitted.'[83]
- Vodafone asked for more detail on how ComReg will assess whether discounts will dissuade investment by or foreclose alternative operators, and the types of discount schemes that could result in this foreclosure occurring.[84]
- Eircom considered that ComReg should develop a regime of "standard FTTH promotions" that could be agreed, are non-subjective and could be implemented with minimal ComReg scrutiny.[85]

[80] Eircom, op. cit., Annex 3, para. 186.
[81] Eircom, op. cit., Annex 3, para. 186.
[82] Eircom, op. cit., Annex 3, para. 189.
[83] Virgin Media, op. cit., p. 31.
[84] Vodafone, op. cit., p. 25
[85] Eircom, op. cit., Annex 3, para. 193.

6.2 Oxera's response

6.5 We consider that the principles set out in the Oxera Part 1 Report behind why there should be restrictions on wholesale promotions and discounts, remain valid and represent a proportionate intervention—they relax the previous ban on promotions and discounts, but still ensure sufficient protection to avoid cases where Eircom can undermine competition from alternative network operators by, for example, loyalty enhancing offers or promotions such as exclusivity discounts or retroactive rebates.

6.6 We recognise that the market is at a key stage of development, and that infrastructure competition could be severely negatively impacted if Eircom had complete commercial freedom, and this is consistent with concerns raised by Virgin Media and SIRO about the removal of the ban—specifically that Eircom could adopt pricing strategies that undermine their investment. . However, while the proposals to relax the existing ban can and do give Eircom some more commercial freedom, this is subject to certain safeguards constructed based on the lessons learned from ex-post competition law cases regarding the types of practices which are designed specifically to ensure that no offer that would likely create foreclosing and/or distortive effects on competition would be allowed. Protecting infrastructure rivals and giving them space to grow is a key consideration of this proposal, and we consider the protections in place will still prevent behaviour that could foreclose economically efficient alternative investment.

6.7 Further, we note that coupled with the 'price floor' proposals, Eircom is prevented from pricing below its costs and thus an efficient alternative network operator should not be prevented from also pricing at that level. We do not consider it possible for Eircom to 'hide anti-competitive pricing' (as suggested by SIRO) under the rules proposed.

6.8 We do not agree with Eircom that it is 'unreasonable' or 'unfair' that Eircom is subject to these rules but rivals such as SIRO and Virgin Media are not. The asymmetric regulation is a function of Eircom having been designated as having SMP.

6.9 While, Eircom consider that the restrictions that remain are 'subjective' and do not provide clarity on what will be accepted or not, we disagree that this is subjective, but acknowledge that it requires a degree of judgement. Guidance can be provided in

advance as to the types of offers that would be concerning, and how ComReg would consider them. Indeed this has already been provided by Oxera[86] and ComReg in the consultation[87]), outlining the types of offers or conditions that would raise concerns. Further, we also note that in recent reviews of Eircom Wholesale pricing notifications, ComReg has indicated the types of considerations and checks it would carry out to assess whether the proposals are likely to have adverse impacts on alternative network operators.[88] For example, the use of the 'as efficient competitor' test to assess whether an efficient competitor can effectively match the offer made by the dominant company.[89]

6.10 However, it would not be reasonable or helpful to attempt to codify all possible types of circumstance that might arise, as these may be very specific to the details of the offer being notified. As such, ComReg will have to assess requests for changes to wholesale prices on a case-by-case basis. It will need to take into account any particular conditions identified by Eircom, and the levels of the discount, guided by the overarching principles that, for such pricing practices to be allowed, they must not have a material impact on existing or nascent competition, and must generate clear benefits in terms of being a critical element of Eircom's fibre investment plans.

6.11 Further, it would not be appropriate for ComReg to develop a regime of "standard FTTH promotions" that could be agreed (as suggested by Eircom)—this is not the role of ComReg and it should not be involved in developing the commercial offers that Eircom will be allowed to put to the market.

6.12 While Virgin Media (and SPC networks) considered some specific clarifications should be provided as to specific types of offers that would never be allowed, we consider that being explicit on certain rules, as Virgin Media suggest, would be going too far. For example, while it flagged volume discounts could be banned,

[86] Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, section 5B.2.
[87] ComReg 23/03, paragraph 9.356 – 9.361.
[88] See ComReg Information Notice 23/24 - https://www.comreg.ie/media/2023/03/ComReg-2324.pdf.
[89] For example, in the case of 'loyalty rebates', the as-efficient competitor test can be performed by checking whether a company that has the same cost structure as the dominant company is able to profitably match the dominant company's offer, when all rebates that the customer would lose in case it switched supplier are applied to the 'contestable share' of the customer's demand (i.e. the part of the customer's demand that it could realistically switch away to the competitor). The test allows us to determine the 'effective price' the 'as efficient competitor' would need to set in order to win the customer. This effective price can then compared against the costs of provision (e.g. LRIC+) to assess whether this price would be sustainable.

it is not that case that these are always anti-competitive and to ban them outright would overly constrain Eircom's behaviour and potential benefits for dynamic and allocative efficiency. For example, volume commitments can reduce risk, and therefore cost, and cannot be banned outright. For example, volume commitment discounts is explicitly covered in the Draft Gigabit Recommendation as potentially being justified under certain circumstances:[90]

- 'This could result in lower prices for long-term agreements with volume guarantees, which could reflect access seekers taking on some of the risks associated with uncertain demand.'
- 'Volume discounts and/or long-term access-pricing agreements are an important tool to foster VHCN investment, in particular where take-up by consumers is still low. However, to ensure that market entry by efficient competitors is possible, NRAs should accept volume discounts by SMP operators to their own downstream businesses, for example their retail arm, only if these discounts do not exceed the highest volume discount offered in good faith to third party access seekers. Equally, NRAs should accept long-term access-pricing agreements by SMP operators to their own downstream businesses, e.g. their retail arms, only if they do not exceed the highest discount for long-term access that has been offered in good faith to third party access seekers.'

6.13 Therefore, there may be a place for volume discounts and they should not be banned outright, but it is important that the conditions of accessing such volume discounts are non-discriminatory and not set in a way that could have loyalty enhancing effects. For example, what would be problematic is if the volume thresholds are aimed at particular operators, or if only Eircom Retail can meet them, which would then cause distortions downstream. In the Oxera Part 1 Report, we emphasised that volume thresholds at which the discounts apply should not be targeted such that, in practice, they can be met only by Eircom's downstream arm. If Eircom were able to favour its downstream arm (for example, by setting the volume

[90] European Commission (2020), Gigabit connectivity recommendation, 23 February. See Annex IV, and Recitals 25 and 59

threshold to obtain a discount at a level that only Eircom's retail arm is able to achieve), it could leverage its wholesale market power at the retail level, which could adversely affect competition to the detriment of consumers.[91]

6.14 Finally, we consider that ComReg ought to consider broadening its assessment beyond simply "information provided by Eircom" and consider seeking inputs from all parties (as suggested by Virgin Media/SPC) in cases where the impact of the offer proposed by Eircom. This would be particularly valuable where the proposals of Eircom may not be in clear breach of the guidance above, nor clearly acceptable and where additional information from other stakeholders on how they consider the proposals would impact them (supported by evidence) may provide valuable additional information to support ComReg in its assessment.

6.3 Oxera's final recommendation

6.15 We do not propose any change to our recommendations on the approach surrounding wholesale commercial offers.

6.16 However, we recommend that ComReg does consider getting inputs from interested parties to feed into its assessment of Eircom wholesale notifications where they may not be in clear breach of the guidance above, nor clearly acceptable.

6.17 We also consider it inappropriate for ComReg to set specific examples of what is allowed (as suggested by Eircom that it should develop a regime of 'standard promotions that could be agreed') or having an outright ban on some things such as volume discounts (as suggested by Virgin Media/SPC), given that volume and commitment discounts can reduce risk and therefore costs—as set out in the Draft Gigabit Recommendation.[92]

[91] Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, para 5.30.
[92] European Commission (2020), Gigabit connectivity recommendation, 23 February

7 FTTH Connection/Migration charges

Box 7.1 Summary of position to date

Oxera Part 1 Report recommendation:

In this market context, we considered that there were two alternatives with regards to connection and migration charges:

Option 1: continue with the existing approach of requiring connections and migrations to be equalised and not (together) increase to levels that would lead to over-recovery of connection costs;

Option 2: take steps to limit migration charges above cost, to avoid distortions to the migration decision as a larger number of customers are already connected to the network, and place limits on connection charges to ensure that new connections remain affordable and are not adversely affecting the take-up of FTTH services.

ComReg consultation proposal:

ComReg proposed to maintain the existing policy that connection and migration costs are recovered by way of equalised connections and migration charges, but subject to an overall price cap,. ComReg considers that the equalisation policy should be maintained but subject to a cap on connection/migration charges so that stakeholders benefit from greater certainty in respect of the future level of connection/migration charges than currently exists. This also addresses any possible distortion that might arise from having a migration charge that is above the incremental cost of the migration. ComReg in this regard proposed to cap the equalised connection/migration charge at €100 (the rate that Eircom applied between 1 July 2020to 30 September 2022 and was expected to be reintroduced on 1 April 2023)

Source: Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, Section 6B.2; ComReg 23/03, para 9.285 and para 9.308

7.1 Summary of respondent's views

7.1 Eircom and Virgin Media were in broad agreement with ComReg's proposals. Eircom commented that 'we believe that charging a national price of €100 per FTTH event provides appropriate signals to the market that eir is committed to its fibre investment.'[93] While Virgin Media acknowledged: 'There may not be a precisely right answer at the moment and ComReg should keep the approach under review. That said, the proposals may strike about the right balance since in practice they allow significant flexibility, particularly when noting that evidence shows that to date Eircom (and others) have adopted a pricing strategy that encourages take up and migration, with costs recovered via the product rentals.'[94]

7.2 Vodafone considered that ComReg should ensure that the cap on Eircom's FTTH connection/migration charges is reflective of costs.[95]

7.3 SIRO disagreed, stating that the cap on connection costs of €100 is too low. Specifically: 'SIRO believes that the arbitrary choice of €100 as a connection cost cap is too low to allow Eircom to recoup transparently all the costs that they may be required to carry. In order to ensure a basic level of price flexibility, SIRO believes, in the first instance, that Eircom should not be subject to a connection cost price cap, however in the event that a cap is to be imposed, that it should be in the order of the €270 which was a connection cost in the market prior to 1st January 2019.'[96]

7.2 Oxera's response

7.4 With regard to connection and migrations, it is relevant to note that Eircom has, for some time, been setting its connection (and migration) charges to zero.[97] We also note that since the Oxera Part 1 Report, Eircom has extended the zero FTTH Connection/Migration Charge indefinitely.[98] In this regard, if this charging behaviour continues to be the norm during the market

[93] Eircom, op. cit., Annex 3, para 243.
[94] Virgin Media, op. cit., p. 34.
[95] Vodafone, op. cit., p. 23.
[96] SIRO, op. cit., p. 21
[97] For example, Eircom set a Standalone NGA (FTTH) Service Connection and Migration Charge of €0 between 1 October 2022 and 31 March 2023. See Eircom's Reference Access Offer, p. 57, https://www.openeir.ie/wp-content/uploads/2022/09/ARO-Price-List-V23_0-Marked-01102022.pdf
[98] ComReg Information Note 23/29. Available at: https://www.comreg.ie/media/2023/03/ComReg-2329.pdf

review period, concerns about the level of connection charges affecting customers' decisions to take up FTTH, and any potential distortions to competition resulting from above-cost migration charges (that we discussed in the Oxera Part 1 Report[99]) may continue to be unwarranted.

7.5 Of course, it must also be true that, in order to avoid below cost pricing, the costs of connections and migrations would need to be recovered from elsewhere. Indeed, the regulatory framework affords a sufficient degree of flexibility for Eircom to seek to recover costs through other charges—for example, in the monthly rental charge that we recommend should continue to be subject to pricing flexibility. The recovery of costs from alternative sources is the approach that Eircom must be taking currently, given its observed commercial behaviour and previous behaviour whereby the connection charge was set below the costs of the connection.

7.6 Alternative network operators should not be adversely affected by this, given, as noted under the price floors assessment above, any costs of connection that would need to be recovered via the monthly rental fee should be accounted for when assessing any FTTH monthly rental price against the price floor, to ensure that overall prices are not below the level that would be replicable by an efficient alternative network operator.

7.7 Where a cap is to be imposed on connection and migration charges (supposing that the commercial policy of Eircom does change from the currently observed €0 upfront prices), as proposed by ComReg, the main disagreement in the response to consultation was on the 'level' of the cap ComReg have chosen. Specifically, SIRO considered connection charges should be able to be charged at a higher price than the €100.

7.8 A justification for a higher cap, would be to ensure that alternative network operators (who face a connection costs higher than this level) are not adversely affected. However, even if the cap is below the incremental cost of delivering a new connection, given that as stated above, the costs of connection should be accounted for in assessing whether Eircom's pricing are below the full costs of provision, such that, overall, prices

[99] Oxera (2023), 'WCA/WLA market review; Oxera report: Part 1', 16 December, Section 6B

are not below the level that would be replicable by an efficient alternative network operator.

7.9 In addition, while a higher cap on the connection fee may be set, setting the cap too high (for example at €270 such that Eircom could move from its commercial strategy of spreading costs across rental and rather charge for the full cost of connections upfront, this could run the risk of undermining the take-up of FTTH services by new customers, which may not be a desirable outcome from a policy perspective.

7.10 We maintain our view that as the market develops and the balance across connections and migrations shift toward a greater number of migrations, any departure from Eircom's current pricing policy of €0 migration costs, alongside a policy that would allow migration charges significantly above the cost could lead to a structure of charges that could distort competition in the retail market as it could mean the end-user were to face higher switching costs as a result (i.e. if the RSP were to pass on the migration costs to customers), and result in a reduction in migrations to competitors.

oxera

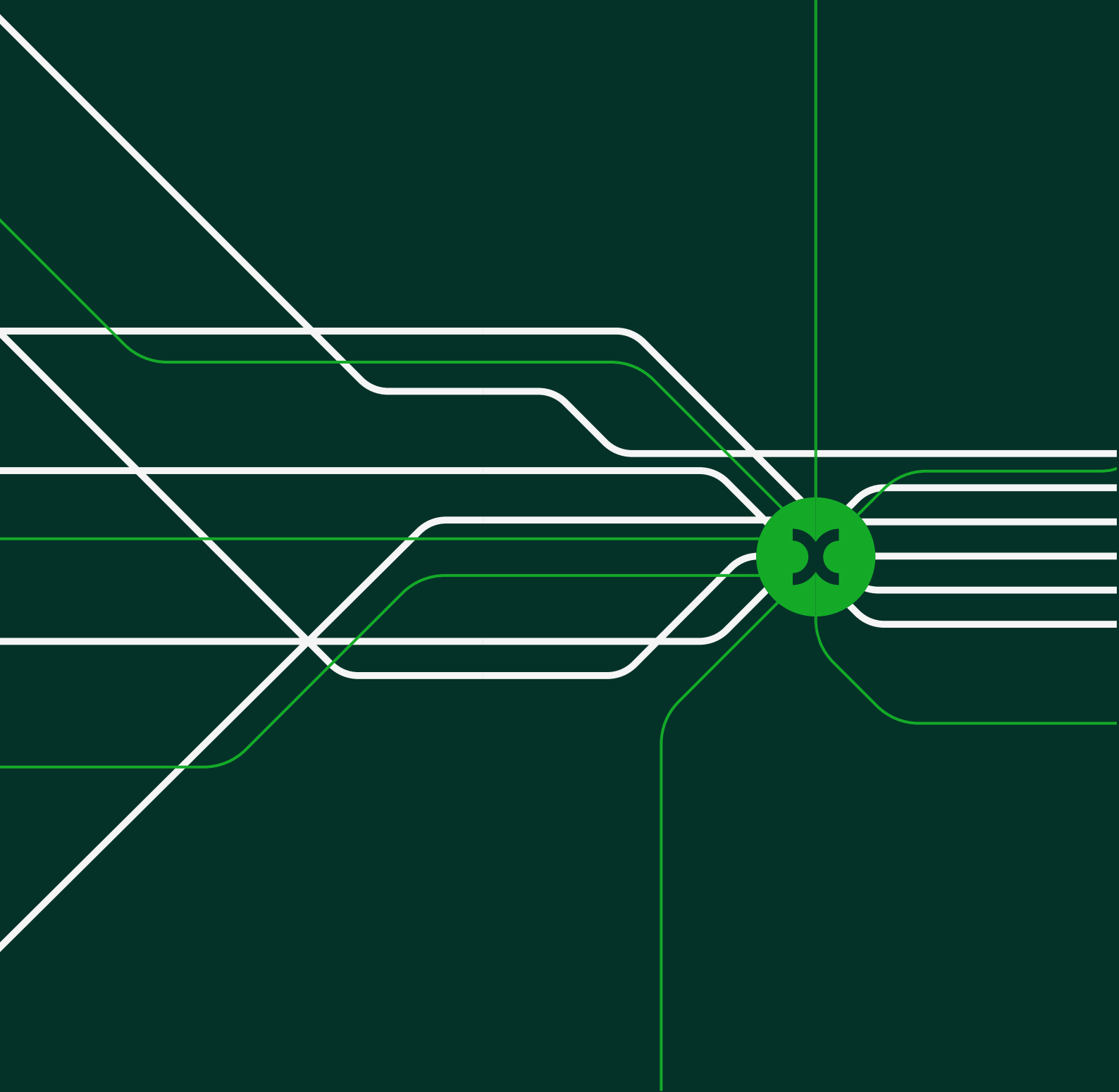
oxera.com

WCA/WLA market review: Oxera Updated Part 3 Report [Non-confidential version]

—

Prepared for the Commission for Communications Regulation

11 January 2024



Contents

1	Introduction and summary	4
2	The need for a margin squeeze test on FTTC VUA services with respect to downstream retail products	9
2.1	Summary of respondents' views	9
2.2	Oxera response	10
2.3	Oxera's final recommendation	15
3	The need for a margin squeeze test on FTTH VUA services with respect to downstream retail products	16
3.1	Summary of respondents' views	16
3.2	Oxera response	17
3.3	Oxera's final recommendation	20
4	Further specification of the FTTH VUA MST	22
4.1	Relevant retail products	22
4.2	Cost standard and level of product aggregation	25
4.3	Benchmark operator	35
4.4	Revenues	36
4.5	Profitability approach: average customer lifetime	40
5	The need for a margin squeeze test on FTTH VUA services with respect to downstream wholesale FTTH Bitstream services	49
5.1	Summary of respondents' views	49
5.2	Oxera response	50
5.3	Oxera's final recommendation	56

Figures and Tables

Table 1.1	Recommended specification of the FTTH VUA MSTs	5
Box 2.1	Summary of position to date	9
Figure 2.1	Retail broadband subscriber lines by technology	12
Box 3.1	Summary of position to date	16
Box 4.1	Summary of position to date	22
Box 4.2	Summary of position to date	25
Box 4.3	Summary of position to date	35
Box 4.4	Summary of position to date	36
Box 4.5	Summary of position to date	40
Table 4.1	Stylised example of the treatment of acquisition and retention costs under the product-by-product test	45

Table 4.2	Stylised example of the treatment of acquisition and retention costs under the product-by-product test	45
Box 5.1	Summary of position to date	49

1 Introduction and summary

1.1 In January 2023, The Commission for Communications Regulation (ComReg) published the provisional findings of its market review of the wholesale local access (WLA) and wholesale central access (WCA) markets.[1] We supported ComReg in reaching its provisional conclusions by providing recommendations on the most appropriate wholesale price control and MST obligations for the next five years, in relation to those services over which ComReg provisionally concluded that Eircom holds SMP. We produced two Expert Economic Reports:

- The 'Oxera Part 1 Report':[2] in this report, we focussed on wholesale price controls to address concerns about excessive pricing and exclusionary behaviours. Specifically, we considered the need for and—where appropriate the design of—wholesale price control obligations for the monthly rental fees for FTTC VUA and FTTH VUA services (NGA services) in the Commercial NG WLA Market.
- The 'Oxera Part 3 Report':[3] in this report, we focussed on the need for ex ante obligations to address the concerns of a margin squeeze occurring and the options available to ComReg. Specifically, we considered the need for and, where appropriate, the design of ex ante MSTs for FTTC VUA and FTTH VUA services (NGA services) in the Commercial NG WLA Market. Our assessment of the need for ex ante MSTs was considered in the context of the recommendations set out in the Oxera Part 1 Report.

1.2 Following the assessment presented in the Oxera Part 3 Report, our recommendation to ComReg was that:

- ex ante MSTs on FTTC VUA services with respect to downstream retail products are no longer required;

[1] ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision; ComReg 23/03', 9 January. Hereafter referred to as 'ComReg 23/03'.
[2] Oxera (2022), 'WCA/WLA market review; Oxera report: Part 1', 16 December. Hereafter referred to as the 'Oxera Part 1 Report'
[3] Oxera (2022), 'WCA/WLA market review; Oxera report: Part 3', 16 December. Hereafter referred to as the 'Oxera Part 3 Report'.

- ex ante MSTs should continue to be imposed on FTTH VUA services with respect to downstream retail products.

1.3 In the Oxera Part 3 Report, we recommended that the FTTH VUA MSTs should be specified in line with Table 1.1.

Table 1.1 Recommended specification of the FTTH VUA MSTs

MST building block	Recommendation
Relevant products	All FTTH retail products sold by Eircom, including standalone and bundles
Cost standard and level of aggregation	Product-by-product tests: LRIC Portfolio test: LRIC+ or ATC
Benchmark operator	Equally Efficient Operator (EEO)
Revenues	Promotions and discounts included Out of Bundle (OOB) revenues included (if they are replicable)
Profitability approach	Discounted Cash Flow (DCF)

Source: Oxera.

1.4 In the Oxera Part 3 Report, we also recommended that there was no need for an ex ante margin squeeze obligation to be imposed on FTTH VUA services with respect to downstream wholesale FTTH Bitstream services (i.e. the 'wholesale' margin squeeze test).

1.5 ComReg took the recommendations from the Oxera Part 3 Report into account in reaching its provisional conclusions, as set out in consultation and draft decision.[4] ComReg largely accepted our recommendations. The main aspect on which ComReg proposed to adopted a different approach was in relation to the relevant retail products to be included in the

[4] ComReg 23/03.

FTTH VUA MST. ComReg proposed to test only 'flagship products', rather than all FTTH retail products sold by Eircom.[5]

1.6 As part of the consultation process, ComReg received submissions from 10 interested parties who commented on its proposals, including those set out above.[6]

1.7 To support ComReg in reaching its final decision, we have prepared this report (the 'Oxera Updated Part 3 Report') as an addendum to the Oxera Part 3 report. In this report, we consider the submissions of respondents to the consultation and consider the implications for the recommendations presented to ComReg in the Oxera Part 3 Report.

1.8 To the extent that consultation responses focus on the specific proposals of ComReg that took a different position to our recommendations in the Oxera Part 3 Report, or raise issues that were not covered within Oxera's scope, we do not provide a direct response to those comments.

1.9 In this report, we take each of the key recommendations in turn and assess the submissions received and set out our position on the same. Specifically, we consider:

- the need for a margin squeeze test on FTTC VUA with respect to downstream retail products;
- the need for a margin squeeze test on FTTH VUA services with respect to downstream retail products;
- further specification of the FTTH VUA MST;
- the need for a margin squeeze test on FTTH VUA services with respect to downstream wholesale FTTH Bitstream services.

1.10 For each, we provide a brief summary of the recommendation set out in the Oxera Part 3 Report, the proposed position adopted by ComReg in its consultation, and a high level summary of the submissions of the respondents to that issue. We then set out our position and direct responses to specific

[5] ComReg 23/03, paras 9.502–9.520.
[6] ComReg received submissions from: ALTO, BT, Eircom, Imagine, NBI, SFG (ENET), Siro, Sky, Virgin Media, and Vodafone. ComReg also received consultant reports from Copenhagen Economics (on behalf of Eircom) and SPC Network (on behalf of Virgin Media).

points raised by respondents, and any changes to our recommendation.

1.11 Our assessment is considered in the context of our final recommendations on wholesale price controls to address the concerns of excessive pricing and exclusionary behaviours, which we present in the Oxera Updated Part 1 Report.[7]

1.12 Having considered the submissions to ComReg's consultation, our final recommendations are as follows:

- We maintain our recommendation that ex ante MSTs on FTTC VUA services with respect to downstream retail products are no longer required.
- We maintain our recommendation that ex ante MSTs should continue to be imposed on FTTH VUA services with respect to downstream retail products.
- We maintain our recommendation that the MSTs on FTTH VUA services should be specified as per Table 1.1 above. In section 4, where appropriate, we provide additional clarity on the specification and implementation of certain aspects of the FTTH VUA MST.

1.13 With regard to the need for a margin squeeze test on FTTH VUA services with respect to downstream wholesale FTTH Bitstream services, we maintain our view that the presence of the FTTH VUA MST (which includes backhaul costs) would, in general, undermine Eircom's incentives to engage in a margin squeeze between FTTH VUA and Bitstream through its national pricing, for the same reasons outlined in the Oxera Part 3 Report.

1.14 However, we recognise that in the absence of a MST between FTTH VUA and Bitstream (and in the absence of any regulation on WCA services) it may be possible for Eircom to engage in targeted discounting of the FTTH Bitstream service to circumvent ComReg's proposed remedies (i.e. restrictions on wholesale discounts and differential geographic wholesale pricing) with the risk that this may foreclose the market to rival alternative network operators.

[7] Oxera (2024), 'WCA/WLA market review: Oxera Updated Part 1 Report', 11 January.

1.15 In the absence of imposing an ex ante wholesale MST between FTTH VUA and FTTH Bitstream (specifically, in the urban WCA areas, where this behaviour may be targeted) and in the absence of ex ante regulation on the WCA services, given the potential risk identified, ComReg should continue to monitor market developments closely. It could do this, for example, through its detailed monitoring of commercial offers. In particular, ComReg could undertake systematic gathering of information from network providers and access seekers on FTTH services and the associated prices (including Bitstream prices). This monitoring would allow it to assess whether there are signs that Eircom's commercial strategy is shifting towards the provision of FTTH Bitstream instead of FTTH VUA, and whether it is launching commercial offers which have the effect of circumventing the obligations not to engage in behaviour that can materially affect infrastructure competition, such as geographically targeted offers.

1.16 Should ComReg identify such concerns, it could decide to intervene. This may, for example, involve re-opening the market review process to reconsider its decision to de-regulate the WCA market, or impose a specific wholesale margin squeeze test in that targeted geography, or use its competition law powers.

1.17 In any case, we note that the targeted discounting of Bitstream pricing may be in breach of the non-discrimination obligations in place on the FTTH VUA service, which is a key input to FTTH Bitstream services. For example, a VUA customer would be placed at a disadvantage by purchasing VUA directly from Eircom and adding backhaul and co-location elements, compared to the alternative of purchasing VUA as part of Eircom's Bitstream service. As such, if ComReg identified changes to the pricing practices of Eircom on its Bitstream services, specifically, targeted discounting, then ComReg could investigate these practices. The precise action that ComReg would take if it does observe Eircom behaving in this way will be for ComReg to decide at that point in time, subject to the specific nature of the practice.

2 The need for a margin squeeze test on FTTC VUA services with respect to downstream retail products

Box 2.1 Summary of position to date

Oxera Part 3 Report recommendation: In the presence of the proposed wholesale price control on FTTC VUA, ex ante margin squeeze obligations should not be imposed on FTTC VUA.

ComReg consultation proposal: ComReg is of the view that Eircom is unlikely to engage in a margin squeeze for FTTC retail offerings (in the presence of the proposed price continuity for FTTC VUA services). It is proposed therefore that it should not be subject to an ex ante MST. Eircom would however continue in any event to be subject to ex post competition law obligations.

Source: Oxera Part 3 Report, para. 4.37; ComReg 23/03, para. 9.428.

2.1 Summary of respondents' views

2.1 Sky argued that removing the FTTC VUA MST is premature.[8] In particular, Sky had concerns given its view that FTTC 'remains a significant technology platform … particularly when ubiquitous FTTH is still some way off'.[9] It argued that 'if FTTH roll out is not completed at the pace that Eir is currently suggesting, Eir may be in a position to operate a FTTC margin squeeze'.[10] Sky also suggested that ComReg should adopt the same degree of caution in respect of Eircom's planned FTTH network roll-out as it does for Virgin Media and SIRO, and to reflect this in its

[8] Sky (2023), 'Sky's response to ComReg's Consultation and Draft Decision: Market Review of Wholesale Local Access and Wholesale Central Access' [non-confidential version], 3 March, p. 5.
[9] Sky (2023), op. cit., p. 4.
[10] Sky (2023), op. cit., p. 5.

assessment of Eircom's incentives to engage in a margin squeeze on FTTC.[11]

2.2 Speed Fibre Group (SFG) also argued that removing the FTTC VUA MST is premature as FTTC is currently the dominant technology, and that the withdrawal of the FTTC VUA MST is based on an assumption of 100% FTTH coverage network coverage by Eircom.[12]

2.3 SFG suggested that the ability to increase FTTC VUA prices by CPI-0%, combined with the withdrawal of the FTTC VUA MST [✂].[13]

2.2 Oxera response

2.4 Our recommendation in the Oxera Part 3 Report was to not impose ex ante margin squeeze obligations on FTTC VUA was based on the following factors:[14]

- FTTC services are showing early signs of decline, with this expected to continue and accelerate across the market review period, as the focus of competition shifts towards FTTH services.
- Eircom is undertaking an extensive investment programme in FTTH and will need to monetise this investment by migrating consumers from legacy networks to FTTH.
- Given the recommendation for a price control on FTTC VUA based on flat real prices, if Eircom were to engage in a margin squeeze on FTTC VUA, it would have to do so through a reduction in its retail FTTC prices.
- Lowering FTTC retail prices is likely to slow the speed of natural migration from FTTC to FTTH, which would impede Eircom's objectives of encouraging migration to FTTH as it rolls out its fibre infrastructure.
- Lowering FTTC retail prices would also mean that Eircom would incur (potentially significant) losses, and may face challenges in recouping these losses after implementing the margin squeeze.

[11] Sky (2023), op. cit., p. 5.
[12] Speed Fibre Group (2023), 'Response to Consultation' [non-confidential version], p. 28.
[13] Speed Fibre Group (2023), op. cit., p. 28.
[14] For more detail see: Oxera Part 3 Report, section 4.

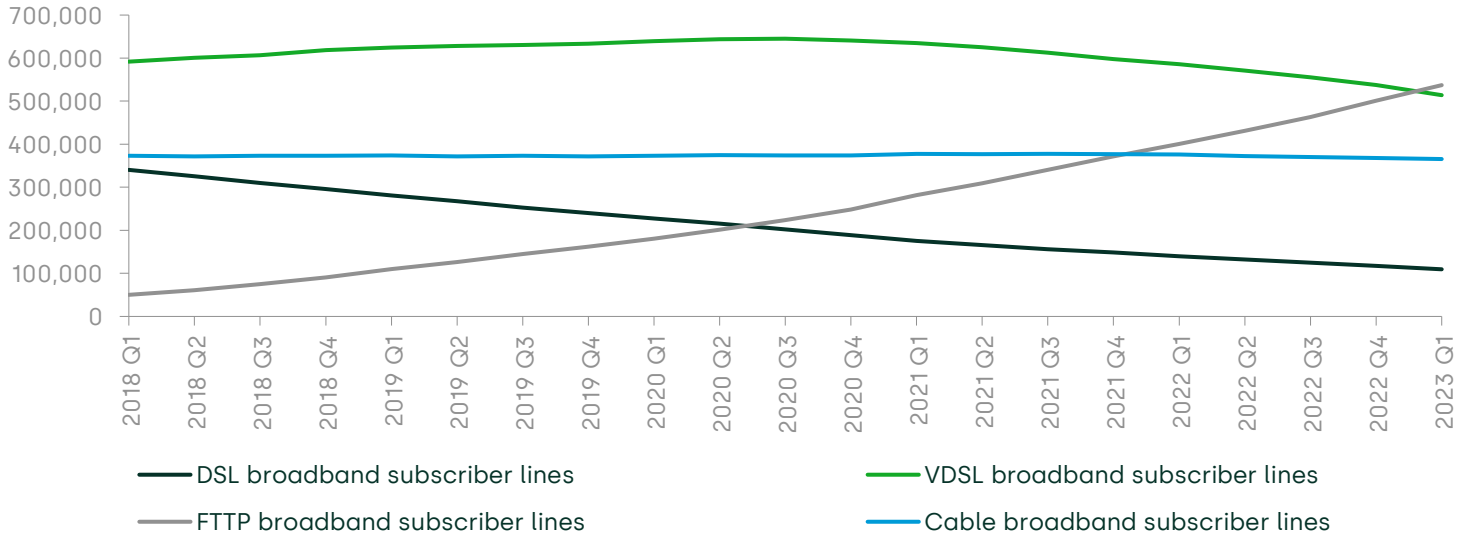
2.5 As explained above, our recommendation to not impose a FTTC VUA MST was based, in part, on Eircom being strongly incentivised to encourage consumers to migrate from FTTC to FTTH. Given that a margin squeeze implemented through a reduction in FTTC retail prices runs counter to Eircom's strategy to encourage migration to its FTTH network, its incentives to squeeze on FTTC VUA are likely to be low.

2.6 More recent evidence, which has become available since the publication of the ComReg Consultation, indicates that Eircom is continuing to invest in deploying its FTTH network. Eircom's FTTH network rollout has passed 1.08 million premises (around 47% of the total premises in Ireland) in Q2 2023; this represents an increase of 219k premises (25% year-on-year growth) relative to Q2 2022.[15]

2.7 In addition, the trends in retail broadband lines demonstrate the continued shift away from legacy technologies as consumers migrate to FTTH services (as shown in Figure 2.1). Notably, the number of FTTC lines has declined in each quarter since 2020 Q3, and in 2023 Q1 FTTH overtook FTTC to become the dominant technology used to provide retail broadband services in Ireland. While the growth rate in FTTH lines has somewhat stabilised (at around 7–8% per quarter), the rate of decline in FTTC lines appears to be showing early signs of accelerating (increasing from 1% per quarter in 2020 Q4 to 4% per quarter in 2023 Q1).[16]

[15] Oxera analysis based on: Eircom (2023), 'eir Group Results: for the quarter ended 30 June 2023', 29 August, p. 7. Available at: https://www.eir.ie/opencms/export/sites/default/.content/pdf/IR/presentations/2022_2023/eir_Q2-23_results_presentation.pdf [accessed 7 September 2023].
[16] Oxera analysis based on: ComReg QKDR 2023 Q1.

Figure 2.1 Retail broadband subscriber lines by technology



Note: FTTH is labelled as 'FTTP' and FTTC is labelled as 'VDSL' are per the QKDR data.
Source: Oxera analysis based on: ComReg QKDR 2023 Q1.

2.8 This evidence is consistent with the expectation that Eircom will continue to roll out its fibre network and seek to encourage migration from FTTC services to FTTH over the review period, where FTTH will be the focus of competition. Therefore, we consider that Eircom's incentives to squeeze on FTTC VUA through reductions in retail prices will be low due to the negative effect this could have on the rate of migration from FTTC to FTTH.

2.9 Contrary to SFG's suggestion, ComReg's (and, by extension, our) assessment as set out above does not rely on a 100% coverage assumption for Eircom's FTTH network. Rather, our assessment considers the relative trade-offs for Eircom associated with a margin squeeze on FTTC VUA, taking into account the actual and expected presence of its FTTH network rollout (which need not reach 100% FTTH coverage).

2.10 Sky expressed concerns in relation to the degree of caution adopted in relation Eircom's planned FTTH rollout, in particular with regards to the assessment of Eircom's incentives to engage in a squeeze on FTTC. The evidence above suggests that Eircom is continuing to roll out its FTTH network and, importantly, demonstrates the shift in competitive dynamics towards FTTH. In this context, a margin squeeze on FTTC runs counter to Eircom's incentives, as described above.

2.11 In the areas where FTTH is slow to reach and FTTC is still used to serve a material share of subscribers the reasoning set out above—contingent on FTTH being present—may be less relevant in the absence of the current practice of national pricing. In that case, it may be possible that the absence of FTTH in some areas could potentially weaken the constraining effect of Eircom's FTTH network rollout on its incentives to margin squeeze on FTTC VUA in those areas. For example, suppose Eircom departed from its current longstanding national retail pricing strategy, it could (in theory) seek to engage in a targeted margin squeeze on FTTC VUA in areas where it had not yet deployed its FTTH network by lowering retail FTTC pricing in those areas. While in these areas there would not be the same constraining effect of Eircom's FTTH network rollout on its incentives to margin squeeze on FTTC VUA, the factors outlined in paragraph 2.12 below would still apply, particularly around recoupment.

2.12 Even if FTTC continues to serve a material number of lines, potentially due to a reduction in the pace of Eircom's FTTH network rollout (though we note that no evidence has been presented to suggest this is the case), there are further factors which weaken Eircom's incentive to squeeze on FTTC VUA, as explained in the Oxera Part 3 Report:

- Due to the presence of a wholesale price control on FTTC VUA, a margin squeeze would need to be implemented through a reduction in FTTC retail prices, meaning Eircom would incur losses at the retail level relative to not engaging in a squeeze.[17] These losses could be significant, as the presence of a number of well-established FTTC retail providers means Eircom may have to engage in a 'deep' squeeze for a sustained period in order to materially undermine its rivals.[18]
- Given the presence of (potentially significant) losses, Eircom would need to have clear prospects of recouping these losses following the implementation of the margin

[17] We note that Eircom announced that it plans to increase prices annually in April each year in line with the rate of CPI (published in the previous January), plus an additional 3%. This pricing policy came into force this year, with an 8% increase in prices in April 2023. Eircom, 'Price change for eir customers'. Available at: https://www.eir.ie/annual-price-increase/#:~:text=The%20annual%20price%20adjustment%20will,in%20January%202023%20was%208.2%25 [accessed 7 September 2023].
[18] For more detail see: Oxera Part 3 Report, paras 4.10–4.16.

squeeze. However, it is likely to face a number of challenges in recouping an such losses.[19]

- Specifically, recoupment through higher FTTC retail prices in future could be challenging as access seekers would be able to resume providing FTTC (competing prices down such that Eircom cannot recoup losses)[20]; and/or customers may have the option of switching to an FTTH service in light of increased FTTC prices, which will be increasingly available.
- Second, Eircom may struggle to recoup losses by upgrading these customers to its own FTTH services at a higher price, given that it will face competition on FTTH services at the retail level from access seekers using Eircom's FTTH network (and end-to-end providers, where coverage overlaps).

2.13 We maintain this reasoning still holds.

2.14 Therefore, we consider Eircom is likely to have a low incentive to engage in a targeted margin squeeze on FTTC VUA in these areas (notwithstanding any other considerations relevant to a decision to depart from its national pricing strategy).

2.15 SFG suggested that the presence of a CPI-0% price control on FTTC VUA [✂]. However, as explained in the Oxera Part 3 Report:[21]

Under the recommendations for pricing continuity for FTTC VUA services, with the price allowed to increase in future by no more than inflation, Eircom's ability to engage in a margin squeeze under this approach does not materially differ from its ability to do so under a cost-based price control … Indeed, the starting point for the recommended price control is the current price from the bottom-up LRIC+ model. While the flat, real pricing continuity approach could produce a slightly higher price path for FTTC prices (compared with the continuation of the BU LRIC+ model),

[19] For more detail see: Oxera Part 3 Report, paras 4.16–4.18.
[20] Recoupment of these losses through higher FTTC retail prices could only be achieved if Eircom were to be successful in eliminating competition from retail FTTC services as a result of the squeeze (i.e. with access seekers exiting the Irish market entirely), such that it can leverage its subsequent market power in respect of FTTC at the retail level. In this scenario, the incentive to engage in a squeeze depends, in part, on how long Eircom would be willing to incur losses on FTTC services to fully drive out the competition such that it could later increase prices without the threat of re-entry. Given Eircom faces a number of well-established access seekers at the retail level which supply FTTC broadband services, Eircom may need to significantly reduce FTTC retail prices for a sustained period of time, in order to weaken these access seekers and, ultimately, force them to exit the market.
[21] Oxera Part 3 Report, paras 4.29–4.30.

given that no explicit efficiency assumptions would be included, it still limits the extent to which prices can rise above general inflation levels.

2.16 In this context, in making the decision over whether an ex ante MST is required depends on an assessment of proportionality, especially in light of the 'backstop' of an ex-post margin squeeze investigation under ComReg's competition law powers. For the reasons set out in the Oxera Part 3 Report, the updated evidence, and the points set out above, we maintain the view that, in the presence of the proposed wholesale price control on FTTC VUA, we consider Eircom's incentives to squeeze on FTTC VUA are low.

2.3 Oxera's final recommendation

2.17 We maintain our view that Eircom's incentives to engage in a margin squeeze on FTTC VUA is low. Given these low incentives, the benefits offered by imposing ex ante margin squeeze obligations of FTTC VUA in terms of avoiding harmful effects on retail competition and consumers are likely to be low. Balancing the low risk of an MST occurring, against the costs (in terms of the regulatory burden imposed on Eircom and, by association, ComReg) of continuing with an ex ante MST requirement, we consider that it would be proportionate to remove the ex ante margin squeeze obligations on FTTC VUA services.

2.18 Importantly, Eircom would continue to be subject to competition law, which offers a backstop to investigate Eircom if it were to engage in a margin squeeze on FTTC VUA on an ex post basis. In this regard, we note that Eircom faces a number of well-established operators at the retail level, such that if a squeeze does occur and is identified early, it can still be reviewed ex post and sanctioned, without this having caused material harm in terms of the exit of players.

2.19 For these reasons, we maintain the recommendation presented in the Oxera Part 3 Report:

In the presence of the proposed wholesale price control on FTTC VUA, ex ante margin squeeze obligations should not be imposed on FTTC VUA.

3 The need for a margin squeeze test on FTTH VUA services with respect to downstream retail products

Box 3.1 Summary of position to date

Oxera Part 3 Report recommendation: In the absence of a direct wholesale price control on FTTH VUA, ex ante margin squeeze obligations should be imposed on FTTH VUA.

ComReg consultation proposal: ComReg accordingly proposes to require that Eircom meets an ex ante MST for FTTH retail offerings (including both FTTH sold on a standalone basis or included in a bundle with one or more unregulated products).

Source: Oxera Part 3 Report, para. 5.42; ComReg 23/03, para. 9.449.

3.1 Summary of respondents' views

3.1 Vodafone and NBI agreed with our recommendation and ComReg's proposal to impose an ex ante MST on FTTH VUA.[22]

3.2 Eircom also broadly agreed with the proposed approach to the MST on FTTH VUA if it were to be adopted, but commented that it was unnecessary.[23] Copenhagen Economics (on behalf of Eircom) argued that the evidence shows that Eircom has not sought to foreclose competitors from FTTH and that there is no reasonable justification to impose a MST on FTTH VUA.[24]

[22] Vodafone (2023), 'Vodafone Response to Consultation' [non-confidential version], 3 March, p. 25; NBI (2023), 'Wholesale Local Access provided at a fixed location and Wholesale Central Access provided at a fixed location for mass-market products; Response to ComReg's Consultation and Draft Decision 23/03' [non-confidential version], 3 March, p. 10.
[23] Eircom 'Response to ComReg Consultation and Draft Decision: Market Reviews – WLA provided at a fixed location and WCA provided at a fixed location' [non-confidential version], 3 March, p. 85 and para. 211.
[24] Copenhagen Economics (2023), 'Proposed SMP regulation of PIA and WLA in Ireland; An economic assessment of ComReg's January 2023 consultations' [non-confidential version], 2 March, para 4.52–4.61.

3.2 Oxera response

3.3 In the Oxera Part 3 Report, our assessment of the need to impose ex ante margin squeeze obligations on FTTH VUA recognised that Eircom's incentives to engage in a margin squeeze on FTTH VUA may vary over time:[25]

- In the early stages of Eircom's FTTH investment programme, access seekers may be seen as allies who can support Eircom with the transition from FTTC to FTTH, to fill up its FTTH network and support recovery of the large fixed and sunk costs involved in the investment. During this period, Eircom may not have the incentive to foreclose access seekers that can act as an important source of volumes.
- Once Eircom has developed sufficient volumes on its network (in particular, after significant volumes of consumers have migrated from FTTC to FTTH), it may have the incentive to engage in a margin squeeze to foreclose access seekers, win their customers and expand its retail market share.

3.4 While there is a degree of uncertainty over Eircom's incentives to engage in a margin squeeze on FTTH VUA, we considered that the potential adverse outcomes that could arise if Eircom engaged in such a squeeze could be significant.[26] In addition, since we recommended that there should not be a direct price control on FTTH VUA, this means Eircom would be able to engage in a margin squeeze without incurring losses, strengthening its ability to engage in a margin squeeze.[27]

3.5 We considered that the backstop of competition law would not be sufficient to address this risk.[28] Given the expected transition to FTTH over the next market review period, the risk of waiting to see whether a competition issue arises before opening an ex post investigation would be that the SMP operator could already have secured an entrenched position before any resolution of the investigation, and it would be difficult and time-consuming to unwind any adverse consequences that would follow.[29] We therefore recommended that, on balance, in the absence of a

[25] Oxera Part 3 Report, paras 5.10–5.23.
[26] Oxera Part 3 Report, paras 5.35–5.38.
[27] Oxera Part 3 Report, para. 5.30.
[28] Oxera Part 3 Report, para. 5.39.
[29] Oxera Part 3 Report, para. 5.39.

direct wholesale price control on FTTH VUA, ex ante margin squeeze obligations should be imposed on FTTH VUA.[30]

3.6 Copenhagen Economics argued that Eircom has not engaged in a margin squeeze on FTTH to date, and that the margin between its retail and wholesale prices has been above the margin that is allowed under the MST.[31] While Eircom has not infringed its margin squeeze obligations and, as we recognised in the Oxera Part 3 Report, its margins were greater than those required by the MST,[32] looking at past behaviour is not necessarily an accurate predictor of future behaviour, particularly when Eircom's conduct may have been driven by its obligation not to engage in a margin squeeze. We consider that, while Eircom has historically earned larger margins than are required under the existing MST and has not breached its margin squeeze obligations to date, a forward-looking assessment of Eircom's ability and incentive to engage in a squeeze on FTTH is required. This is particularly important given the evolving dynamics of competitive FTTH network rollout and retail market trends.

3.7 In the presence of limited FTTH infrastructure competition, and in the absence of a direct price control on FTTH wholesale prices, Eircom would be able to engage in a 'costless' margin squeeze without incurring losses on an end-to-end basis, given that it could engage in a squeeze by increasing wholesale VUA prices (which it can internalise for its own retail arm). This gives Eircom a greater ability to engage in a squeeze over the course of the market review period compared to a situation where there is a cap on wholesale prices.[33]

3.8 On the incentive to engage in an MST on FTTH, Copenhagen Economics argued that our reasoning, was 'speculative and not consistent with standard theories of harm concerning incentives to foreclose';[34] it argued that, from an economics perspective, an incumbent would be expected to engage in a margin squeeze at the early stages of market development, not when the market has already matured. It argued that this 'more plausible' theory

[30] Oxera Part 3 Report, paras 5.40–5.42.
[31] Copenhagen Economics (2023), op. cit., para. 4.54.
[32] Oxera Part 3 Report, para. 5.28.
[33] Oxera Part 3 Report, para. 5.30.
[34] Copenhagen Economics (2023), op. cit., para. 4.60.

of harm does not appear to hold in the Irish FTTH segment with no evidence of attempts to foreclose competitors.[35]

3.9 While Copenhagen Economics consider that our assessment of Eircom's incentives to engage in a margin squeeze on FTTH is not consistent with the 'standard' theory of harm, we consider that the economic mechanisms outlined in the Oxera Part 3 Report are credible and, therefore, that there is a present risk that Eircom would have both the ability and incentive to engage in a margin squeeze on FTTH during the market review period. In particular, we consider that Eircom may have low incentives to foreclose access seekers through a margin squeeze during the earlier stages of its fibre network rollout, since these access seekers can help Eircom to 'fill' its FTTH network. Indeed, Copenhagen Economics agrees that Eircom relies significantly on wholesale customers and that it would therefore have the incentive to 'fill' its FTTH network.[36]

3.10 However, we maintain the view that once Eircom has sufficient volumes on its FTTH network (which could be reached over the course of this market review period) and there is a clear path towards achieving payback on its investment, it may have the incentive to engage in a margin squeeze to increase its retail FTTH share and keep for itself a bigger proportion of the margin available on FTTH services.[37]

3.11 An integral aspect of our assessment of the need for margin squeeze obligation on FTTH VUA is not only the risk of a margin squeeze occurring, but also the potential costs to competition and consumers if this conduct were to occur. As explained in the Oxera Part 3 Report, the potential cost if Eircom were able to successfully implement a margin squeeze on FTTH VUA at this critical stage of FTTH rollout could be significant. Specifically, given that FTTH is expected to be the focus of competition going forward, a successful margin squeeze could enable Eircom to secure an entrenched position of market power at the retail

[35] Copenhagen Economics (2023), op. cit., para. 4.60.
[36] Copenhagen Economics (2023), op. cit., para. 4.56.
[37] The incentive would be greatest where the margin on retail customers is more attractive than the margin on wholesale customers, which may be the case under wholesale regulation of FTTH services in future, and If there are limited retail pricing constraints in the presence of limited infrastructure competition. Eircom may be more inclined to engage in this strategy if it expects future regulation on its FTTH wholesale prices, with attractive margins available at the retail level. We note that, in this scenario, if Eircom were to implement a margin squeeze through a reduction in FTTH retail prices, this could adversely affect alternative wholesale network operators, since their wholesale customers may be prevented from profitably operating at the retail level.

level. A reduction (and potential elimination) of competition at the retail level following a squeeze would result in less consumer choice, less innovation, lower incentives to provide good customer services and reduced price competition, among other aspects, which would be a poor outcome for consumers in Ireland.

3.12 Overall, we maintain our view that the consequence of errors from choosing not to impose an MST and later observing a squeeze compared to imposing an MST and finding it may not have been necessary would suggest that, on balance, it would be proportionate to impose margin squeeze obligations on Eircom's FTTH VUA services, given the risks of not doing so.

3.13 Furthermore, we maintain the view that this risk cannot be adequately addressed by relying on ex post competition law in view of the potentially significant harms that could arise if Eircom did engage in a successful margin squeeze at this key stage in the transition to FTTH.[38]

3.3 Oxera's final recommendation

3.14 We maintain the view that, on balance, in the absence of a direct wholesale price control on FTTH VUA, ex ante margin squeeze obligations should be imposed on FTTH VUA.

3.15 We also note that the imposition of an MST alongside pricing flexibility at the wholesale level on FTTH is consistent with 2013 Recommendation on non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (hereafter the '2013 Recommendation'), which recommends this as a competitive safeguard.[39] We also note that this is consistent with the draft Gigabit Recommendation.[40]

3.16 Based on the above, we maintain the recommendation presented in the Oxera Part 3 Report:

[38] Oxera Part 3 Report, para. 5.38 – 5.39.
[39] European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU)', Recitals 50–55.
[40] European Commission (2023), 'Commission Recommendation of XXX on the regulatory promotion of Gigabit connectivity', 23 February, Recitals 27 and 30–32.

On balance, in the absence of a direct wholesale price control on FTTH VUA, ex ante margin squeeze obligations should be imposed on FTTH VUA.

4 Further specification of the FTTH VUA MST

4.1 In the following, we consider each of the recommendations on the specification of the FTTH VUA MST in turn and assess the views expressed by respondents. Specifically, we consider:

- relevant retail products;
- cost standard and level of product aggregation;
- benchmark operator;
- revenues;
- profitability approach.

4.1 Relevant retail products

Box 4.1 Summary of position to date

Oxera Part 3 Report recommendation: The FTTH VUA MST should capture all FTTH retail products sold by Eircom, including all standalone and bundled FTTH products.

ComReg consultation proposal: ComReg proposed a 'flagship' approach and specified the basis for identifying flagship products.

Source: Oxera Part 3 Report, para. 6.18; ComReg 23/03, paras 9.516–9.520.

4.1.1 Summary of respondents' view

4.2 Eircom and SPC Network (on behalf of Virgin Media) agreed with ComReg's proposal to adopt a flagship approach, with Eircom offering a suggestion of different metrics to identify flagship products.[41] However, Vodafone and SFG disagreed with ComReg's proposal.[42]

[41] Eircom (2023), op. cit., paras 213–216; SPC Network (2023), 'Review of Pricing Remedies in ComReg's WLA and WCA Market Reviews; Prepared for Virgin Media Ireland Limited' [non-confidential version], March, para. 148.
[42] Vodafone (2023), op. cit., p. 26; Speed Fibre Group (20203), op. cit., p. 25.

4.3 No respondent directly raised any points of disagreement with the recommendation in the Oxera Part 3 Report, but Vodafone highlighted similar concerns regarding the flagship approach as we identified in the Oxera Part 3 Report.

4.1.2 Oxera response

4.4 We do not comment directly on the respondents' views on the relevant retail products to include in the FTTH VUA MST as no respondent directly raised any points of disagreement with the recommendation in the Oxera Part 3 Report.

4.5 We maintain the view that, given the nascent nature of FTTH and the potential for evolving competitive dynamics across the market review period, the importance of different individual products is likely to evolve over the market review period.

4.1.3 Oxera's final recommendation

4.6 Based on the above, we maintain the recommendation presented in the Oxera Part 3 Report:

The FTTH VUA MST should capture all FTTH retail products sold by Eircom, including all standalone and bundled FTTH products.

4.7 As set out in the Oxera Part 3 Report, we recognise that the decision of whether to adopt a flagship approach or to test all products is one of proportionality, with the ultimate objective of ensuring that effective retail competition is preserved. While a flagship approach may lessen the regulatory burden while offering a degree of protection to access seekers for the most popular Eircom products, there is the risk that emerging products or those that are particularly important to an access seeker's business model may not be captured by the MST, to the detriment of competition and consumers.[43]

[43] We noted: 'Excluding certain FTTH products from the MST today, on the basis of small volumes, would leave these products at risk of being subject to a margin squeeze by Eircom. Without ex ante measures in place for these products, this could lead to foreclosure in relation to a product that is important to competitive dynamics not being detected in a timely manner. In particular, any new product launch by Eircom would, by definition, not be a flagship product because it has no volumes. If such a product is keenly priced such that it would not pass an MST, by the time it became a flagship product it could be too late, as competition may have already been distorted' (Oxera Part 3 Report, para. 6.23.

4.8 We note ComReg has decided to adopt a flagship approach on the basis of proportionality,[44] and that this approach is consistent with the 2013 Recommendation, and the draft Gigabit Recommendation, which provides for a flagship approach to be adopted by national regulatory authorities (NRAs), as well as providing guidance on how NRAs may select 'flagship' products.[45]

4.9 We note that ComReg's approach includes some safeguards including that the flagship products will be determined on a quarterly basis with the submission by Eircom of its quarterly monitoring statements, with the intention of identifying any movements in volumes such that the most commercially attractive products are included in the FTTH VUA MST assessments going forward.[46] ComReg can also identify other FTTH retail offerings which should be regarded as flagship and request Eircom to demonstrate compliance with the MST for any FTTH retail offerings, including where complaints have been brought by retail service providers.[47] Eircom are also required to demonstrate MST is passed for new products expected to have a significant impact on the market,[48] and is subject to an overriding obligation requiring Eircom not to engage in a margin squeeze on FTTH VUA in relation to all retail offers.[49]

[44] ComReg (2024), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Final Decision', Section 9.3.5. Hereafter referred to as 'ComReg Decision'.
[45] European Commission (2013),' op. cit., Recital 66, Annex II; European Commission (2023), op. cit., Annex III.
[46] ComReg Decision, Section 9.3.5.
[47] ComReg Decision, Section 9.3.5.
[48] ComReg Decision, Section 9.3.5.
[49] ComReg Decision, Section 9.3.5.

4.2 Cost standard and level of product aggregation

Box 4.2 Summary of position to date

Oxera Part 3 Report recommendation: The FTTH VUA MST should adopt the combinatorial approach, whereby: the product-by-product tests are conducted at the LRIC cost standard; the portfolio test is conducted at the LRIC+ or ATC cost standard.

ComReg consultation proposal: While the 2013 EC Recommendation does not specify the aggregation level of the MSTs, ComReg believes that a LRIC+ or ATC approach (as in the 2018 Bundles Decision) is appropriate at the portfolio level. A lighter cost standard (LRIC) is proposed for the calculation of downstream retail costs on a 'product-by-product' basis.

Source: Oxera Part 3 Report, para. 6.45; ComReg 23/03, paras 9.487–9.488.

4.2.1 Summary of respondent's views

4.10 SPC Network (on behalf of Virgin Media) disagreed with definitional points in relation to the cost standards and on how the cost standards should be interpreted and implemented in the MST.[50] SPC Network also disagreed with our recommendation that the FTTH VUA MST should include product-by-product tests (at LRIC) and a portfolio test (at LRIC+); it argued in support of product-by-product tests at LRIC+.[51]

4.11 Copenhagen Economics (on behalf of Eircom) argued that more clarity on the rationale for adopting an LRIC+ or ATC standard was needed, and that Eircom should be allowed to price bundles and standalone products as flexibly as possible.[52]

4.12 Eircom argued that there is no need to identify a share of common costs to include in the MST.[53] It proposed that as an

[50] SPC Network (2023), op. cit., paras 183–188.
[51] SPC Network (2023), op. cit., paras 141 and 191–198.
[52] Copenhagen Economics (2023), op. cit., para. 4.64–4.65.
[53] Eircom (2023), op. cit., para. 222.

alternative approach to assigning an 'arbitrary' allocation of common costs to an individual product, one should simply recognise that a positive margin above incremental costs shows that an operator is contributing to the recovery of common costs, implying that this would be sufficient.[54] In making these comments, Eircom did not specify whether it was making these comments with reference to the product-by-product or portfolio test.

4.13 Eircom also stated that ComReg's proposal (and by extension our recommendation) on the amount of common costs that should be allocated to the set of flagship products was not clear.[55]

4.2.2 Oxera response

4.14 In the Oxera Part 3 Report, we recommended the MST should be applied on a product-by-product basis and a portfolio basis, whereby:

- product-by-product tests are conducted at the LRIC cost standard;
- a portfolio test is conducted at the LRIC+ (or ATC) cost standard.

4.15 By adopting LRIC cost standard for the product-by-product tests, and the LRIC+/ATC cost standard for the portfolio-level test, the SMP operator is afforded flexibility to recover common costs across products in different proportions, but limits the extent of any cross-subsidies, as each product must still recover its specific incremental costs.[56]

4.16 Given the interlinkages between the level of aggregation and the cost standards we recommended, we have consolidated our response to comments on these two building blocks of the MST. We first address the responses in relation to the cost standard definitions. We then address the responses in relation the recommended approach on the level of aggregation and cost standards in the MST.

[54] Eircom (2023), op. cit., paras 222–223.
[55] Eircom (2023), op. cit., para. 238.
[56] Oxera Part 3 Report, paras 6.39–6.42.

4.17 SPC Network provided comments in respect of the LRIC and LRIC+ definitions adopted.[57] We respond to these as follows.

4.18 We agree with SPC Network that LRIC includes fixed costs, as there may be fixed costs that can be avoided if the increment in question is not produced.[58] From an economic perspective, taking a long-run approach for incremental costs ensures that costs that may be fixed when assessed over a short period of time, but which may be avoided over the long run, are also attributed to the increment in question. However, we disagree with SPC Network's suggestion that 'LRIC also includes all variable costs associated with cost blocks that span other increments in addition to the increment in question'.[59] By definition, the only costs included in LRIC are those relevant to the increment in question. Costs that span Other increments would, by definition, be categorised as common costs and would therefore be excluded from the LRIC.

4.19 SPC Network made further comments in relation to the working definition of the LRIC and LRIC+ standards. It suggested that the difference between LRIC and LRIC+ is limited to 'overhead' costs (rather than common costs).[60] It expressed concerns that 'duct, fibre and backhaul/core equipment costs would almost all be excluded from the LRIC in a product-by-product MST.[61] SPC Network suggested that ComReg's (and, by extension, our) intention, may have been 'to provide Eircom with a relatively small degree of flexibility in the pricing of its FTTH services by allowing the company to recover its broad overhead costs'.[62]

4.20 First, for the reasons explained in paragraphs 4.18–4.19 above, we disagree with SPC Network's interpretation of the LRIC and LRIC+ cost standards. SPC Network's interpretation appears to conflate the concepts of variable and fixed costs with those of incremental and common costs.

4.21 Second, it is important to recall that the choice of cost standard is relevant only to the downstream costs included in the test, i.e. the costs incurred by retail providers in addition to the relevant

[57] SPC Network (2023), op. cit., paras 183–188.
[58] SPC Network (2023), op. cit., para. 185.
[59] SPC Network (2023), op. cit., para. 186.
[60] SPC Network (2023), op. cit., para. 142.
[61] SPC Network (2023), op. cit., para. 142.
[62] SPC Network (2023), op. cit., para. 200.

wholesale input (FTTH VUA) to replicate Eircom's retail product(s). As explained in the Oxera Part 3 Report, downstream costs would typically include the following categories of cost: own network costs; SG&A costs; subscriber acquisition costs; CPE costs.[63]

4.22 For the product-by-product tests at LRIC, only downstream costs that are incremental to the provision of the retail FTTH product should be included; this should not include any common costs. The LRIC downstream costs may include, for example:

- own network costs that are incremental to providing the retail product, such as certain pieces of network equipment required to provide FTTH broadband;
- customer premises equipment relevant to the retail product, such as the modem and/or TV set-top box;
- marketing costs that are specific to the provision of the retail product.

4.23 To the extent that cost falling into the categories referenced by SPC Network (i.e. duct, fibre and backhaul/core network costs) are incremental to the provision of the retail FTTH product, these should be included in the downstream costs at LRIC.

4.24 For the portfolio test at LRIC+, a reasonable share of common costs should be added to the total LRIC costs across the entire portfolio, to give the portfolio LRIC+. This should include only common costs that are relevant to the downstream activities. This could include, for example, SG&A costs, such as finance and administrative costs, where these are not specific to the provision of the retail product.

4.25 Upstream costs are not included as the upstream input (FTTH VUA) is 'transfer charged' at a level equal to the wholesale input price published in Eircom's price list (or provided separately to ComReg as part of Eircom's regulatory obligations) in the MST. The wholesale price of FTTH VUA will be the means through which Eircom recovers the incremental costs associated with providing the wholesale input plus a contribution to the recovery of common costs. Since the MST seeks to ensure economic replicability for retail providers using Eircom's FTTH VUA input,

[63] Oxera Part 3 Report, para. 6.96.

the price that they pay for this input is included in the test (rather than the modelled costs of providing this input).

4.26 Taking into account the interpretations of the LRIC and LRIC+ cost standards above, contrary to SPC Network's suggestion, the intention of our recommended approach is to afford Eircom flexibility over the reasonable share of common costs which is allocated to the FTTH portfolio, not only those costs referred to by SPC Network as 'overheads'.

4.27 Having addressed the responses related to the definitions and implementation of the cost standards, we now turn to the responses in relation the proposed approach to the level of aggregation and the associated cost standards.

4.28 SPC Network disagreed with our recommendations on the level of aggregation and cost standards, and argued that it is inconsistent with the 2013 Recommendation.[64] It suggested that the 2013 Recommendation includes a recommendation on the level of aggregation, specifically that individual products should be tested. SPC Network did 'not agree that LRIC is suitable for the product-by-product tests, as this is counter to the 2013 EC Recommendation which states that LRIC+ should be used'.[65] Based on the above, SPC Network argued the FTTH VUA MST should be performed at the product-by-product level at LRIC+.[66]

4.29 We disagree. While parts of the 2013 Recommendation refers to retail products, services and offers in the singular and states that the LRIC+ cost standard should be used to determine the relevant incremental (downstream) costs, we do not consider this should be interpreted as an explicit recommendation that the MST should be conducted using product-by-product tests based on the LRIC+ standard. Indeed, our interpretation of the 2013 Recommendation is consistent with the BEREC guidance on the application of ex ante MSTs with regards to the 2013 Recommendation and Annex II. Specifically, BEREC states:[67]

A margin squeeze test can be conducted for different aggregation levels: **product-by-product** or **aggregation of (a group) of products** or

[64] SPC Network (2023), op. cit., paras 141 and 191–198.
[65] SPC Network (2023), op. cit., para. 141.
[66] SPC Network (2023), op. cit., paras 191–198.
[67] BEREC (2014), 'BEREC Guidance on the regulatory accounting approach to the economic replicability test (i.e. ex-ante/sector specific margin squeeze tests)', 5 December, pp. 14–15 and 36.

both (i.e. a **combinatorial approach**) … BEREC believes that **it is appropriate for each NRA to determine what the appropriate level of aggregation should be when carrying out the margin squeeze test in the light of the assessment of competition problems identified in the market analysis**.

4.30 Moreover, BEREC found that 'the majority of NRAs apply both product-by-product and aggregation of products approach (i.e. combinatorial approach)'.[68] BEREC finds that some NRAs use a lower cost standard for the product-by-product tests than for the portfolio test, which 'provides some pricing flexibility at the product level while ensuring that the overall "portfolio" is replicable'.[69] This is consistent with adopting a LRIC standard for the product-by-product tests, and LRIC+ for the portfolio test. Therefore, contrary to SPC Network's suggestion, we consider that our approach is consistent with the 2013 Recommendation, the relevant BEREC guidance, and the wider practice of other European NRAs.

4.31 Moreover, the draft Gigabit Recommendation recommends that 'NRAs should determine the level of aggregation (product-by-product or portfolio of products) that is appropriate for the economic replicability test, in the light of the assessment of competition problems identified in the market analysis'.[70] The draft Gigabit Recommendation maintains that the relevant cost standard for calculating downstream costs should be LRIC+.[71] Our recommendation is to adopt both product-by-product tests and a portfolio test. As explained in paragraph 4.30. under this approach, the stricter cost standard (i.e. the cost standard that would lead to smaller margins – LRIC+) is generally applied to the higher level of aggregation (the portfolio), consistent with our recommendation.[72]

4.32 For the reasons described in the Oxera Part 3 Report and below, we consider that our recommendation in relation to the level of aggregation and cost standards is consistent with 2013 Recommendation and the draft Gigabit Recommendation.

[68] BEREC (2014), op. cit., p. 24.
[69] BEREC (2014), op. cit., p. 25.
[70] European Commission (2023), op. cit., Annex III.
[71] European Commission (2023), op. cit., Annex III.
[72] In fact, if the LRIC+ standard was adopted in the product-by-product tests, there would be no benefit of performing the portfolio test.

4.33 Copenhagen Economics argued that it is not clear why LRIC+ (or ATC) is required for bundles.[73] It argued that given the lack of evidence that Eircom would be close to engaging in a squeeze or distortionary cross-subsidisation, it should be afforded the ability to price bundles and standalone products as flexibly as possible (as long as it is compliant with competition law).[74] Copenhagen Economics also argued that more clarity on the rationale for the ATC was needed, given the high market shares which have been achieved by access seekers, and that the ATC limits Eircom's ability to price flexibly across bundles and standalone products.[75]

4.34 In response, we first note that, contrary to Copenhagen Economics' interpretation, our recommendation is for the LRIC+ cost standard to apply to all products (not only bundle products), when products are test at the **portfolio level**.

4.35 We also note that the core principle in the MST is that the SMP operator should be allowed to recover all relevant downstream costs of providing services that rely on a regulated wholesale input. However, flexibility to recover common costs across different products (e.g. different standalone broadband and bundled broadband products) may be permitted depending on the level of competition in the market. In general, the more competitive the market is, the greater the level of flexibility should be.

4.36 In the Oxera Part 3 Report, we also acknowledged that Eircom faces competition from access seekers in the provision of FTTH services, with Vodafone and Sky holding a material share of FTTH subscriptions. Indeed, Eircom continues to face strong competition at the retail level. For example, Eircom continues to hold the second largest share of retail FTTH lines (32.5%) behind Vodafone (33.6%), while Sky continues to hold a material share (20.3%) of lines, and Eircom faces a number of (at present) smaller retail providers.[76] Therefore, we maintain our view that, given the level of retail competition, Eircom should be afforded a degree of flexibility,

[73] Copenhagen Economics (2023), op. cit., para. 4.64.
[74] Copenhagen Economics (2023), op. cit., para. 4.65.
[75] Copenhagen Economics (2023), op. cit., para. 4.65.
[76] Oxera analysis based on: ComReg QKDR Q1 2023 data.

4.37 In recognition of the degree of competition Eircom faces at the retail level, each individual product should be required only to recover its LRIC in the MST, whilst affording Eircom a degree of pricing flexibility in respect of how it chooses to recover common costs across the portfolio. However, FTTH take-up is still relatively nascent, and the relative importance of different product types could change across the duration of the market review. Given this uncertainty, there is a risk that providing Eircom too much flexibility—i.e. across the portfolio of all FTTH products—without any product-by-product checks, could allow Eircom to engage in a margin squeeze on products that are particularly important to competitive dynamics. Therefore, there may be considerable risk associated with assessing the MST only across the portfolio of FTTH products (with no restrictions at the individual product level).[77]We maintain the view that the combinatorial approach strikes the right balance between protecting competition on FTTH retail services while affording Eircom flexibility to recover its common costs in an efficient manner. In this context, we disagree with Copenhagen Economics comments that Eircom should be afforded greater flexibility than is proposed under our recommended approach.

4.38 Eircom argued that there is no single mechanism for allocating common costs nor for establishing what a 'reasonable' share of common costs should be.[78] It suggested an alternative method, given the challenges with estimating a 'reasonable' share of common costs, would be to assess whether there is a positive margin above LRIC as this confirms that Eircom contributing to its common costs.[79]

4.39 Eircom did not make clear whether it was making this statement in relation to the cost standard to apply to the product-by-product test or the portfolio test. However, given the product-by-product test is proposed to be conducted against LRIC, a portfolio test also at LRIC would not provide any additional protection—if every product is passing its LRIC, then by definition the portfolio would also pass its LRIC. In this case, we consider that Eircom may be implying that the product-by-product test at LRIC is sufficient, and provided products are making at least their LRIC, this demonstrates that products are

[77] Oxera Part 3 Report, para. 6.39 – 6.42.
[78] Eircom (2023), op. cit., para. 222.
[79] Eircom (2023), op. cit., para. 223.

making a contribution to common costs and no further tests are needed.

4.40 However, we recognise that, given that telecoms operators are typically multi-product firms, the recovery of common costs is highly relevant. We consider that it is important that Eircom is required to recover a reasonable share of common costs associated with providing FTTH retail products, from across the portfolio. Failure to ensure this could allow it to engage in a margin squeeze and foreclose access seekers. For example, suppose Eircom recovered only the LRIC of its FTTH portfolio and made no contribution to its common costs, with these being recovered across non-FTTH retail products. In this case, an access seeker focussed only on providing FTTH retail products (with no other retail activities) may be unable to replicate Eircom's FTTH portfolio, since it would occur retail costs that are not allowed for in the MST.

4.41 While we agree with Eircom that there is no single, unique mechanism to allocate common costs, we disagree with Eircom's alternative approach, that any positive margin above LRIC would be sufficient to ensure the replicability of the FTTH portfolio. It implies, for example, that a contribution of €1 towards its common cost recovery across the entire FTTH retail portfolio would be appropriate.

4.42 To ensure that Eircom's products are replicable, it is important that Eircom makes a reasonable contribution to its common costs. We do not consider that the potential challenges associated with allocating common costs outweigh the need to ensure that Eircom recovers a reasonable share of common costs from its FTTH portfolio to ensure the replicability of its retail products. While we agree that there is no unique way of allocating costs, the current volume-based approach being used to allocate common costs should continue as a commonly used approach.

4.43 In response to Eircom's comment regarding the allocation of common costs to flagship products (which will be relevant for the portfolio test, conducted at LRIC+), as explained in the Oxera Part 3 Report, each flagship product should receive an appropriate allocation of common costs, derived from Eircom's total common costs. Eircom's common costs should be allocated to each service (for example, fixed voice, broadband) and from this, a unit common cost per subscriber for each

service should be calculated. The unit common costs for each flagship product should reflect the services included in that product. For example a standalone broadband product should include the unit common costs allocated to broadband, while a dual-play bundled product including fixed voice and broadband should include the unit common costs allocated to broadband and fixed voice.

4.2.3 Oxera's final recommendation

4.44 Based on the above and the rationale outlined in the Oxera Part 3 Report, we maintain the view that our recommended approach to the cost standard and level of aggregation strikes the right balance between protecting competition on FTTH retail services while affording Eircom flexibility to recover its common costs in an efficient manner.

4.45 We consider that our recommendation is consistent with the 2013 Recommendation and relevant BEREC guidance, and the draft Gigabit Recommendation.[80]

4.46 Based on the above, we maintain the recommendation presented in the Oxera Part 3 Report:

The FTTH VUA MST should adopt the combinatorial approach, whereby:

- the product-by-product tests are conducted at the LRIC cost standard;
- the portfolio test is conducted at the LRIC+ or ATC cost standard.

[80] European Commission (2013), op. cit., Annex II; European Commission (2023), op. cit., Annex III.

4.3 Benchmark operator

Box 4.3 Summary of position to date

Oxera Part 3 Report recommendation: The FTTH VUA MST should adopt an Equally Efficient Operator (EEO) benchmark operator approach when calculating downstream costs and unregulated wholesale costs.

ComReg consultation proposal: ComReg proposes that an EEO approach should continue to be applied in the calculation of downstream costs for the ex ante MSTs.

Source: Oxera Part 3 Report, para. 6.72; ComReg 23/03, paras 9.553.

4.3.1 Summary of respondent's view

4.47 Eircom agreed with the recommendation to (continue to) adopt an EEO standard.[81]

4.48 No respondent directly raised any points of disagreement with the recommendation in the Oxera Part 3 Report.

4.3.2 Oxera response

4.49 We do not comment on the respondents' views on the benchmark operator approach to adopt in the FTTH VUA MST as no respondent directly raised any points of disagreement with the recommendation in the Oxera Part 3 Report.

4.3.3 Oxera's final recommendation

4.50 We maintain the view that a continuation of the EEO benchmark is the appropriate standard to adopt given that Eircom is competing with well-established access seekers that are active in the retail market and that the MST is not intended to protect inefficient entry by smaller operators.

4.51 Based on the above, we maintain the recommendation presented in the Oxera Part 3 Report:

[81] Eircom (2023), op. cit., para. 226.

The FTTH VUA MST should adopt an EEO benchmark operator approach when calculating downstream costs and unregulated wholesale costs.

4.4 Revenues

Box 4.4 Summary of position to date

Oxera Part 3 Report recommendation: The FTTH VUA MST should take into account the effective revenues generated by the relevant products. In particular: discounts and promotions should be included in the test; out-of-bundle revenues should be included in the test (if they are replicable).

ComReg consultation proposal: ComReg proposes that the relevant FTTH flagship products MSTs include the effective revenues generated by the product offering including out of bundle revenues and once-off revenues. Discounts and promotional costs should also be included in the FTTH MST (as either a reduction in revenues or an increase in downstream costs).

Source: Oxera Part 3 Report, para. 6.77; ComReg 23/03, para. 9.559.

4.4.1 Summary of respondents' views

4.52 SPC Network (on Virgin Media's behalf) expressed concerns over the potential for out-of-bundle (OOB) revenues to significantly affect the MST result, and suggested that there should be transparency about the impact of OOB revenues on the MST.[82]

4.53 While no stakeholder raised issue with the requirement for discounts and promotions to be captured in the test, there were some queries about how they would be accounted for against the average customer life (ACL) in the discounted cash flow (DCF) calculation. We consider those points separately in section 4.5 below.

[82] SPC Network (2023), op. cit., paras 210–212.

4.4.2 Oxera response

4.54 We recommended that OOB revenues should be included in the FTTH VUA MST as they are a valid source of revenues which contribute to the margin of a retail product.[83]

4.55 SPC Network expressed concerns that OOB revenues could have a significant impact on the MST, and that their inclusion could lead to a situation where the MST is passed only when OOB revenues are included; SPC Network questioned whether this would send 'the right signals to the market'.[84] It said that it would be 'strange to SPC Network if users of a particular bundle that do not generate out of bundle revenues are in effect subsidised by those that do' and that this 'could, for example, significantly disadvantage operators that are only in a position to offer standalone broadband services or are not in a position to attract significant out of bundle revenues from their own customer bases'.[85]

4.56 The central purpose of the MST is to ensure the economic replicability of Eircom's retail offerings. As OOB revenues are a valid source of revenues which contribute to the margin of the retail product, we maintain our view that they—alongside the relevant costs of providing these services—should be included in the test. In principle, from an economic perspective, the fact that this could give rise to scenarios in which the MST result is contingent on the inclusion of OOB revenues is not problematic in and of itself. However, there are two important considerations in this regard: the replicability of these revenues; and that OOB revenues included are relevant to the product in question and that the value of revenues included in the test is reliable.

4.57 First, the replicability of the OOB revenues generated is an important consideration. The purpose of the MST is to ensure the replicability Eircom's FTTH retail product offerings. Provided other access seekers have the opportunity to replicate such revenues, for example through the supply of OOB calls and content, they should be included in the test. By virtue of using the OOB revenues generated by Eircom, the MST assumes that other access seekers would be able to replicate these revenues from their customer bases. If ComReg considers that there is an

[83] Oxera Part 3 Report, paras 6.73–6.76.
[84] SPC Network (2023), op. cit., para. 211.
[85] SPC Network (2023), op. cit., para. 211.

asymmetry between Eircom and access seekers in terms of their ability to generate OOB revenues—for example, stemming from Eircom's position as the incumbent operator—then it could make adjustments to the OOB revenues included to ensure that Eircom is not advantaged by this asymmetry.

4.58 In response to SPC Network's comment that the OOB revenues from one product could be used to subsidise another, and that this could disadvantage operators who supply only certain retail products which may be unable to generate certain types of OOB revenues, we note that our proposed MST includes product-by-product tests.[86] The individual product tests will include the OOB revenues (and any associated costs at LRIC) relevant to that retail product, and require the test to be passed at LRIC. This mitigates SPC Network's concerns over the potential for Eircom's to cross-subsidise using OBB revenues.

4.59 Second, it is important to ensure that that OOB revenues included are relevant to the product in question and that their value is reliable. We recognise that OOB revenues will vary by product, and even by customer as they depend on usage levels. Therefore, there is typically a degree of uncertainty about the value of OOB revenues generated by operators. Given this degree of uncertainty, we consider that Eircom should be required to substantiate OOB revenues that are included in the MST to ensure their integrity, particularly in scenarios where their inclusion is determinative of the result of the test. One potential approach to help ensure that the OOB revenues are reliable would be to include revenues based on actual historic data on their value. This could be based on the average value of OOB revenues, which should be calculated over a reasonable period (such as 6–12 months), to avoid the risk of under- or over-stating OOB revenues which may fluctuate from month to month in line with changes in usage patterns.

4.60 In its simplest form, for each source of OOB revenues (e.g. from out-of-bundled fixed and/or mobile calls, data usage or TV content), this could be based on an average across all FTTH products. However, there is a risk that this would mask potential differences in OOB revenues across individual products. For example, products with larger inclusive calls allowances may be

[86] We note that ComReg's flagship approach requires at least one FTTH standalone broadband product to be tested (see: ComReg Decision, Section 9.3.5).

associated with lower OOB call revenues. To help ensure the replicability of an individual product, the average OOB revenues should ideally be based actual data for the bundle in question (or similar).

4.61 The above two issues are important to ensure the integrity of the MST. However, they will only bite in practice where the inclusion of OOB revenues is determinative of the MST result. Specifically, if the magnitude by which an MST passes is larger than the size of the OOB revenues, then this would mean that even if OOB revenues were set to zero, the product would still pass the MST. Where this is not the case, then ComReg may need to seek further evidence to justify the OOB revenues included in the test.

4.4.3 Oxera's final recommendation

4.62 We maintain our view that OOB revenues should be included in the FTTH VUA MST as they are a valid source of revenues which contribute to the margin of a retail product.

4.63 As outlined above, OOB revenues should be relevant to the product in question and ComReg could take steps to ensure the values included are reliable. The test should include OOB revenues that are replicable and, if it deems it appropriate, ComReg could make adjustments if it considers Eircom has an advantage in this regard. Given these complexities it would be reasonable for ComReg to first assess whether MST result is contingent on the inclusion of OOB revenues.

4.64 We also maintain our position in relation to the inclusion of discounts in the MST, for the reasons outlined in the Oxera Part 3 Report.

4.65 Based on the above, we maintain the recommendation presented in the Oxera Part 3 Report:

The FTTH VUA MST should take into account the effective revenues generated by the relevant products. In particular:

- discounts and promotions should be included in the test;[87]
- OOB revenues should be included in the test (if they are replicable).

4.5 Profitability approach: average customer lifetime

Box 4.5 Summary of position to date

Oxera Part 3 Report recommendation: The FTTH VUA MST should use a DCF profitability approach.[88] This approach assesses the size of the margin over a specified period of time (e.g. the average customer lifetime, ACL), and takes into account the time value of money through discounting. The discount factor is equal to Eircom's WACC; the time horizon used is the estimated ACL.

In the Oxera Part 3 Report, we provided an overview of how the DCF approach would be implemented in practice. Specifically we set out that this would involve:

- Assessing the margin based on each product over a period equal to the ACL. This involves assessing the net present value (NPV) of future revenues minus the costs for a given product, assuming that a given cohort of customers purchases the product at the point in time when the NPV analysis is conducted.
- One-off upfront costs (such as installation costs) and revenues (such as installation revenues) should be included in full in the first period (i.e. the first month) of the ACL.
- The stream of revenues over the ACL should include all effective revenues generated on a recurring basis. This should include the monthly retail price, OOB revenues (if appropriate), and any other relevant recurring revenues. The revenues should reflect any promotions or discounts the customer receives over the course of the ACL.
- The stream of costs over the ACL should include the recurring costs associated with the provision of the product to the

[87] We note, discounts and promotions can be reflected in the test as a downward adjustments to revenues, or the included as a cost in the calculation. We note ComReg has typically adopted the latter approach is its MST to date, and is its proposals here.
[88] In this setting, in line the with 2013 Recommendation, the DCF profitability approach uses a forecast of the stream of revenues and costs of supplying the retail product in each month over the duration of the ACL. From this, the total margin should be estimated across the ACL in NPV terms, to reflect the time value of money. This differs from the accounting DCF approach, which is based on actual flows of cash, in terms of costs and revenues. We refer to our recommended approach as DCF/NPV in the remainder of this report.

cohort of customers. This should include any one-off capital costs which may, for example, include one-off downstream costs (such as start-up costs associated with setting up a customer services desk). These capital costs should be amortised across the relevant asset life to provide an annualised charge that should be included in the test as a recurring cost.

- The total margin should be estimated across the ACL in NPV terms, to reflect the time value of money. The discount factor used to calculate the NPV should be given by Eircom's WACC.

ComReg consultation proposal: In light of the above discussion and the 2013 EC Recommendation, ComReg proposes that a DCF approach should be used by Eircom to demonstrate compliance of the flagship FTTH products (as detailed above) with the ex ante MST (e.g., in advance of proposed launch of new products, promotions and discounts).

ComReg proposes that the ACL of 42 months as set out in the 2018 Bundles Decision, should continue to be used over the next review period.

In the case of retention offers, ComReg proposes that the ACL should be consistent with the 2018 Bundled Decision i.e., it should reflect the re-contracting period or the expected remaining ACL of customers on the relevant standalone or bundled product at the time of the retention promotion.

Source: Oxera Part 3 Report, para. 6.84; ComReg 23/03, paras 9.525–9.526 and 9.575.

4.5.1 Summary of respondents' views

4.66 Vodafone expressed concerns with the profitability approach. Vodafone argued that after the initial contract term, during which customers may be receiving a discount on the monthly price, the price would increase to the undiscounted monthly price.[89] It argued that despite this increase in price, and that customers are able to freely switch as they are out of the

[89] Vodafone (2023), op. cit., p. 25–26.

minimum contract term, the MST assumes that customers would stay for the remainder of the 42-month ACL.[90]

4.67 Vodafone suggested that the recommended approach which was 'not fit for purpose', as access seekers could not risk competing on negative margins on the assumption that a customer is likely to stay for 42 months.[91] It suggested that an approach which ensures a sufficient margin at 'the point when a competitive response is required' should be adopted.[92]

4.68 SPC Network questioned how retention offers would be dealt with in the MST. Specifically, it noted that the fact that Eircom's retail products typically include a contract term of 12 or 24 months raised the question of what retail price should be used between the end of the minimum contract term and the ACL.[93] It highlighted that, after the minimum term expires, customers may recontract with Eircom and receive a lower price than the standard undiscounted price for (part of) the remaining ACL.[94] It argued that if customers do have the ability to recontract, the MST needed to take this into account.[95]

4.69 SPC Network also made comments in relation to inflation-linked price increases; it noted that, as a result, customers joining at different points in time may face different prices and that it was not clear how this would be taken into account in the MST. [96]

4.5.2 Oxera response

4.70 The central purpose of the MST is to ensure the economic replicability of Eircom's retail offerings. For the reasons outlined in the Oxera Part 3 Report, we maintain our view that the DCF/NPV approach, which assesses the margin over the ACL, is an appropriate approach to use. We also note that this is in line with the 2013 Recommendation and the draft Gigabit Recommendation.[97]

4.71 However, we recognise the comments of both SPC Network and Vodafone querying whether and how the revenues included in

[90] Vodafone (2023), op. cit., p. 25–26.
[91] Vodafone (2023), op. cit., p. 26.
[92] Vodafone (2023), op. cit., p. 26.
[93] SPC Network (2023), op. cit. para. 205.
[94] SPC Network (2023), op. cit. para. 205.
[95] SPC Network (2023), op. cit. para. 208.
[96] SPC Network (2023), op. cit. para. 205.
[97] European Commission (2013), op. cit., Annex II; European Commission (2023), op. cit., Annex III.

the test will vary over time, recognising that there are typically promotions and/or discounts offered to customers over their initial contract term and, in some cases, use of promotions and discounts to retain customers once their minimum contract term has expired.

4.72 In principle any 'acquisition' discounts/promotions and, if used by Eircom, retention offers (which we understand to be the case) should be included in the MST. If retention offers are omitted from the MST (and as Vodafone suggests, the 'headline' price—which will typically be higher than the initial discounted price—is used for the remained of the ACL), the revenues included in the test would be artificially high. This would risk giving an erroneous MST result with a much higher DCF/NPV margin reported than if all relevant discounts and promotions were included.

4.73 This can be illustrated with a simple worked example, expressed on a per customer basis. For example, suppose Eircom is offering a product with the following prices, terms and costs:

- Headline, undiscounted price = €75.99 (incl. VAT) = €61.78 (excl. VAT);
- Initial contract duration = 24 months;
- Discounted price for initial contract = €39.99 (incl. VAT) = €32.51 (excl. VAT (i.e. a €29.27 discount);
- The monthly cost of provision (wholesale and retail costs at LRIC) = €35.00.

4.74 That is, a new customer of this product would be expected to pay €32.51 (excl. VAT) for 24 months.[98]

4.75 As noted by SPC, after the minimum term expires, customers may recontract with Eircom and receive a lower price than the headline price for (part of) the remaining ACL,[99] and the MST needs to take this into account.[100] We agree. This point also relates to Vodafone's comment regarding their view that the

[98] In this simple worked example, we assume that all new customers would receive an acquisition discount on the headline price, and that all new customers receive the same acquisition discount. If, in practice, Eircom does not provide all new customers with an acquisition discount and/or provides different acquisition discounts to different customers, the cost of acquisition discounts should be included in the FTTH VUA MST as a weighted average, using an analogous approach to that described in paragraph 4.76.
[99] SPC Network (2023), op. cit. para. 205.
[100] SPC Network (2023), op. cit. para. 208.

MST as proposed assumes that the price reverts to the undiscounted monthly price.

4.76 To the extent that retention offers are available and are, therefore, included in the MST, it should not be the case that the price reverts to the undiscounted price for the remainder of the ACL (at least not for all customers). Extending the example above, suppose that after the initial contract period (24 months) Eircom offers 50% of customers a 'retention' promotion of a further 12 months with a €20 discount (on excl. VAT prices). That is, the *average* customer will get a weighted average discount of €10 discount between month 25–36 in this example.

4.77 After the retention period, those customers may be offered a further retention offer, or may be left to pay the headline price. Depending on which assumption is made, about retention offers beyond the acquisition and initial retention period, this can be reflected in the test in different ways:

1. after the initial retention promotion, all customers pay the headline price for the remainder of the ACL;
2. after the initial retention promotion some customers are offered an additional retention offer, and is assumed that the same offer on the same terms to the same proportion of customers is made, then the same weighted average retention offer may be applied for the remainder of the ACL.[101]

4.78 One can then estimate, the stream of costs and revenues for the average customer taking this product (as measured across the *average* customer life of 42 months, which reflects the fact that some customers will leave earlier than 42 months, while others will stay longer than 42 months).

4.79 Under approach 1 the key inputs to the calculation would be as presented in Table 4.1.

[101] As illustrated in paragraph 4.76, the weighted average retention offer should reflect the average retention discount received by customers, taking into account the volume of customers receiving different values of retention discounts offered (including those customers that receive no retention discount).

Table 4.1 Stylised example of the treatment of acquisition and retention costs under the product-by-product test

	Initial contract term Month 1 – 24	Forecast retention period Month 25 – 36	Remaining months in the ACL Month 37 – 42
Headline price	€61.78	€61.78	€61.78
(average) acquisition discount	€29.27	-	-
(average) forecast retention promotion	-	€10.00	-
Cost (wholesale price + downstream costs at LRIC)	€35.00	€35.00	€35.00
Monthly margin	-€2.49	€16.78	€26.78

Source: Oxera analysis.

4.80 Calculating the margin across the 42 month ACL, and discounting using the annual WACC of 4.93% as the discount factor, would give an NPV of €259.58 (across the 42-month ACL). So while the initial contract period is provided at a negative margin, the NPV margin across the ACL is positive and thus this product would 'pass' the MST.

4.81 Under approach 2 the key inputs to the calculation would be as presented in Table 4.2.

Table 4.2 Stylised example of the treatment of acquisition and retention costs under the product-by-product test

	Initial contract term Month 1 – 24	Forecast retention period Month 25 – 36	Remaining months in the ACL Month 37 – 42
Headline price	€61.78	€61.78	€61.78
(average) acquisition discount	€29.27	-	-

(average) forecast retention promotion	-	€10.00	€10.00
Cost (wholesale price + downstream costs at LRIC)	€35.00	€35.00	€35.00
Monthly margin	-€2.49	€16.78	€16.78

Source: Oxera analysis.

4.82 Calculating the margin across the 42 month ACL, and discounting using the annual WACC of 4.93% as the discount factor, would give an NPV of €208.16 (across the 42-month ACL). So while the initial contract period is provided at a negative margin, the NPV margin across the ACL is positive and thus this product would 'pass' the MST.

4.83 Of course the examples above are simplified for illustration. It could be that for this bundle there are different initial contract terms with different initial discounts, and there may be different retention promotions of different values and durations. However, the principle remains that the (weighted) average value of retention promotions should be taken to enable the estimation of the NPV margin of the average customer.[102] We recommend that ComReg ensures these principles are taken into account in the implementation of the MST.

4.84 The simple examples above also focusses on 'new' customers to the bundle, for whom assessing the discounted margin across the full ACL of 42 months in consistent.

4.85 Based on the example shown above, we disagree with Vodafone's characterisation of the DCF/NPV approach and its suggestion that this approach is not fit for purpose due to its view that it does not allow for a sufficient margin at the time a competitive response is required and that access seekers would face the risk of competing on negative margins, which they may

[102] As explained in footnote 98, if, in practice, Eircom does not provide all new customers with an acquisition discount and/or provides different acquisition discounts to different customers, the cost of acquisition discounts should be included in the FTTH VUA MST as a weighted average, using an analogous approach to the calculation of retention discounts.

not be able to earn back if the customer does not remain for the ACL.

4.86 The DCF/NPV approach ensures that the overall margin of a retail product is positive when all the costs and revenues are assessed across the ACL. While this approach allows the margin to be negative in a given sub-period—and thus accounts for more intense price competition for new customers[103]—subject to the test being positive across the ACL, which could be achieved by higher subsequent prices later in ACL.

4.87 As noted above, while it is the case that some customers will switch before the end of the ACL (and thus any negative margins from the initial contract may not be recovered for that individual customer), there will also be a number of customers that will continue to stay with the bundle and generate positive margins beyond the ACL. That is reflected in the fact that the model is based on the *average* customer life.

4.88 We consider the DCF/NPV approach provides a robust means of ensuring that the overall margin of a product is positive when all the costs and revenues are assessed at the time they are incurred and discounted across the ACL and, therefore, testing whether Eircom's retail products are replicable.

4.89 We understand the ACL proposed by ComReg for the MST (42 months) is based on industry data on the actual ACL of Eircom's and other operators' customers. We consider this is an appropriate period over which to allow Eircom to recover its costs to ensure its products are replicable. Since the ACL is based on actual data, this will reflect the average customer based on the typical structure of prices charged in practice (which may include retention offers), and the fact that customers are free to switch providers after their minimum term. This provides a reasonable basis for the average tenure of customers in practice, which takes these factors into account.

4.90 In relation to SPC Network's comments on inflation-linked price increases, we consider that, to the extent that such price rises

[103] For example through discounted prices which may lead to negative margins in the relevant months, during the initial contract term.

are contractually imposed on customers, they should be accounted for in the stream of revenues in the MST.

4.5.3 Oxera's final recommendation

4.91 Based on the above, we maintain the recommendation presented in the Oxera Part 3 Report.

The FTTH VUA MST should use a DCF/NPV profitability approach, where:

- the discount factor is equal to Eircom's WACC;
- the time horizon used is the estimated ACL;
- acquisition and retention discounts and promotions should be captured in the test, reflecting the commercial practices in the market.

5 The need for a margin squeeze test on FTTH VUA services with respect to downstream wholesale FTTH Bitstream services

Box 5.1 Summary of position to date

Oxera Part 3 Report recommendation: A separate 'wholesale' MST between FTTH VUA services and FTTH Bitstream services is not recommended.

ComReg consultation proposal: ComReg is of the view that the proposed FTTH MST would ensure that Eircom has no incentive to engage in a squeeze between FTTH VUA and FTTH Bitstream. ComReg proposes accordingly that the wholesale MST between FTTH-based VUA and FTTH-based Bitstream should be removed.

Source: Oxera Part 3 Report, para. 6.104; ComReg 23/03, para. 9.580.

5.1 Summary of respondents' views

5.1 BT, SFG, Virgin Media and SPC Network (on Virgin Media's behalf) disagreed with the proposal to remove the MST on FTTH VUA services with respect to downstream wholesale FTTH Bitstream services.

5.2 BT raised concerns that, as the '[WCA] market is very price sensitive', a margin squeeze between the VUA and WCA (Bitstream) price is a real concern.[104] It argued this could have the effect of 'closing the market for access to the more costly VUA sites – this could be a reasonable number'.[105]

[104] BT (2023), 'BT Response to the ComReg Consultation: Market Reviews' [non-confidential version], p. 10.
[105] BT (2023), op. cit., p. 10.

5.3 SPC Network stated that [✂].[106]

5.4 SPC Network also set out a potential strategy that Eircom could adopt to foreclose the market to alternative network providers—[✂].[107] It correctly noted that this practice depends on Eircom being willing, at least in the short-term, to sacrifice revenues in the retail market but increase revenues in the WCA market.[108]

5.5 SFG commented that '[Oxera] has entirely ignored the scope and potential distortion to competition from a geographically targeted BS [bitstream] margin squeeze strategy by Eircom' and that 'even where Eircom face no competition in the VUA market e.g. the Rural Commercial Area, it may also have an incentive to engage in aggressive backhaul pricing strategies on a geographic basis to undermine WCA competitors'.[109]

5.2 Oxera response

5.6 In the Oxera Part 3 Report, we recommended that a MST between FTTH VUA services and FTTH Bitstream services should not be imposed. This was based on the fact that, the presence of the FTTH VUA MST (as described in section 3) would ensure that Eircom has no incentive to engage in a profitable squeeze between FTTH VUA and FTTH Bitstream.[110] Specifically:

- If Eircom decided to lower Bitstream prices to engage in a squeeze relative to FTTH VUA, then downstream rivals using Eircom's wholesale Bitstream input would be able to lower their retail prices (as their input costs would fall). Eircom would not be able to respond by matching those lower retail prices given that the FTTH VUA MST (with VUA plus backhaul and other costs) prohibits this, in the absence of Eircom also lowering FTTH VUA prices.
- Therefore, the Bitstream-based access seekers' retail prices would undercut Eircom's retail prices. In this case, Eircom would be faced with losing customers at the retail level, who may divert to the Bitstream-based access seekers offering lower retail prices.

[106] SPC Network, op. cit., para. 114. See also Virgin Media (2023), 'Virgin Media response to: ComReg's Wholesale Local Access and Wholesale Central Access Market Reviews', March, p. 33
[107] SPC Network (2023), op. cit., Section 6.1.
[108] Virgin Media (2023), op. cit., p. 33; SPC Network (2023), op. cit., Section 6.1.
[109] SFG (20203), op. cit., p. 22–23.
[110] For more detail see: Oxera Part 3 Report, paras 6.100–6.104.

- This would undermine any attempt to squeeze an operator that self-provides the backhaul and network elements to create its own Bitstream service.
- In other words, the proposed FTTH VUA MST would ensure that Eircom has no incentive to engage in a profitable squeeze between FTTH VUA and FTTH Bitstream. Therefore, a separate 'wholesale' MST between VUA and Bitstream is not recommended

5.7 Therefore, while Eircom could, in theory, lower FTTH bitstream prices in the way that Virgin Media and SFG claim, this would allow retailers relying on the (now) cheaper FTTH Bitstream inputs to lower their FTTH retail prices. Due to presence of the proposed MST on FTTH VUA, Eircom would need to ensure that FTTH VUA prices leave sufficient space to pass the MST, and may therefore also be forced to reduce its FTTH VUA prices to ensure compliance. Under ComReg's proposal, there is nothing to prevent Eircom from lowering its FTTH VUA prices in this way—provided they are above the price floor, and are not part of a commercial offer which can have detrimental effects on network rollout. This aligns with the logic set out above, and in the Oxera Part 3 Report.

5.8 However, one potential concern raised by SFG (and implicit in the response of SPC Network) is that Eircom could decide to lower Bitstream prices in a geographically targeted way, perhaps focusing on areas with greatest (actual or potential) infrastructure competition. Eircom could do this without requiring approval from ComReg as the WCA market is being fully deregulated. The consequence of this could be that Eircom circumvents ComReg's proposals requiring commercial offers (including geographic discounts) to be approved by ComReg.[111]

5.9 Furthermore, this risk could be compounded if these targeted WCA discounts are not fully reflected in retail price reductions, given national retail pricing policies. If so, Eircom would not be forced to reduce wholesale VUA prices to maintain sufficient margin (in line with the MST on FTTH VUA services) and it could, therefore, successfully target Bitstream discounts in those areas

[111] ComReg 23/03, paras 9.347–9.376.

with greatest (actual or potential) infrastructure competition without implication for its retail pricing.

5.10 Indeed, the rationale set out in the Oxera Part 3 Report, holds only in the case where there is a mechanism through which lower unregulated wholesale bitstream prices would result in access seekers lowering their retail FTTH prices. This would likely be the case if there was a national reduction in wholesale bitstream prices, such that national retail prices could be lowered. If, however, Eircom set discounted FTTH Bitstream prices (for example, by equating the Bitstream price to the VUA price, in effect offering backhaul for free) in targeted areas with greatest (actual or potential) infrastructure competition, then:

- Retailers who have national retail pricing strategies may not lower their retail FTTH prices in response to a lower FTTH Bitsream price in that very specific area.
- In this case, Eircom's retail market share may remain the same, since (at a national level) it's not disadvantaged in terms of its price level relative to its rivals' prices.
- If it is successful in undercutting alternative wholesale providers (providing bitstream services, or substitutable VUA services), then it could gain wholesale customers to its benefit, and may therefore have an incentive to engage in this behaviour.

5.11 In this case, the concern is therefore one of Eircom finding a way to circumvent ComReg's proposed remedies (i.e. restrictions on wholesale discounts and differential geographic wholesale pricing) and engage in pricing behaviour to foreclose the market to rival alternative network operators. Indeed, under ComReg's proposals (with no MST between FTTH VUA and Bitstream, and the WCA market being fully deregulated), the approach described could be a way of circumventing the commercial offers pre-authorisation process by engaging in geographically targeted discounting which is not allowed for VUA (under the current proposals), but which is not prohibited for Bitstream as it is unregulated. Where there could be targeted discounting on FTTH Bitstream in some specific geographic areas, this could undermine the business case of alternative network operators as they would need to compete against heavily discounted Bitstream offers, which may not be covering their cost, and are targeted in nature.

5.12 Whether ex-ante regulation should be imposed to protect against this risk and whether it would be proportional to do so, relies on an assessment of the risk of Eircom seeking to engage in such behaviour (ability and incentive) and the costs (in terms of the regulatory burden imposed on Eircom and, by association, ComReg), considered alongside ComReg's policy objectives and the backstop of using its ex post competition law powers.

5.13 The risk of the above behaviour occurring is ultimately an empirical question of whether such a strategy could lead to a better financial position for Eircom, and thus whether it would have an incentive to enagge in such behaviour. This will depend on the difference in the margins Eircom would make on FTTH VUA compared with the discounted FTTH Bitstream price, together with any volume effects.

5.14 If the increase in profits on bitstream is greater than the decrease in profits from its own wholesale customers switching from FTTH VUA to FTTH bitstream, then Eircom could have the incentive to engage in this behaviour. Importantly, this is not determined only by switching from VUA to bitstream by Eircom's existing customers. If this was the case, the net impact would be Eircom being worse off, as bitstream is being offered at a price that doesn't cover backhaul costs. For this strategy to be profitable for Eircom, it must also capture customers from alternative network operators (such as SIRO or Virgin Media) or, more precisely, prevent the risk of customers leaving Eircom and switching to these rivals. If Eircom perceives this as a high risk, then even if it earns reduced margins with bitstream, it may consider the strategy to be profitable because of the avoided costs of losing customers to rivals. The strategy is more profitable when the loss of profits from a reduction in margins on bitstream are more than offset by the avoided losses from losing wholesale customers to rivals in the alternative.

5.15 The above effect in turn depends on the extent to which there would be switching to the Eircom Bitstream services. This will depend on the follow factors:

- The extent to which access seekers see FTTH VUA and FTTH bitstream as substitutes.[112] This will be determined, in part, by the costs associated with switching from FTTH VUA to FTTH Bitstream. If switching costs are low, then access seekers may be able to respond to the pricing signals and switch accordingly.[113]
- Whether the equivalent costs of upgrading from FTTC VUA to FTTH Bitstream or FTTH VUA are significantly different. If the difference in costs are low, and the two services seen as substitutes then takeup of the discounted bitsream product could be high.

5.16 The incentive and ability is highly contingent on the above factors and it thus difficult to quantify at this stage.

5.17 If Eircom were to engage in this behaviour, the impact could be foreclosure of infrastrucure competition in certain geographic areas that would otherwise benefit from competition across alternative network operators. This is because alternative network operators, such as SIRO, would need to compete against heavily discounted Bitstream offers, which may not be covering their cost, and are targeted in nature, and this may undermine their business case.

Options available to ComReg

Option 1: Maintain the existing wholesale FTTH VUA-bitstream MST

5.18 The first option would be to reverse the proposals in the Consultation and to maintain the existing MST between FTTH VUA and FTTH Bitstream. This would mean there would be an obligation for the margin between FTTH VUA prices and FTTH Bitstream prices to be reflective of the differences in the cost of provision—with the relevant prices being those in the specific geographic area where the discounts are being offered.

5.19 In regards to proportionality of this option we note that while this would protect against the risks identified above, it may be

[112] ComReg's market analysis has found that the degree of substitutability between the FTTH VUA and FTTH Bitstream is insufficient to conclude that they are in the same product market. ComReg Decision, Section 5.
[113] Operators who have already invested in deploying their own network infrastructure to allow them to use VUA inputs may face high switching costs if switching results in a large value of stranded assets.

that the specific pricing behaviour identified—targeted discounting of bitstream services—may be in breach of the non-discrimination obligations in place on the FTTH VUA service, [114] which is a key input to FTTH Bitstream services, and thus could also be prevented through ComReg's enforcement of that obligation, and identified through the proposals for monitoring of pricing, as set out below.

Option 2: Ongoing monitoring of the market with a view to using ex post competition powers or bringing FTTH Bitstream services in scope of the proposed rules on wholesale promotions and discounts

5.20 If ComReg opts not to maintain the existing MST between FTTH VUA and FTTH Bistream prices, ComReg should monitor market developments closely, given the potential identified risk to alternative network operators. It could do this, for example, through its detailed monitoring of commercial offers. In particular, ComReg could undertake systematic gathering of information from network providers and access seekers on FTTH services and the associated prices (including Bitstream prices).

5.21 This monitoring would allow it to assess whether there are signs that Eircom's commercial strategy is shifting towards the provision of FTTH Bitstream instead of FTTH VUA, and whether it is launching FTTH Bitstream commercial offers which have the effect of circumventing the obligations on FTTH VUA to not engage in behaviour that can materially affect infrastructure competition, such as geographically targeted offers.

5.22 This monitoring could allow ComReg to identify concerns early, and intervene in a variety of ways including using ex post competition law, enforcement of the non-discrimination obligations in place on the FTTH VUA service, reimposition of an explicit ex ante wholesale MST, or bringing Bitstream into scope of the wholesale commercial offer restrictions to avoid targeted discounting.

[114] ComReg considers that this could represent a breach of Eircom's non-discrimination obligations since 'a targeted discounting of FTTP Bitstream may place Access Seekers at a disadvantage by purchasing VUA directly (from Eircom and adding on the backhaul and co-location elements) as opposed to purchasing VUA as part of Eircom Wholesale's Bitstream offering' (source: ComReg Decision, Section 9.3.5).

5.3 Oxera's final recommendation

5.23 We recommend ComReg adopts Option 2. Whilst ComReg could consider adopting Option 1 to ensure maximum protection against the risk of targeted discounting on the bitstream services, Option 2 is a more flexible approach that ensures ComReg continues to monitor market developments closely, and should concerns be identified, it could intervene swiftly.

5.24 The precise action that ComReg would take will be for ComReg to decide at that point in time, subject to the specific nature of the practice.

oxera

oxera.com

WCA/WLA market review

—

Oxera report: Part 1
Prepared for Commission for Communications Regulation

16 December 2022

Contents

Acronyms 1
1 Introduction and summary 3
2 Context for the current assessment 8
2A Key findings from the market analysis 8
2B Competition concerns to be addressed 9
2C ComReg's objectives 9
3 Assessing the need for a price control 12
4 Price control recommendation for the Irish WLA market 15
4A Introduction 15
4B Option 1: Anchor pricing approaches—charge controls on FTTC with FTTH pricing flexibility 16
4C Option 2: Cost-based price controls on FTTC and FTTH 27
4D Option 3: A RAB-based approach 29
4E Option 4: Retail-minus approach 31
4F Recommended option 32
5 Regulatory approach to wholesale offers including price reductions 39
5A Conditions in place from the 2018 Pricing Decision 39
5B Recommended adjustments 41
6 FTTH connection and migration charges 49
6A Conditions in place from the 2018 market review 49

6B Assessing the need for continuation of this approach 50
7 Conclusions and recommendations 55
A1 Summary of ComReg's 2018 Decisions 58
A1A Price controls for FTTC services 62
A1B Price controls for FTTH services 63

Figure 4.1 Retail broadband subscriber lines by technology 19
Table 4.1 FTTC VUA regulated prices 27
Figure 4.2 The building blocks of a RAB-based price control 30
Box 4.1 Oxera recommmendations 37
Figure 5.1 Price floor for FTTC VUA and FTTH VUA 40
Box 5.1 Two-step process for reviewing price reductions 44
Figure A1.1 Summary of WLA and WCA services 59
Table A1.1 Summary of obligations imposed in the relevant markets 61
Table A1.2 Summary of price control obligations imposed on NGA services 62
Figure A1.2 Summary of 2018 Decision price control regulation 65

Acronyms

Term	Definition
AAC	average avoidable cost
ACL	average customer lifetime
ATC	average total cost
AVC	average variable cost
BEREC	Body of European Regulators for Electronic Communications
BU	bottom up
BU LRIC+	bottom up long run incremental cost plus
CGA	current generation access
ComReg	Commission for Communications Regulation
DCF	discounted cash flow
EECC	European Electronic Communications Code
EEO	equally efficient operator
(E)VDSL	(enhanced) very high-speed digital subscriber line
FTTC	fibre to the cabinet
FTTH	fibre to the home
FTTP	fibre to the premises
FWA	fixed wireless access
HEO	hypothetically efficient operator
IA	intervention area
LLU	local loop unbundling
LRAIC	long-run average incremental cost
LRIC	long-run incremental cost
Mbit/s	megabits per second
MST	margin squeeze test
NDCM	non-discrimination obligations and costing methodologies
NGA	next-generation access
NPV	net present value
NRA	national regulatory authority
OOB	out of bundle
PIA	physical infrastructure access
RAB	regulatory asset base
RSPs	retail service providers
SLU	sub-loop unbundling
SMP	significant market power
VHCN	very high capacity network
VUA	virtual unbundled access
VULA	virtual unbundled local access

Term	Definition
WACC	weighted average cost of capital
WCA	wholesale central access
WLA	wholesale local access

Note: this includes acronyms from the Oxera report: Part 1 and the Oxera report: Part 3.

1 Introduction and summary

1.1 Having completed its latest draft market reviews of the wholesale local access (WLA) and wholesale central access (WCA) markets, the Commission for Communications Regulation (ComReg) has made a number of proposals. These are outlined below, together with some of the key findings from its reviews.

1.2 The retail broadband market is deemed to remain competitive in the absence of WCA regulation (and in the presence of WLA regulation and physical infrastructure access (PIA) regulation upstream of the WLA markets) such that the WCA market is proposed to be deregulated.

1.3 For the WLA market, ComReg has defined two separate product markets:

- CG WLA Market: including local loop unbundling (LLU) over Eircom's legacy copper-only network;
- NG WLA Market: including virtual unbundled access (VUA) over fibre to the cabinet (FTTC) and fibre to the home (FTTH), with services provided by Eircom on FTTC and FTTH and by SIRO and NBI on FTTH.

1.4 The CG WLA Market will be deregulated given that it is in persistent decline and that CG WLA numbers are likely to continue to decline over the lifetime of this market review, alongside the likelihood of asymmetric substitution to VUA over FTTH.

1.5 The NG WLA Market has been split across two geographic markets. Specifically, ComReg defines:

- the Intervention Area (the IA NG WLA Market)—areas covered by the national broadband plan (NBP);
- the Commercial Area (the Commercial NG WLA Market)—premises not covered by the NBP where at least Eircom is present in the wholesale market.

1.6 In the IA NG WLA Market, NBI is expected to be the main provider, but no significant market power (SMP) was found as ComReg considers that NBI is sufficiently constrained by the terms of its contract with the State, which means that it cannot act independently of competitors, customers and end-users.

1.7 Eircom has been found to have SMP in the Commercial NG WLA Market, given that this market is not effectively competitive, and that Eircom would not be sufficiently constrained such that it would be prevented from behaving, to an appreciable extent, independently of competitors, customers and end-users in this market.

1.8 In this context, ComReg asked Oxera to produce two Expert Economic Reports outlining the options for wholesale price

controls and ex ante margin squeeze tests (MSTs) on those services where Eircom has been found to have SMP, and to recommend the most appropriate wholesale price control and MST obligations for the next five years. These recommendations should take into account ComReg's concerns that, absent regulation, Eircom as the SMP operator would have the incentive and ability to set excessive wholesale prices and/or engage in exclusionary behaviours through low, or loyalty-enhancing, wholesale pricing and/or impose a price squeeze, leading to negative outcomes for consumers.

1.9 In this report, the focus is on wholesale price controls to address concerns about excessive pricing and exclusionary behaviours. While we note the role of ex ante margin squeeze in addressing the concerns of margin squeeze directly (as we set out in more detail in the separate report[1]), we also note the role that a margin squeeze test (MST) can have in providing additional safeguards for access seekers where there is pricing flexibility on some key wholesale inputs.

1.10 Specifically, we consider whether wholesale price control obligations are appropriate for the monthly rental fees for FTTC VUA and FTTH VUA services (NGA services) given the finding of SMP in the WLA markets, and examine the options for such a price control. We then recommend the most appropriate wholesale price control obligations for NGA services for the next market review period, taking into account the specifics of the Irish WLA market, ComReg's objectives, and the recommendations and guidelines adopted by the European Commission and BEREC.

1.11 Following our assessment, our recommendation to ComReg is that price regulation of NGA VUA services, in the WLA market where Eircom has SMP, should follow an anchor pricing approach. This approach should include:

- pricing continuity of FTTC VUA services, taking as a starting point the current price from the BU LRIC+ model (which in July 2023 will be €19.12), with any future price increase limited to no more than inflation (CPI-0%)—i.e. a flat, real price cap;
- pricing freedom on FTTH VUA services;
- a requirement on Eircom to make available a 100Mbit/s FTTC-like service over its FTTH network wherever there is no parallel FTTC network, and to provide this service at the regulated price of FTTC in line with the above recommendation. This service should be made available in advance of the implementation of copper switch off such that new FTTC connections are no longer available.

1.12 We consider that this option strikes the most appropriate balance between:

[1] Oxera (2022), 'WCA/WLA market review – Oxera report: Part 3', prepared for the Commission for Communications Regulation, December.

- offering protection to customers from the risk of excessive prices, as FTTC and (at least lower-bandwidth) FTTH services will be substitutable, and hence will act as a constraint on the pricing of FTTH services; and
- providing investors in FTTH networks with an opportunity to earn fair returns by not directly capping FTTH prices too early, as this might undermine investment incentives, especially if there remains uncertainty over the speed of the transition from FTTC to FTTH.

1.13 This approach is also supportive of ComReg's objectives to:

- ensure that wholesale prices do not lead to excessive end-user prices on FTTC services, as these services will continue to be regulated at current levels;
- encourage investment in FTTH by the network operators, given the pricing flexibility and assurances that the FTTC prices will not be significantly below the costs of providing FTTH services;
- ensure that regulated FTTH access prices are not set so low as to choke off investment that would otherwise be commercially viable;
- provide protection against excessive end-user prices on FTTH (particularly lower-bandwidth FTTH services).

1.14 A recommendation to maintain pricing flexibility on FTTH, in the presence of a retail pricing constraint from a price anchor stemming from other regulated access products, is consistent with European Commission guidance—specifically with the conditions set out in the European Electronic Communications Code (EECC) and the 2013 Recommendation on non-discrimination obligations and costing methodologies (NDCM) to promote competition and enhance the broadband investment environment.

1.15 We note that Oxera also recommends (in Oxera report: Part 3) for there to be an obligation not to engage in a margin squeeze (i.e. to ensure economic replicability of retail FTTH services by access seekers), with reference to retail services that rely on FTTH VUA wholesale services as an input. This provides a further safeguard, in line with the European Commission's recommendations.

1.16 In addition to Oxera's recommendations for controls to protect against excessive monthly rental prices, we consider whether the current regulatory approach to wholesale offers (e.g. discounts and promotions) needs to be revised, in line with ComReg's objective to promote competition and encourage investment, including by ensuring that investment by other operators is not jeopardised (e.g. were Eircom to set prices too low).

1.17 To safeguard against exclusionary behaviours, including pricing practices that might impair investment by alternative network operators, we recommend that, instead of banning wholesale

promotions and discounts, as is currently the case (subject to an exceptional circumstances review), it would be more proportionate to allow Eircom to launch price reductions or other wholesale offers. However, these would need to be first assessed and approved by ComReg on an ex ante case by case basis, in line with a number of key principles.

1.18 Specifically, ComReg must be satisfied that Eircom's wholesale pricing practices:

- are unlikely to have a material impact on economically efficient alternative investment by alternative network operators that are either investing or planning to invest in very high capacity networks (VHCNs);
- will generate clear and demonstrable benefits, in terms of being a critical element of Eircom's investment plans, and/or that the prices will deliver benefits for consumers.

1.19 We provide examples of key considerations for ComReg when assessing geographically differentiated pricing, price reductions assessed against a price floor, and the terms and conditions attached to wholesale offers.

1.20 We also assess the need for the continuation of controls on FTTH connection and migration charges, which are currently required to be set at the same level.[2] We consider that ComReg's approach to date might have had the desired effect, at a time when most new customer acquisitions would have required new connections. We also observe that Eircom has lowered its connection (and migration) charges to zero. If this charging behaviour were to continue and become the norm during the market review period, concerns about the level of connection charges affecting customers' decisions to take up FTTH, and any potential distortions to competition resulting from above-cost migration charges, may continue to be unwarranted. Also, ComReg may choose not to make any changes to its current regulatory approach to FTTH connection and migration costs.

1.21 If, however, the number of customers connected to Eircom's FTTH network increases over time such that the large majority of customers changing RSP would face migration charges (and if the wholesale charges increase above zero and these are passed on the end-users), there could be a distortion to competition whereby customers face a higher cost to switching through high migration charges being passed through at the retail level. In this case, ComReg could consider requiring migration charges to be set in line with their incremental costs.

1.22 If controls on migration charges are changed to ensure that the prices are no higher than the costs, and where there is a concern that Eircom might move away from non-zero connection charges, ComReg could cap wholesale connection

[2] Provided that, together, the price does not exceed the level that would allow Eircom to recover its customer-specific connection-related investment over the lifetime of the underlying assets.

charges at €100—their most recent levels before Eircom reduced the price to zero.[3] This will prevent prices increasing significantly to a level that could disincentivise new connections. While this may be below the incremental cost of delivering a new connection, we consider that the regulatory framework affords sufficient flexibility for Eircom to seek to recover costs through other charges—for example, in the monthly line rental charge which we recommend should continue to be subject to pricing flexibility.

1.23 This Economic Expert Report is structured as follows.

- In section 2 we set out key points of context to be considered in any assessment of the need for, and form of, price controls, including the main findings and conclusions from ComReg's updated market review analysis, the competition concerns to be addressed, and ComReg's objectives.
- In section 3 we consider whether, in this context, there is a need for price controls in the NGA WLA Market in areas where Eircom is designated as having SMP.
- In section 4, we focus on the options for controlling wholesale FTTC VUA and FTTH VUA monthly rental prices, and provide our recommendation.
- In sections 5 and 6 we look at the need for further controls to restrict the ability of the SMP operator to make wholesale offers that could lead to worse outcomes for competition, and controls on ancillary charges including connection and migration charges.

1.24 For completeness, in Annex A we summarise the existing regulation (as set out in ComReg's 2018 Decisions).[4]

[3] €100, in place between 1 January 2019 and 30 September 2022. See Eircom's Reference Access Offer, p. 57, https://www.openeir.ie/wp-content/uploads/2022/09/ARO-Price-List-V23_0-Marked-01102022.pdf.

[4] Namely: ComReg (2018), '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', ComReg 18/94, D10/18, 19 November (henceforth referred to as 'ComReg 18/94'); ComReg (2018), 'Pricing of wholesale broadband services: Wholesale Local Access (WLA) market and the Wholesale Central Access (WCA) markets. Response to Consultation and Decision', ComReg 18/95, D11/18, 19 November (henceforth referred to as 'ComReg 18/95'); ComReg (2018), 'Response to Consultation and Decision on price control obligations relating to bundles: Further specification of the wholesale price control obligation not to cause a margin squeeze in the WLA, and WCA markets. Response to Consultation and Decision', ComReg18/96, D12/18, 19 November (henceforth referred to as 'ComReg 18/96').

2 Context for the current assessment

2A Key findings from the market analysis

2.1 Having completed its latest draft market reviews of the WLA and WCA markets, ComReg has made a number of proposals. These are outlined below, together with some of the key findings from its reviews.

2.2 The retail broadband market is deemed to remain competitive in the absence of WCA regulation (and in the presence of WLA regulation and PIA regulation upstream of the WLA markets) such that the WCA market is proposed to be deregulated. This is consistent with the European Commission 2020 Recommendation on markets susceptible to ex ante regulation.

2.3 For the WLA market, ComReg has defined two separate product markets:

- CG WLA Market: including LLU over Eircom's legacy copper-only network; and
- NG WLA Market: including VUA over FTTC and FTTH, with services provided by Eircom on FTTC and FTTH and by SIRO and NBI on FTTH.

2.4 The CG WLA Market will be deregulated given that it is in persistent decline and that CG WLA numbers are likely to continue to decline over the lifetime of this market review.

2.5 The NG WLA Market has been split across two geographic markets, for which the geographic unit of analysis was Eircom exchange areas. Specifically, ComReg defines:

- the Intervention Area (the IA NG WLA Market)—areas covered by the NBP;
- the Commercial Area (the Commercial NG WLA Market)—premises not covered by the NBP where at least Eircom is present in the wholesale market.

2.6 In the IA NG WLA Market, NBI is expected to be the main provider, but no SMP is found as ComReg considers that NBI is sufficiently constrained by the terms of its contract with the State, which means that it cannot act independently of competitors, customers and end users.

2.7 Eircom has been found to have SMP in the Commercial NG WLA Market, given that the market is not effectively competitive, and that Eircom would not be sufficiently constrained such that it would be prevented from behaving, to an appreciable extent, independently of competitors, customers and end-users in this market.

2.8 While there is scope for a third geographic area for NG WLA markets in which ComReg would deem there to be sufficient presence of alternative operators such that the conditions of competition would be appreciably different (requiring at least

three operators with 60% coverage of the exchange and overlapping coverage for at least 50% of premises in the exchange), ComReg found no areas that currently meet these requirements.

2.9 Therefore, the analysis set out below is focused on the need for price regulation in the Commercial NG WLA Market, where Eircom is found to have SMP. In line with the product market definition, this includes consideration of price controls for FTTC VUA and FTTH VUA services.

2B Competition concerns to be addressed

2.10 In the presence of SMP in the Commercial NG WLA Market, there is a concern that, absent regulation, Eircom as the SMP operator would have the incentive and the ability to set excessive wholesale prices and/or engage in exclusionary behaviours through low, or loyalty-enhancing pricing and/or to impose a price squeeze leading to negative outcomes for consumers.

2.11 In this report, the focus is on imposing a price control to address the concerns about excessive pricing. We note the role of ex ante margin squeeze in addressing the concerns about margin squeeze directly (as covered in more detail in our separate report[5]). However, we also note the role that an MST can have in providing additional safeguards for access seekers where there is pricing flexibility on some key wholesale inputs, in line with European Commission Recommendations.

2C ComReg's objectives

2.12 When choosing the relevant price control obligation and/or appropriate network pricing and costing approaches, ComReg needs to take into account its statutory objectives. Under the Communications Regulation Act of 2002 (as amended), ComReg's objectives regarding the electronic communication market are:

- to promote competition;
- to contribute to the development of the internal market;
- to promote the interests of users within the Community;
- to ensure the efficient management and use of the radio frequency spectrum and numbers.[6]

2.13 According to the Communications Regulation Act of 2002 (as amended), promoting competition can be achieved by:

- ensuring that users, including disabled users, derive maximum benefit in terms of choice, price and quality;
- ensuring that there is no distortion or restriction of competition in the electronic communications sector;

[5] Oxera (2022), 'WCA/WLA market review – Oxera report: Part 3', prepared for the Commission for Communications Regulation, December.
[6] This objective is not relevant to the context of this report, and is therefore not covered any further.

- encouraging efficient investment in infrastructure and promoting innovation;
- encouraging efficient use, and ensuring the effective management of radio frequencies and numbering resources.[7]

2.14 Among these objectives, it is clear that ComReg must find a balance between two key ones:

- to encourage the development of alternative infrastructure ('encouraging efficient investment in infrastructure');
- to promote competition.

2.15 This is also reflected in ComReg's Strategy Statement:[8]

In general, ComReg has a preference for infrastructure-based competition, based on inter-platform competition as well as access-based competition at the deepest level possible. At all times, ComReg's pricing decisions aim to strike a balance between the following:

- Encouraging investment in VHCN by the network operators. It is important that regulated access prices are not set so low that investment that would otherwise be commercially viable is choked off;
- Encouraging viable investment in own infrastructure by those who purchase access from other networks, particularly those who use regulated access to Eircom's network;
- Ensuring that regulated prices reflect efficient practice and that excessive recovery by the SMP operator does not happen;
- Ensuring that wholesale prices do not lead to price squeezes;
- Wholesale prices do not lead to excessive end user prices; and
- Wholesale prices ensure a timely and efficient migration to new infrastructure over time.

Further, national regulatory authorities of European Member States shall pursue general objectives, as set out in Article 3 EECC. In particular:

a) promote connectivity and access to, and take-up of, very high capacity networks, including fixed, mobile and wireless networks, by all citizens and businesses of the Union;

(b) promote competition in the provision of electronic communications networks and associated facilities, including efficient infrastructure-based competition, and in the provision of electronic communications services and associated services.

[7] This means of promoting competition is not relevant to the context of this report, and is therefore not covered any further.
[8] ComReg (2021), 'Electronic Communications Strategy Statement 2021 to 2023', para. 4.45, https://www.comreg.ie/media/2021/12/ComReg-ECS-Strategy-Statement-English-Dec-7-Final-Web.pdf.

2.16 Below we set out some options that take these objectives into account and consider to what extent the proposed options would strike the appropriate balance between the objectives. However, ComReg's decision on which approaches to take forward will be based on its own assessment of the appropriate balance to strike given its overall policy objectives.

3 Assessing the need for a price control

3.1 Price controls on wholesale services can be imposed only in markets where SMP has been identified and thus that is the first necessary condition, informed by the findings of market analysis.

3.2 Given the finding of SMP in the Commercial NG WLA Market (which includes FTTC and FTTH wholesale VUA services), but no SMP (and therefore deregulation) in the WCA market, we assess the options for price controls on NGA WLA services in the Commercial NG WLA Market only.

3.3 While there is a finding of SMP in the NG Commercial WLA Market, the need for (and form of) price regulation on FTTC VUA and/or FTTH VUA will depend on a number of factors.

3.4 In addition to the key competition and policy issues at play (concerns about excessive pricing and margin squeeze) and ComReg's objectives (as set out above), it is important to examine the presence or otherwise of retail price constraints, either present now or expected in future.

3.5 Indeed, following a finding of SMP at the wholesale level, price control regulation may be needed to protect consumers from excessive pricing. However, price controls will be necessary only where there are no demonstrable retail price constraints resulting from, for example:

- alternative infrastructure competition; or
- constraints coming from a price anchor from a cost-oriented copper access price (or an equivalent NGA service), where these are found to be in the same market.

3.6 This is a view consistent with the EECC and the 2013 European Commission Recommendation on NDCM.

3.7 In determining whether price control obligations are appropriate, Recital 193 of the EECC provides that:[9]

> National regulatory authorities should be able to decide to maintain or **not to impose regulated wholesale access prices** on next-generation networks if sufficient competition safeguards are present…and a **demonstrable retail price constraint** resulting from infrastructure competition **or a price anchor stemming from other regulated access products,** or both. [Emphasis added]

3.8 This is reflected in the NDCM, which advocates pricing flexibility for NGA products where sufficient competitive safeguards are put in place (non-discrimination, economic replicability test, pricing constraints coming from the regulated legacy product

[9] EECC, Art. 74.1.

(the 'copper anchor') or an alternative networks retail constraint.[10]

3.9 In practice, the degree of retail pricing constraints in a market may vary, and thus the need for price controls may vary across different services, as follows, for example:

- If retail prices are constrained to a competitive level, wholesale price controls may not be needed. In fact, in such a situation, the market is likely to be effectively competitive and a finding of SMP would not be warranted.
- There may be a degree of constraint on retail prices, but not sufficient to constrain prices to a competitive level. In this case the retail price constraint would not be sufficiently strong to conclude that the relevant market is effectively competitive and therefore that no operator has SMP. Here the question is whether regulation should focus on allocative efficiency (i.e. keeping wholesale access prices low to encourage further entry through wholesale access), or on dynamic efficiency (i.e. to ensure that prices are not controlled so tightly as to close off the upstream investment opportunity and potential for further infrastructure competition).
- If there are no retail pricing constraints and ineffective regulated anchors, there is a significant risk of prices being set at excessively high levels, which may require more intrusive intervention in the form of a direct control on prices. Indeed, when Eircom launched FTTC services in 2013 and it was subject only to a margin squeeze obligation, FTTC Bitstream prices increased twice over a two-year timespan, from €17.50 to €23.00.[11]

3.10 In assessing the form of price control to apply, a balance must also be struck between price controls that set a cap on the SMP operator to prevent excessive pricing (a focus on allocative efficiency) and overly tight controls on the SMP operator that could discourage investment by the SMP operator and by independent competitors (to the extent that the regulated prices of the SMP operator would also constrain the prices of any potential entrants).

3.11 In this context, we examine a range of price control options that could be imposed on the WLA market in Ireland (described in more detail in section 4). For each option considered, some form of price regulation will be needed on at least one of the services (FTTC VUA and/or FTTH VUA). This is because, given the findings of the market review and the SMP assessment implying an absence of sufficient retail pricing constraints from competing infrastructure, no wholesale price control on *any*

[10] European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment', 2013/466/EU, Recitals 49–69.
[11] ComReg (2016), 'Market Reviews: Wholesale Local Access and Wholesale Central Access', ComReg 16/96, para 13.306(b). (Henceforth referred to as 'ComReg 16/96').

services would not be appropriate or supportive of ComReg's objectives.[12]

3.12 As a number of service providers use WLA inputs to compete with Eircom in related downstream wholesale and retail markets (including in the supply of WCA services), the findings of ComReg's market review imply that Eircom would have the ability and incentive to exclude or foreclose access seekers competing in the provision of wholesale and/or retail services by setting WLA prices at an excessive level (and/or engaging in a margin squeeze). This would ultimately be detrimental to retail competition.

3.13 While having no price controls in place may support some of ComReg's objectives (in particular, those relating to encouraging competing network operators to invest in VHCNs, as well as a timely migration to the new FTTH infrastructure), this could come at the expense of excessive end-user prices and over-recovery of costs by the SMP operator, as well as the risk of an inefficient migration from FTTC to FTTH infrastructure (in particular, where customers on the FTTC network are force-migrated onto the new infrastructure without any safeguards). To the extent that the absence of any price controls would also allow Eircom to set very low wholesale prices with the intention to undermine actual or potential investments by alternative network operators, this would also be against ComReg's objectives of promoting competition and encouraging investment.[13]

3.14 In summary, we find that an approach of no wholesale price controls on both FTTC and FTTH is unlikely to be consistent with ComReg's objectives, and would not address the competition concerns where SMP is found. We therefore do not consider this to be a viable option for further discussion.

[12] Having considered the possibility of market entry or expansion by Virgin Media or SIRO in the Commercial NG WLA Market, ComReg considers that there is insufficient evidence to suggest that the potential competition from these sources would exert an effective competitive constraint on Eircom's provision of NG WLA, given the limited current and expected rollout by SIRO and insufficient data in respect of Virgin Media's entry into NG WLA (see ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', sections 6.5.2 and 6.5.3).
[13] The prospect of price floors is discussed in further detail in section 5.

4 Price control recommendation for the Irish WLA market

4A Introduction

4.1 Having established the need for some form of price control on NGA services in the WLA market, this section assesses a range of options for how such price controls can be designed, before recommending the most appropriate option for the WLA market in Ireland.

4.2 At a high level, we examine four types of price control option for the Irish WLA market.

1 Anchor price regulation

4.3 This would involve a price cap on FTTC wholesale services and pricing flexibility on FTTH wholesale services. The idea behind this approach is that the prices of FTTC services will provide a sufficient constraint on the pricing of FTTH services, while still allowing for price experimentation and maintaining investment incentives on FTTH. While ComReg's current approach to price regulation is based on a form of anchor price regulation, there are alternative ways in which such regulation could be implemented, as we explore in further detail below.

2 Cost-based price controls on both FTTC and FTTH

4.4 This would involve capping the wholesale prices of both FTTC and FTTH services at a cost-oriented level based on the hypothetical (bottom-up) cost of providing access.

3 A RAB-based approach

4.5 This would involve pooling all the SMP operator's NGA assets into one regulated asset base (RAB) and estimating the allowed revenues that can be earned based on a top-down RAB–weighted average cost of capital (WACC) model. Depending on the design of the RAB-WACC model, this option could allow the SMP operator to vary the relative prices of FTTC and FTTH to manage the migration from legacy to VHCN infrastructure, while still earning returns in line with its costs, including its cost of capital. This approach is typically used to set price controls on utility networks with natural monopoly characteristics that face no or limited competition.

4 A retail-minus approach

4.6 This would involve establishing the wholesale access price by considering what proportion of avoidable retail and other downstream costs and margins would need to be removed from the retail price so that just the wholesale components remain. This approach is therefore conceptually similar to an ex ante MST.

4.7 In sections 4B to 4E below, we describe and assess each of these options, having regard to whether they would help to

achieve ComReg's policy objectives, as well as considering their impact on different stakeholders and on competition. Section 4F concludes with our recommendation on the most appropriate price control option for the Irish WLA market.

4B Option 1: Anchor pricing approaches—charge controls on FTTC with FTTH pricing flexibility

4.8 This approach would involve imposing a charge control of some form on FTTC services, while having pricing flexibility on FTTH services. This would ensure that the charge control on FTTC services protects FTTC consumers from the risk of excessive prices (in the absence of retail pricing constraints), while providing a degree of pricing flexibility on FTTH VUA services to avoid undermining investment incentives.

4.9 ComReg's existing approach to price regulation, as set out in the 2018 WLA/WCA Market Review Decision,[14] is a specific application of the anchor pricing approach, and involves setting cost-based controls on both CGA[15] and FTTC wholesale access products. For FTTC in particular, the price control on wholesale FTTC services is based on the outcomes of a BU LRIC cost model, while allowing pricing freedom on FTTH services (subject to compliance with an ex ante MST test and other constraints on geographic pricing and wholesale offers).[16]

The need for price controls on FTTC VUA

4.10 ComReg introduced price controls on FTTC VUA as part of its 2018 WLA/WCA Market Review Decision. This followed a period when FTTC VUA prices were subject only to an ex ante MST obligation, and where legacy CGA services were subject to cost-based price controls. In other words, CGA services were the anchor product and FTTC was allowed pricing flexibility.

4.11 At the time of the 2018 WLA/WCA Market Review Decision, ComReg considered that:[17]

> the lack of effective constraint exercised by Eircom's legacy copper access network indicates that LLU can no longer be considered as an anchor product that would constrain the pricing of FTTC-based services in a way that would avoid a negative knock-on effect for retail broadband prices.

4.12 This was one of the key reasons that Eircom's prices were deemed not to be effectively constrained at the retail or wholesale level—evidenced by NGA wholesale prices increasing twice since the launch of NGA services in 2013—and price caps were imposed on FTTC services.[18]

[14] ComReg 18/94.
[15] In the 2018 WLA Market Review Decision, ComReg (re)imposed an obligation of cost orientation based on a TD HCA costing methodology, with the exception of Active Assets, where the costs are calculated using a BU-LRAIC+ methodology for CG SABB.
[16] Annex A1 of this report summarises the 2018 WLA/WCA Market Review Decisions.
[17] ComReg 18/94, para. A3.111.
[18] ComReg 16/96, para. 8.626.

4.13 In light of the findings of the present market review—in particular, the proposals to deregulate CGA services, and the finding of a lack of effective infrastructure competition in the market—there are unlikely to be any retail pricing constraints on FTTC services. In the absence of such constraints, pricing freedom on FTTC services could lead to excessive pricing of wholesale FTTC, which is of concern given the large number of subscribers in the market who obtain broadband services over FTTC technologies. In particular, despite some small decreases in recent quarters, in Q2 2022 there remain around 571,000 broadband subscribers taking VDSL services, representing 35% of all fixed broadband subscribers.[19]

4.14 While that number may be expected to decline over the course of the market review (on the basis that Eircom is continuing to roll out FTTH over its FTTC network), such consumers should still be protected from excessive prices during the transition.

4.15 Absent price controls on FTTC, Eircom would be free to raise FTTC prices to encourage migration. While this could support faster migration, the migration may not necessarily be done in an efficient or non-exploitative manner if there are no controls on how customers remaining on FTTC services will be treated and how customers on the new network will be protected from excessive prices.

4.16 For these reasons, we consider that price controls on FTTC will continue to be needed, particularly in view of the role that such regulation could have in ensuring retail pricing constraints on FTTH services, as discussed below.

The need for pricing flexibility on FTTH VUA

4.17 Pricing flexibility on FTTH is consistent with ComReg's objectives to promote investment in VHCNs and allow a timely migration from legacy to new infrastructures.

4.18 The case for pricing flexibility was made by ComReg in the 2018 WLA/WCA Market Review Decision. ComReg considered that with uncertainty over costs and demand, the FTTH price was likely to be sensitive to the penetration rate.[20] Furthermore, it considered that incorrect forecasts could affect future market developments and distort investment decisions, for example if the wholesale price were set too high or too low.[21]

4.19 This is consistent with sound economic principles in favour of pricing freedom, particularly during the early stages of FTTH roll-out, including:[22]

[19] ComReg (2022), 'Quarterly Key Data Reports: Data Portal: Internet Statistics', https://www.comreg.ie/industry/electronic-communications/data-portal/graphic-info/, accessed 21 September 2022.
[20] ComReg 16/96, para. 7.1313.
[21] Ibid, para. 7.1313.
[22] As set out in Oxera's submission to European Commission (2020), 'Targeted consultation on the revision of the Commission's access Recommendations',

- operators investing in these networks may face a number of **risks** (due to demand, cost and regulatory uncertainty);
- in this case, it may be appropriate for regulators to allow for a period of **pricing flexibility**. Such pricing flexibility may enable operators investing in NGA networks to test price points and **wait for the period of demand and cost uncertainty to play out**;
- not imposing strict price controls in the early stages of roll out will also allow a period for clarity on **the impact of (or emergence of) competition** from alternative technologies and any **pricing constraints** caused by other elements of the regulatory regime itself, such as anchor pricing or copper services regulation;
- in this regard, pricing flexibility could support regulatory objectives with respect to **fostering investment in VHCNs**;
- in contrast, early regulation of FTTH through price caps that may be set at the 'wrong' level (at a level that significantly reduces the expected returns on the investment below the WACC) can **undermine the investment incentives** for FTTH.

4.20 An approach of pricing flexibility in these circumstances is in line with recommended practice from the 2013 Recommendation on NDCM and the EECC:

> Due to current demand uncertainty regarding the provision of very high-speed broadband services it is important in order to promote efficient investment and innovation [...] to allow those operators investing in NGA networks a certain degree of pricing flexibility to test price points and conduct appropriate penetration pricing.[23]
>
> Due to **uncertainty** regarding the rate of materialisation of demand for the provision of next-generation broadband services, it is important in order to promote efficient investment and innovation to allow those operators investing in new or upgraded networks a certain degree of **pricing flexibility**.
>
> National regulatory authorities should be able to decide to maintain or **not to impose regulated wholesale access prices** on next-generation networks if sufficient competition safeguards are present.[24] [Emphasis added]

4.21 Many of these remain important considerations when assessing the need for continued pricing flexibility on FTTH services.

4.22 However, as shown in the market review, in recent years there has been increased roll-out and take-up of FTTH services in Ireland, with early indications that users are starting to migrate away from FTTC services to FTTH services (see Figure 4.1). For example, FTTC subscriber volumes peaked in Q3 2020 (at around 645,000) and have since declined in each quarter, falling to around 571,000 as at Q2 2022. In contrast, FTTH broadband subscriptions are increasing significantly—between

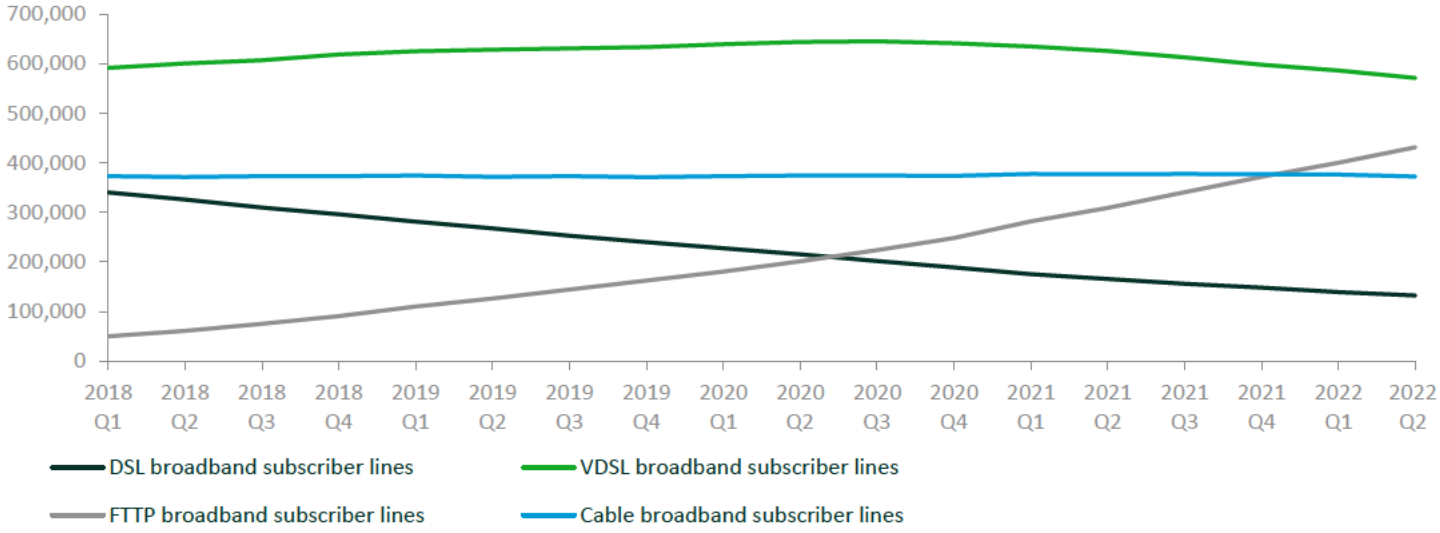
https://digital-strategy.ec.europa.eu/en/library/access-recommendations-factual-summary-report-targeted-consultation-proposed-revision.

[23] Commission Recommendation of 11 September 2013 on NDCM, Recitals 49–69.

[24] EECC, Recital 193.

Q4 2018 (after the previous market review) and Q2 2022, FTTH subscriptions grew from around 91,000 to 431,000. This trend is expected to continue across the review period.

Figure 4.1 Retail broadband subscriber lines by technology



Note: Excludes satellite, fixed wireless access and mobile broadband subscribers.
Source: Oxera based on ComReg (2022), 'Quarterly Key Data Reports: Data Portal: Internet Statistics', https://www.comreg.ie/industry/electronic-communications/data-portal/tabular-information/, accessed 21 September 2022.

4.23 In addition, a number of announcements have been made to further investment throughout the country, including Eircom's plans to increase its FTTH footprint to 1.9 million premises by 2026.[25] Its FTTH investment commitments and signals of other investors committing to FTTH investment[26] show that the current regulatory regime in Ireland has been supportive in encouraging FTTH roll-out.

4.24 With these developments, an important question arises in this market review of whether continued pricing flexibility on FTTH VUA is still warranted, or whether the time is right to impose price caps on this service.

4.25 Simply observing increased FTTH roll-out does not alone make the case for moving away from pricing flexibility and imposing more stringent price controls on wholesale FTTH services.

4.26 Any move away from pricing flexibility needs to be properly justified, taking into account the impact on Eircom's investment

[25] On 11 August 2021 Eircom announced the expansion of the FTTH fibre network roll-out to include a further 200,000 premises in Ireland, which were initially not included within the open eir FTTH roll-out or in the government-backed NBP. The revised target is to have 1.9m premises within the open eir FTTH footprint by 2026. See eir (2021), 'Ireland on track to become one of the most connected countries in the world', press release, 11 August, https://www.eir.ie/pressroom/eirs-Gigabit-Fibre-network-to-expand-to-a-further-200000-homes-and-businesses.

[26] For example, SIRO's Phase 2 plans to roll out to an additional 344,161 premises, with the eventual announced intention being to pass 770,000 premises in 154 towns. *The Irish Times* (2021), 'Siro announces €620m investment to upgrade broadband network', 28 October, https://www.irishtimes.com/business/technology/siro-announces-620m-investment-to-upgrade-broadband-network-1.4712850.

incentives, and those of other actual or prospective FTTH providers. In assessing the options for FTTH regulation, which may involve either continued pricing flexibility on FTTH services or the introduction of a direct price control on FTTH services, ComReg needs to give due consideration to the downside risks of an investment in FTTH and to the allowable returns over the investment's lifetime (as we explore further under Option 2 below and in our recommendations in section 4F below).

4.27 This requires taking account of the fact that, notwithstanding the investment plans being announced, risks may remain during the investment phase of the project, which is still ongoing. As discussed in section 4F, such risks may come from uncertainty about: the speed of take-up (a key driver of value and payback in the FTTH business plan); the impact of infrastructure competition; and costs.

4.28 Under Option 2 below and in our recommendations in section 4F, we set out further detail on why strict cost-based price caps should be considered only once the major risks have crystallised, and Eircom continues to have SMP, and why it may still be too early to move away from pricing flexibility on FTTH VUA.

FTTC price caps constraining FTTH prices

4.29 Under anchor pricing, even though no direct price control would be applied to FTTH VUA services, the effectiveness of this approach in limiting the risk of excessive prices is predicated on the continued regulation of FTTC VUA prices providing a retail pricing constraint on FTTH.

4.30 This works under the assumption that FTTC and FTTH services are part of the same relevant economic market,[27] and therefore any attempts by Eircom to increase FTTH VUA prices will be unprofitable, given the availability of a cheaper price-capped alternative.

4.31 In summary, an anchor pricing approach aims to strike a balance between: (i) providing protection from the risk of excessive prices by imposing a price cap on an anchor product that can indirectly constrain the prices of all other wholesale products, and (ii) maintaining investment incentives to deploy VHCNs by not directly capping FTTH prices while investment risk and uncertainty over the speed of transition from FTTC to FTTH remain.

4.32 The precise balance between these objectives can differ depending on how the anchor pricing approach is implemented in practice—in particular, how the anchor product is specified

[27] ComReg has provisionally concluded that it is appropriate to include VUA delivered over FTTC and VUA delivered over FTTP in the VUA focal product (see ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', section 5.2.1).

and the form of price control imposed on it. In this context we consider three options below.

- Option 1a: a cost-based charge control on FTTC services based on a BU LRIC cost model and pricing flexibility on FTTH.
- Option 1b: flat real prices (pricing continuity) on FTTC services and pricing flexibility on FTTH.
- Option 1c: requiring an emulated FTTC product on the FTTH network in combination with the above, such that in areas where FTTC is not currently available alongside FTTH and, looking forward, in areas where the FTTC network is switched off, the prices of FTTH continue to have a regulated anchor.

4B.1 Option 1a: charge control on FTTC services (based on cost model assuming continuation of existing volumes) and pricing flexibility on FTTH

4.33 This option is essentially the continuation of the existing regime, with FTTC regulated with reference to the outputs of ComReg's BU LRIC cost model. ComReg's model assumes that demand for the existing FTTC network will continue at current levels and is unaffected by the roll-out and take-up of FTTH services. In other words, it models a hypothetical steady-state FTTC demand.[28] The model is therefore implicitly assuming that FTTC technology remains the primary NGA modern efficient network that a hypothetically efficient operator (HEO) would continue to invest in. Such an approach is consistent with the European Commission's 2013 Recommendations.[29]

4.34 Under these assumptions, the unit costs obtained from the BU LRIC model are also relatively stable and not subject to increases in unit costs that would be observed if actual volumes of FTTC active connections were used (which would be falling as a result of customers migrating away from FTTC to

[28] This approach has also been taken in other jurisdictions. Specifically, Ofcom has used a similar principle in the past with its application of a 'hypothetical ongoing network' approach. Under this approach Ofcom set charge controls on legacy services based on BT's costs but including a hypothetical ongoing network adjustment, which uplifted the value of BT's heavily depreciated assets (mainly exchange equipment) to reflect the cost of maintaining a network on an ongoing basis (see Ofcom (2018), 'Wholesale Local Access Market Review: Statement: Annexes 10–16', 28 March, paras A12.84–A12.89; Ofcom (2019), 'Promoting competition and investment in fibre networks: Initial proposals – Approach to remedies', 29 March, para. 2.14). This was to adjust for a situation whereby unit capital costs were likely to be calculated to be too low, with prices set on that basis giving uneconomic signals to customers, encouraging more consumption of a declining service, and potentially leading to a requirement for new investment to support the demand.
The conceptual approach for adjusting volumes in this case would be the same. The objective would again be to set sensible economic prices and to prioritise this relative to concerns about over- or under-recovery of sunk costs. In addition, under the modelling approach used for Eircom's costs, it is not clear that it would be necessary to raise prices as volumes fall in order to allow full cost recovery over the lifetime of the investment. The relationship between allowed revenues and actual costs would need to be assessed in detail to establish the likelihood of over- or under-recovery of costs over the investment's lifetime.

[29] This is consistent with Recitals 25–42 of the European Commission Recommendation of 11 September 2013 on NDCM. 'A costing methodology that provides the appropriate "build-or-buy" signal strikes an appropriate balance between ensuring efficient entry and sufficient incentives to invest and, in particular, to deploy NGA networks and hence deliver new, faster and better-quality broadband services.'

FTTH). This allows for more stable and predictable wholesale access prices over time.

4.35 In this regard, one of the key inputs into the FTTC BU LRIC model is ComReg's access network model, which does assume that the FTTC network will be subject to some line losses to rival networks (e.g. SIRO, Virgin Media), as well as reduced use of e-side copper as CGA service volumes decline. As such, all else equal, slight increases in the modelled FTTC prices would be expected each year.[30]

4.36 One of the main advantages of implementing the anchor pricing option based on the continued use of the BU LRIC model is that it is a tried and tested approach on which the market has been consulted. However, we note that the current FTTC prices in the NGA model are set until 2024 only.[31] We understand that while the access network model produces outputs up to 2029, the NGA model does so only until 2024. We also understand that NGA data post 2026 is effectively held steady in real terms. Therefore an extension beyond 2024 prices may require further updates or the construction of a new FTTC BU LRIC model.

4.37 The benefits of engaging in such an exercise need to be set against the costs, in time and resources, of the exercise, notwithstanding the practicalities of obtaining information on copper-based VDSL assets at this stage. Furthermore, it is not clear whether there are large benefits to engaging in an exercise whose core assumption is that an HEO would continue to invest in an FTTC network as a modern equivalent asset at a time when both Eircom and alternative network operators are rolling out FTTH networks.

4.38 Over time, telecoms services will be increasingly provided over FTTH networks, calling into question a costing approach based on a hypothetical steady-state FTTC network.

4.39 In this regard, if the current FTTC prices are deemed already to be in line with modelled costs, a simpler approach would be to adopt 'pricing continuity'—i.e. to allow no price increases over the existing FTTC prices (beyond inflation). We discuss this option (Option 1b) next.

4B.2 Option 1b: pricing continuity (flat real prices) on FTTC and pricing flexibility on FTTH

4.40 Rather than re-running and updating a BU LRIC model to forecast the costs of FTTC VUA services under a hypothetical steady-state scenario, an alternative option for regulation could be simply to prevent FTTC VUA from any further price

[30] This is consistent with Recital 39 of the European Commission Recommendation of 11 September 2013 on NDCM: 'Only traffic volume moving to other infrastructures (for example cable, mobile), which are not included in the cost model, will entail a rise in unit costs.'

[31] See ComReg (2021), 'Regulated Wholesale Fixed Access Charges – Review of the Access Network Model – response to consultation and final decision', D11/21, December 20, Table 3.

rises, beyond inflation, above their current regulated levels—in other words, a flat, real price cap. We refer to this as the 'pricing continuity' approach whose primary advantage over Option 1a would be in avoiding the need to re-run and update a hypothetical FTTC BU LRIC model.

4.41 The pricing continuity approach is appropriate if current FTTC prices are already cost-oriented and general inflation trends are a reasonable predictor of how the costs in a hypothetical FTTC model might be expected to evolve.

4.42 Compared to a hypothetical BU LRIC model, as in Option 1a, a flat, real pricing continuity approach can be expected to produce a slightly higher price path for FTTC prices as there are no explicit efficiency assumptions built into the approach.

4.43 As such, this approach would tilt the balance slightly towards incentivising investment between competing network infrastructures, while still providing protection for consumers by limiting the extent to which prices can rise to general inflation levels. For similar reasons, a pricing continuity approach may also incentivise a speedier migration towards FTTH services, provided that FTTH prices stay constant or increase at a lower rate than general inflation.

4B.3 Option 1c: emulated FTTC product on the FTTH network

Rationale for requiring the provision of an emulated FTTC-like product on FTTH

4.44 Each of the anchor product approaches considered above implicitly assumes that the FTTC services will continue to be available in the market, thus providing a competitive constraint on FTTH pricing. However, we understand that Eircom has plans to continue to upgrade its FTTC network to FTTH[32] and ultimately to proceed to copper switch off in the future.[33] There are also areas of the country where Eircom has deployed an FTTH network as a direct upgrade from CGA, such that FTTC services are not present in those areas.

4.45 In this regard, the presence of FTTC VUA as an alternative input for the provision of retail broadband services may not be available in all areas for the duration of the market review. In those areas, the absence of a regulated FTTC service will therefore mean that there are no pricing constraints on FTTH.

4.46 In this case, ComReg could require the SMP operator to provide an 'FTTC-like' service over the FTTH network, at a price similar or equivalent to the FTTC service and on non-price terms.

4.47 This emulated FTTC product on the FTTC network would serve two purposes:

[32] As noted above, in 2021 Eircom announced the expansion of the FTTH network roll-out to include a further 200,000 premises, giving a revised target to have 1.9m premises within the open eir FTTH footprint by 2026.
[33] Open eir, Copper Switch Off: https://www.openeir.ie/copper-switch-off/.

- continuation of an indirect pricing constraint on FTTH prices (through continuation of the anchor pricing constraint imposed by regulation of FTTC VUA services);
- the provision of protection to users who, at the point of FTTC switch off, would have an equivalent service available on the FTTH network and would otherwise face the prospect of being force-migrated onto a higher-price/higher-speed FTTH product that they may not wish to purchase.[34]

4.48 This approach will be necessary where the FTTC network is retired (and the implementation of copper switch off means that new FTTC connections are no longer available). It may also be needed in areas where FTTC is already absent, to ensure that FTTH prices continue to be constrained by the presence of an anchor. For example, in the absence of FTTC in a 'rural commercial area', and where the CG WLA Market is deregulated (as is proposed in the market review), there is a risk to consumers in these areas that they would be force-migrated onto a higher-priced, higher speed FTTH service that they may not want. In this case, the role of the emulated anchor could be to protect consumers in the transition. For this reason, a requirement to provide the emulated service in that area upon deregulation of CGA (rather than wait for copper switch off) could be considered.

Specification of the emulated service

4.49 As with all forms of anchor price regulation, the exact terms (including the exact product chosen as the anchor and the corresponding price) will affect the strength of any constraint on the degree of pricing freedom for services provided over the new network.

4.50 The specification of the emulated FTTC-like service on the FTTH network involves a trade-off:

- specifying a very low speed (e.g. a 30Mbit/s service) is likely to be ineffective as a constraint on FTTH prices, in view of the significant additional value that could be achieved using higher-bandwidth FTTH services and the fact that this would represent a downgrade in service for many customers;
- specifying a very high speed (e.g. a 200Mbit/s service), which is beyond the capabilities of existing FTTC networks, would be likely to require forcing customers to pay considerably more than they currently do, unless the anchor product is regulated at a price similar to what customers pay for FTTC services. However, in that case, this could significantly affect FTTH operators' returns and investment incentives.

4.51 If ComReg were to adopt this option, the starting point for assessing the price and non-price terms of the emulated service should be that customers are no worse off compared to their current position (i.e. in line with the 'Pareto principle').

[34] Customers who value higher-speed FTTH services would still be able to upgrade to higher-bandwidth FTTH services at prices that would still be subject to a retail pricing constraint.

Ideally, the service provided on the FTTH network should match the quality and price of current FTTC services as closely as possible.

4.52 In Ireland, there is currently only one FTTC VUA service, which is marketed as providing speeds of 'up to' 100 Mbit/s. However, the speed of the FTTC service that end-users actually get will depend on how far they are from the cabinet.

4.53 One possibility would be to specify a range of emulated FTTC services—for example, depending on a customer's existing distance from the cabinet, the emulated service on FTTH could be specified at 30/60/90 Mbit/s at the current price of FTTC. This would reflect the reality of the current position and could encourage efficient decision-making for access seekers and their customers to shift to higher-bandwidth FTTH services. For example, someone with a 30Mbit/s FTTC service anchor at €19.12 may be willing to get a 300Mbit/s FTTH service for €23.50[35] because they see value in the significant performance increase; whereas someone who is currently getting the 90Mbit/s service for €19.12 may be less willing to pay the €4.38 to jump to a bandwidth that is not a significant improvement (depending on their needs).

4.54 In practice, multiple emulated FTTC services on the FTTH network would be extremely hard to implement and monitor, especially given that the criterion for establishing the availability of a given emulated speed would be based on a customer's distance from a cabinet, but the point when the emulated service would be available is precisely when the cabinet will be decommissioned (i.e. at FTTC switch off). For that reason, an emulated FTTC service is likely to need to be implemented as a single product, in which case the trade-offs discussed above regarding the benefits and costs of setting the anchor too low or too high would be particularly relevant.

4.55 While the exact balance would come down to a policy judgement weighing the different considerations in line with ComReg's policy objectives, we consider that an emulated FTTC-like anchor product set at 100Mbit/s would ensure that all customers are protected during the transition and that this is an anchor product that could provide a constraint on FTTH pricing. This is also consistent with the fact that Eircom currently offers only one FTTC service which provides speeds of up to 100Mbit/s and that is what consumers are currently paying for.

4.56 The price level at which this emulated 100Mbit/s FTTC-like product would be offered on the FTTH network could itself be based on a BU LRIC model (as described under Option 1a) or on a pricing continuity approach (as described under Option 1b). However, given that the emulated FTTC product would be provided on the FTTH network after the FTTC network has been switched, we consider that building a BU LRIC model would not

[35] This is the current price for FTTH VUA 150Mbps to 500Mbps services.

be justified at this point and recommend that a pricing continuity approach, as described in Option 1b, be adopted.

Price levels of the anchor product

4.57 If ComReg decides to take forward any of the anchor pricing approaches described above, a key question is whether the level at which the price of the anchor product is set will actually have the intended dual aims of protecting consumers from excessive prices while retaining incentives to invest in FTTH networks.

4.58 To determine this, the price of the FTTC anchor needs to be compared with the estimated costs of providing FTTH services. This will ensure that the anchor is not set so tightly as to undermine the viability of the FTTH investment, but also not too loosely such that consumers face excessive prices. A number of scenarios are possible, as set out below.

4.59 If the FTTC anchor price is significantly below the cost of providing an FTTH line, an anchor pricing approach may be overly restrictive and undermine the incentives to invest in FTTH. This could be especially problematic at FTTC switch off if an emulated service is required on the FTTH network. In this case, while adopting the FTTC price as the anchor would support the Pareto principle, if there is little scope to charge a premium for higher bandwidths above those on FTTC, the price of the emulated FTTC service may not cover the FTTH costs, making the investment non-viable.

4.60 If the FTTC anchor price is comfortably above the modelled FTTH costs, this approach would support the Pareto principle while also allowing pricing of the FTTH services to be above the costs of the modelled FTTH operator. This may be justified on the basis of allowing additional headroom for the costs of an FTTH entrant (to ensure the FTTH price control does not choke off entrant investments) and encourage investment from both Eircom and alternative providers, with a view to potential infrastructure competition in future. In this scenario, however, it would be important to ensure that the anchor price does not remain materially above the FTTH costs beyond a sufficient period of time that can be justified based on the riskiness of the investment. Otherwise, there is a risk that Eircom would be overcompensated, and consumers would be paying excessively high prices.

4.61 If the FTTC anchor price is close to (but still above) the modelled FTTH cost, this approach would satisfy the Pareto principle, aiding migration without customers being worse off, as well as allowing Eircom to earn a return on its FTTH services. Under this scenario, it would be important to ensure that there is still sufficient headroom for alternative network operators to invest and earn a return on their own FTTH roll-out plans.

4.62 The monthly prices for FTTC-based VUA are shown in Table 4.1.

Table 4.1 FTTC VUA regulated prices

Service	1 July 2022–30 June 2023	1 July 2023–30 June 2024
FTTC-based VUA	€18.54	€19.12

Source: ComReg D11/21, Table 3.

4.63 Therefore, if the FTTC anchor price is set at €19.12 (rising in line with an extension of the cost model—Option 1a; or in line with inflation CPI-0% in the pricing continuity approach—Option 1b), this should not be significantly below the (estimated) costs of providing an FTTH VUA service, for risk of undermining investment incentives.

4.64 As part of the market review exercises, ComReg has begun to develop a BU LRIC+ model to estimate the costs of providing FTTH services. Based on the preliminary outputs from the draft model, we consider that the BU LRIC+ costs of providing FTTH VUA services are such that an FTTC anchor product at the existing price of €19.12, rising with inflation, would be above the costs of providing an FTTH VUA line, and would therefore not undermine investment incentives in FTTH networks. Further, while it is hard to establish causality, there is no suggestion that the BU LRIC+ FTTC prices prevailing in the market since 2018 have prevented investment in fibre.

4.65 Furthermore, if ComReg were to adopt Option 1c (e.g. once FTTC is removed from sale), we note that an emulated FTTC-like 100Mbit/s service provided on FTTH at this price should also provide a constraint on higher-speed products in light of Eircom's current FTTH VUA price for 150Mbit/s to 500Mbit/s services of €23.50.

4C Option 2: Cost-based price controls on FTTC and FTTH

4.66 Option 2 would involve cost-based price controls on both FTTC and FTTH services based on the actual (or hypothetical) cost of providing access (e.g. informed by a bottom-up cost model or top-down cost estimate).

4.67 With a cost-based price control on all WLA products, in theory static efficiency might be achieved such that the incumbent does not receive any monopoly rents from providing access to its infrastructure. However, this would need to be balanced against the potential loss of dynamic efficiency benefits if a cost-based-price control reduces the incentives for both the SMP and non-SMP infrastructure operators to make efficient investments in the market.

4.68 In order not to undermine investment incentives, any decision to introduce direct regulation of wholesale prices for FTTH must give due consideration to the downside risks of an investment in FTTH and consider the allowable returns over the lifetime of an investment.

4.69 Under this approach, we set out an option where FTTC continues to be price-regulated with reference to a bottom-up model (for the reasons set out previously), but where FTTH prices are also cost-regulated. Specifically, FTTH wholesale prices would be regulated to cost (plus a reasonable return) with reference to the BU LRIC+ costs from the cost model. This would require the development of a bottom-up LRIC+ model for FTTH services, based on an HEO (using Eircom's demand, network architecture, geographic scope and coverage, etc.). The costs derived from this model could then be used as a basis for setting a charge control on FTTH services.

4.70 This approach would favour the protection of end-users from excessive pricing, but may come at the expense of discouraging investment in FTTH networks if:

- the prospect of downside risks is not taken into account such that the price control imposed could lead to expected returns below the WACC;
- regulated prices based on a cost model developed for an HEO are below the costs faced by alternative operators with smaller scale.

4.71 This approach to regulation may be more appropriate in areas where there is limited or no prospect of infrastructure competition and/or there is no FTTC charge control (and thus no/weak retail price constraints).

4.72 In assessing whether to impose cost-based price controls on FTTH in this market review, ComReg should consider:

- whether there is sufficient clarity on costs and volumes such that the results from a cost model could be used to control prices without the risk of undermining Eircom's investment incentives;
- whether setting prices at costs would allow an expected return equal to the project-specific cost of capital (and that this cost of capital should appropriately reflect the level of risk and uncertainty associated with fibre network deployment).

4.73 First, ComReg would need to be aware of the risk of capping prices too tightly/at the wrong level. Even though there may be more historical information about demand for FTTH-based VUA services than was available at the time of the last market review, there is still no certainty in forecast volumes associated with the provision of FTTH-based VUA. Given this uncertainty, and that the FTTH price is likely to be very sensitive to the penetration rate (such that an incorrect forecast could distort future market development), there is a risk that a cost-based price could be set at the wrong level. Indeed, incorrect forecasts could affect future market developments, and distort investment decisions—for example, if the wholesale price were set too high or too low.

4.74 Second, if ComReg were to introduce cost-based price controls on FTTH after a period of pricing flexibility, it should recognise the impact of the allowed price levels on Eircom's ability to achieve lifetime cost recovery, and the importance of honouring a 'fair bet'. For an investment to be a fair bet, the firm making the investment should be allowed to enjoy some of the upside benefit when demand turns out to be high or costs low (i.e. the investor should be allowed returns higher than the cost of capital) in order to balance the probability that it will earn returns below the cost of capital if demand turns out to be low or costs high. In other words, if a charge control is implemented, the upside benefit of an investment is capped, while the downside is left unchanged. The fair bet principle ensures that some upside benefit of an investment remains to balance against the downside risk faced by the investor.

4.75 It would not be recommended that ComReg simply uses the outputs of the cost model as its sole basis for the price cap without ensuring that this still allows lifetime recovery of its investment, and taking into account the level of risk and uncertainty associated with the fibre network deployment.

4.76 In reaching our recommended option presented in section 4F, we consider whether a move away from pricing flexibility on FTTH VUA to a price control based on a BU LRIC model for the next market review period would be appropriate.

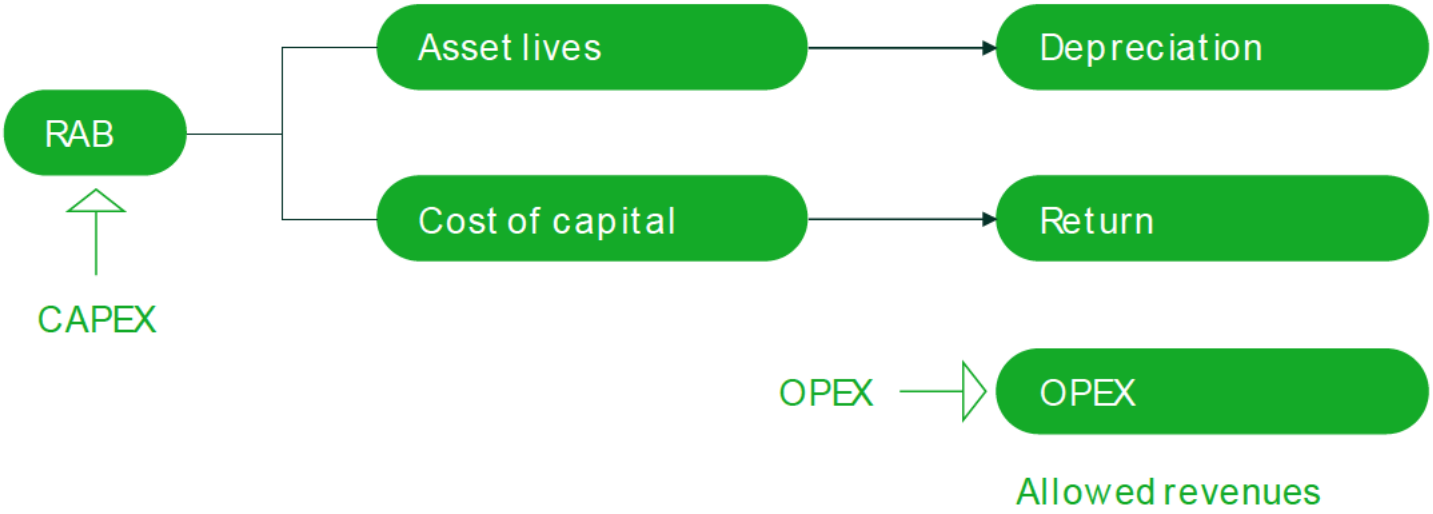
4D Option 3: A RAB-based approach

4.77 Rather than relying on cost-based price controls informed by a BU LRIC model, an alternative would be to follow a RAB approach. This option would involve pooling all the SMP operator's NGA assets into one RAB and estimating the allowed revenues that can be earned based on a top-down RAB–WACC model.

4.78 A key distinction between this option and Option 2 is that, whereas the latter would be based on a bottom-up estimate of the costs of an HEO, the RAB approach is built based on the actual capital and operating expenditure (CAPEX and OPEX) of the SMP operator.

4.79 As shown in Figure 4.2, the RAB captures the value of an investment that has been made, changing over time based on net CAPEX (CAPEX less depreciation) and inflation (thus allowing investors to be compensated for inflation). Under a RAB–WACC regulatory model, the investor can be allowed to earn revenues to compensate for the depreciation of the asset (dependent on the assumed asset lives of the investment), and to compensate for the cost of capital (calculated by multiplying the RAB by the estimated cost of capital).

Figure 4.2 The building blocks of a RAB-based price control



Source: Oxera.

4.80 When designing the RAB model, a key decision is which services to include in it; for example, ComReg could include only FTTH services, or FTTC and FTTH services.[36] This choice depends on the balance of objectives.

4.81 Setting a RAB including FTTH services only would allow ComReg to honour the fair bet principle on the new investment. However, without the ability to recover some of the costs of fibre investment from a wider range of services, this may not provide incentives to invest in FTTH in areas where the costs of provision are high and where demand (or willingness to pay) is expected to be low.[37] Furthermore, if FTTC services are omitted from the RAB, this option would still leave open the question of how to regulate FTTC services during the migration period to FTTH.

4.82 Setting a RAB including FTTC and FTTH would allow the SMP operator to recover some of the costs of its FTTH investment from FTTC services. This may be beneficial to promote investment as it allows a greater certainty of cost recovery, but might come at the risk of increasing the cost of FTTC services. This cross-subsidy may still provide a net welfare enhancement if there are significant (positive) externalities associated with the FTTH investment, and where the cost recovery of FTTH services might be a concern.

4.83 The RAB model has several properties that make it attractive for regulating the prices of NGA services in the market. First, given that the approach is based on the costs that the SMP

[36] This is an approach that Ofcom in the UK took in its 'area 3', where it determined there was no prospect for future infrastructure competition. Ofcom (2021), 'Promoting competition and investment in fibre networks: Wholesale Fixed Telecoms Market Review 2021-26: Volume 4: Pricing remedies', para 2.25, p. 44.
[37] In principle, the fair bet parameters can be adjusted, but if the downside risk is very large such that the 'delta' required to the WACC in the upside case may also be very large, it may be more sensible to adopt a combined RAB and allow cost recovery also from FTTC services.

operator is expected to incur, this model can be more effective at ensuring that control wholesale prices do not result in excessive returns, while also allowing for cost recovery in line with the fair bet principle. Second, if the RAB approach is designed to include both FTTC and FTTH assets, this could allow the SMP operator to directly manage the transition from legacy to VHCN infrastructure, thereby possibly speeding up the adoption of FTTH.

4.84 At the same time, a significant concern with the RAB approach is that it is typically best suited to situations where the regulated assets have natural monopoly characteristics and, hence, where no or very limited competition is expected. In the Irish WLA market, however, Eircom is expected to face direct competition from SIRO in some areas, as well as indirect competitive constraints from Virgin Media.

4.85 As a result, in practice, all the purported benefits of the RAB model in relation to being able to provide more certainty around the level of returns that the regulated firm can earn, as well as more certainty about how to manage the transition from legacy to new infrastructure, are unlikely to be achieved.

4.86 Even if these issues could be overcome, there would remain significant practical challenges in implementing a RAB approach given that it would require significant informational and modelling demands to build an asset register, keep it up to date with ongoing CAPEX, monitor that revenues earned by Eircom are in line with the allowed revenues of the RAB–WACC model, and take remedial action if not. For all these reasons, we consider that a RAB approach would not be appropriate for setting NGA price controls in the Irish WLA market. This option is therefore not considered further in this report.

4E Option 4: Retail-minus approach

4.87 The approaches above can all be considered cost-based regulation; however, an alternative would be to adopt a **retail-minus approach.**

4.88 A retail-minus approach establishes the wholesale access price by considering what proportion of avoidable retail and other downstream costs and margins would need to be removed from the retail price so that just the wholesale components remain.

4.89 This approach seeks to achieve two objectives:

- to control the wholesale price (at a level that may or may not equal costs) with the constraint from retail markets transmitted to wholesale markets; and/or
- to protect downstream competition from the leverage of wholesale SMP into the retail market through a margin squeeze.

4.90 In the context of this report, we focus on the first objective, considering whether a retail-minus approach would provide a sufficient constraint on the wholesale access price. We note that considerations of margin squeeze are considered in detail in Oxera report: Part 3.

4.91 An important advantage of a retail-minus price control is that it is easier to implement than other controls as it does not require a detailed cost model (such as a BU LRIC network cost model). Setting the retail margin with reference to the SMP operator's retail costs requires significantly less data (i.e. wholesale costing data) than constructing a network cost model.

4.92 Under this approach, the level of the wholesale access price would mimic competitive outcomes and be cost-oriented only if retail prices are themselves set at competitive levels. In other words, the retail-minus approach seeks to transmit the retail pricing constraint onto wholesale prices.

4.93 In this regard, for this approach to be effective in constraining the price of wholesale access services, a sufficiently effective retail pricing constraint is needed in the relevant downstream market.

4.94 A retail pricing constraint on FTTH is likely to exist where the presence of many alternative retail operators relying on their own or third-party infrastructures is effective at constraining the SMP operator's pricing behaviour. Where this is the case, the SMP operator will be encouraged to set retail prices more keenly to ensure that it does not lose its customers to rivals.

4.95 However, consistent with the findings of the market analysis, a sufficiently effective indirect retail pricing constraint does not exist in the Commercial NG WLA market (in the absence of the anchor).

4.96 For all these reasons, we consider that a retail-minus approach would not be appropriate for setting price controls in the Commercial NG WLA Market. This option is therefore not considered further in this report.

4F Recommended option

4.97 For the reasons set out above, we consider that the case for implementing a retail-minus price control or RAB approach should not be considered further by ComReg.

4.98 This reduces the assessment to a choice between:

- Option 1—an anchor pricing approach, with a price cap on FTTC wholesale services and pricing flexibility on FTTH wholesale services; and
- Option 2—a cost-based price control on both FTTC and FTTH.

4.99 As noted above, ComReg's current approach to regulation is a form of anchor pricing approach whereby FTTC services are price-capped based on the outputs from a BU LRIC model, and

FTTH has pricing flexibility. In this regard, Option 2 would represent a shift away from the anchor product approach towards more intrusive price regulation. Such a shift could be warranted where there is no longer a valid rationale for favouring an anchor pricing approach, for example if all the following factors apply:

- price regulation of FTTC VUA services no longer provides an effective competitive constraint on FTTH VUA prices;
- the actual or potential competitive constraint from alternative infrastructures at the retail and/or wholesale level (i.e. SIRO, Virgin Media) is expected to be weak or ineffective during the entire market review period;
- the roll-out of FTTH networks is largely complete and/or the major risks associated with the investment programme have crystallised (i.e. take-up and other volume risks; cost risks; competition risks); and
- there are concerns that the SMP operator will earn returns over the investment's lifetime well in excess of the project-specific cost of capital, including an allowance for risk.

4.100 Based on the evidence we have reviewed, we consider that these criteria are not currently satisfied in the Irish WLA market.

4.101 With regard to FTTC VUA price caps acting as an effective constraint on FTTH VUA services, we note that since the 2018 WLA/WCA Market Review Decision, the prices for a number of Eircom's FTTH VUA services have decreased. In particular, Eircom's FTTH VUA 300Mbit/s, 500Mbit/s and 1Gbit/s services were reduced by €5 in 2020, and other FTTH VUA services have remained unchanged.[38] This contrasts with evidence from before the introduction of wholesale price regulation on FTTC services, where Eircom increased the price of its FTTH VUA 150Mbit/s service by €3 in 2016. This evidence is the opposite of what we would expect if FTTC VUA services no longer provided an effective constraint on FTTH services.

4.102 With regard to actual or potential competitive constraints from alternative infrastructures, we note that ComReg has provisionally concluded in this market review that such competitive constraints are likely to be insufficient during the next market review period.[39] However, this further supports the conclusion that the FTTC price anchor has been highly effective not only at capping, but also at exerting downward pressure

[38] Open eir (2022), 'Access Reference Offer Price List', 4 April, Table 1.2, p. 60, https://www.openeir.ie/wp-content/uploads/2022/04/ARO-Price-List-V21_0-Unmarked-04042022.pdf.

[39] Having considered the possibility of market entry or expansion by Virgin Media or SIRO in the Commercial NG WLA Market, ComReg considers that there is insufficient evidence to suggest that the potential competition from these sources would exert an effective competitive constraint on Eircom's provision of NG WLA, given the limited current and expected rollout by SIRO and insufficient data in respect of Virgin Media's entry into NG WLA (see ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', sections 6.5.2 and 6.5.3).

on, FTTH wholesale VUA prices, given the limited pricing constraints present from alternative network operators.

4.103 With regard to the risks associated with FTTH investments, we note that FTTH roll-out is still in the investment phase, with much of the investment still to take place. For example, while Eircom currently passes around 900,000 premises with FTTP,[40] it has plans to target 1.9m premises passed.[41] This shows that there is still significant investment to be undertaken over the market review period. As such, significant risks may remain in relation to the speed of take-up, which is one of the key drivers of financial benefits and payback in the FTTH business plan. In particular, we note that:

- the large majority of Irish broadband subscribers are still on FTTC or CGA services—as at Q2 2022, DSL and VDSL subscriptions made up approximately 47% of all fixed broadband subscriptions in Ireland, compared to approximately 29% on FTTP.[42] This implies that significant migration from legacy to VHCN services still needs to happen, the speed of which is uncertain, affecting returns and payback periods for the FTTH investment;
- uncertainty remains about the impact of infrastructure competition given the FTTH investment plans of other operators such as SIRO (which competes directly with Eircom at the wholesale level), and Virgin Media (which competes with Eircom at the retail level). The investment plans and pricing strategies of these alternative providers could still have a material impact on the level and speed of take-up of Eircom's FTTH services;
- there are other uncertainties and risks facing Eircom, including cost risk (given the high inflationary environment at this time, and potential fibre supply issues).[43]

4.104 Finally, while we do not have clear evidence at this stage to determine whether Eircom can be expected to earn returns over the lifetime of its FTTH investment that could be well in excess of the project-specific cost of capital, including an allowance for risk, this is in large part because many of the key risk factors of the investment have not yet crystallised, and it is therefore too early to assess with certainty what the trajectory of returns might be.

[40] eir '900,000 Homes and Businesses Now Passed by eir's High-Speed Fibre Network', https://m.eir.ie/pressroom/900000-Homes-and-Businesses-Now-Passed-by-eirs-High-Speed-Fibre-Network/.
[41] eir (2022), 'eir announces completion of significant infrastructure deal with Infravia', 30 June, https://www.eir.ie/pressroom/eir-announces-completion-of-significant-infrastructure-deal-with-Infravia/.
[42] ComReg Quarterly Key Data Reports: Data Portal: Broadband subscriber lines by platform (excluding mobile broadband subscriptions and FWA, but including: DSL, VDSL, Satellite, Cable, FTTP). Available at: https://www.comreg.ie/industry/electronic-communications/data-portal/graphic-info/, accessed 21 September.
[43] For example, fibre prices in Europe have increased significantly since January 2021 from €3 to €6.5. See *Financial Times* (2022), 'Europe needs a more robust optical fibre supply chain, says Corning chief', 11 September, https://www.ft.com/content/33197e36-b2c9-4c96-8dc7-60446f7abd6c.

4.105 For all these reasons, we consider that it would be too soon to impose cost orientation on FTTH services. ComReg imposing a cost-oriented price control on FTTH services with reference to a bottom-up cost model risks undermining investment incentives, especially where the outputs from the cost model may be sensitive to many assumptions that are still uncertain—in particular, volumes and costs. In this environment, regulation of FTTH through price caps could lead to regulated prices being set at the 'wrong' level (i.e. at a level that reduces the expected returns on the investment significantly below the WACC), which would have the significant risk of undermining the investment incentives for FTTH, contrary to ComReg's objectives.

4.106 Furthermore, we consider that continuing with an FTTC anchor pricing approach with pricing flexibility on FTTH is still warranted during the next five-year market review period. In particular, we consider that the anchor pricing approach will strike the most appropriate balance between:

- offering protection to customers from the risk of excessive prices (due to the fact that FTTC and FTTH services are in the same market and will be substitutable, and hence will act as a constraint on the pricing of FTTH services), and
- providing investors in FTTH networks with an opportunity to earn fair returns by not directly capping FTTH prices too early, which could undermine the investment incentives, especially if there remains uncertainty over the speed of transition from FTTC to FTTH.

4.107 Each of the anchor product options considered above would be supportive of ComReg's objectives to:

- ensure that wholesale prices do not lead to excessive end-user prices on FTTC services, as the wholesale prices would continue to be regulated at current levels;
- encourage investment in FTTH by the network operators, given pricing flexibility and assurances that the FTTC prices are not significantly below the costs of providing FTTH services;
- ensure that regulated FTTH access prices are not set so low as to choke off investment that would otherwise be commercially viable;
- provide protection against excessive end-user prices for FTTH services (particularly lower-bandwidth FTTH services).

4.108 As noted earlier in this section, of the two options considered for controlling FTTC prices under an anchor pricing approach, a flat, real pricing continuity approach (Option 1b) can be expected to produce a slightly higher price path for FTTC prices than under Option 1a (a charge control with reference to the existing FTTC cost model), given that no explicit efficiency assumptions would be built into the approach. As such, Option 1b would tilt the balance slightly towards incentivising investment between competing network infrastructures, while still providing protection for consumers by limiting the extent to

which prices can rise to general inflation levels. For similar reasons, a pricing continuity approach (Option 1b) may also incentivise a speedier migration towards FTTH services, provided that FTTH prices stay constant or grow at a lower rate than general inflation.

4.109 Furthermore, Option 1b is also a simpler approach than Option 1a, and would avoid the continued need for engaging in a detailed modelling exercise, whose core assumption is that a HEO would continue to invest in an FTTC network as a modern equivalent asset at a time when both Eircom and the alternative network operators are rolling out FTTH networks. Any potential benefits of doing so in terms of more precisely estimating the hypothetical BU LRIC costs of FTTC may not outweigh the significant resource costs involved in maintaining such a cost model.

4.110 While it is ultimately for ComReg to determine whether an approach that slightly tilts the balance towards providing investment incentives to invest in FTTH would be consistent with its policy objectives, **Oxera's recommendation is for ComReg to consider adopting Option 1b, with an anchor price based on flat, real prices (pricing continuity) for FTTC VUA services, taking the regulated FTTC VUA price at the end of the current price review period (2023) as the starting point.**

4.111 Furthermore, to ensure that FTTH services continue to be constrained by an anchor product at the point when the FTTC network is switched off, **Oxera also recommends that ComReg require Eircom to provide an emulated 100Mbit/s FTTC-like product on the FTTH network (Option 1c) at a price consistent with the FTTC anchor under Option 1b.**

4.112 This emulated FTTC-like product should be made available in advance of the implementation of copper switch off, such that the emulated product is available during the transition from CG of FTTC to FTTH services.

4.113 This approach will ensure that where the FTTC network is not present, the prices of FTTH continue to be constrained by the presence of an anchor. It also has the added benefit of providing protection to users who, at the point of the FTTC switch off, would have an equivalent service available on the FTTH network. They would therefore not face the prospect of being force-migrated onto a higher-priced, higher-speed FTTH product, which they may not wish to purchase.

4.114 This emulated service could also be made available now in areas where there are currently only CGA services in addition to FTTH. Given the absence of FTTC in these areas, and the proposals to deregulate CG services, the absence of an emulated service would mean there would be no anchor to constrain FTTH pricing in those areas. However, if there is national pricing on FTTH, the risk of FTTH prices rising in the few areas where FTTC is not present (currently) may be limited.

Further, in the absence of FTTC in the 'rural commercial area' and where the CG WLA Market is deregulated (as is proposed in the market review), there is a risk to consumers in these areas that they would be force-migrated onto a higher-priced, higher-speed FTTH service that they may not want. The role of the emulated anchor in these areas would be to protect consumers in the transition. For this reason, the requirement to provide the emulated service in that area at the point when CGA is deregulated (and not wait for the copper switch off) could be considered.

4.115 However, given the specific circumstances of the 'rural commercial area' in which CG prices are already higher than the existing entry-level FTTH 150 Mbit/s service, consumers can in fact already benefit from migrating to FTTH.

4.116 In this case, consumers would not be worse off (and could in fact benefit if they switch to FTTH) if the emulated anchor is not mandated now and is instead required at copper switch off, as will be the case in the rest of the country.

Box 4.1 Oxera recommmendations

In summary, following our above assessment, we recommend that price regulation of monthly rental prices for NGA VUA services, in the WLA market where Eircom has SMP, should comprise:

- pricing continuity of FTTC VUA services, taking as a starting point the current price from the BU LRIC+ model (which in July 2023 will be €19.12), with the price allowed to increase in future by no more than inflation (CPI-0%)—i.e. a flat, real price cap;
- pricing freedom on FTTH VUA services;
- a requirement on Eircom to make available a 100Mbit/s FTTC-like service on its FTTH network, and to provide this service at the regulated price of FTTC in line with the recommendation above. This service should be made available in advance of the implementation of copper switch off which means that new FTTC connections are no longer available.

4.117 If such an approach were taken forward, we consider that this would have positive outcomes for stakeholders and competition in line with ComReg's objectives as set out above. Specifically:

- Eircom would be allowed to continue to make returns on the FTTC network within the bounds of regulated prices and would still have some pricing freedom on FTTH to ensure that investment incentives are maintained;

- access seekers taking FTTC services would benefit from price stability and be protected from further price rises above inflation, thus providing certainty and predictability;
- access seekers would also be protected from any price increases coming from forced migration, as the emulated service will be available to ensure that they can continue to get an equivalent service for an equivalent price;
- access seekers would benefit from protection against significant wholesale FTTH price increases, given the constraints coming from the anchor;
- alternative FTTH wholesale providers and potential investors in FTTH would be protected from overly tight controls on FTTH VUA prices in the market, thus reducing the risk that investment incentives of alternative operators are choked off, and providing an encouraging investment environment.

5 Regulatory approach to wholesale offers including price reductions

5.1 In the sections above, we have focused on options to provide constraints on Eircom's ability to set excessive prices for wholesale NG VUA services. However, in the 2018 WLA/WCA Pricing Decision,[44] ComReg also imposed a ban on promotions and discounts, with wholesale price reductions permitted only in exceptional circumstances, and in any case, subject to a price floor.

5.2 We re-cap ComReg's 2018 decision below, including its justification for ex ante controls in line with its objectives and policy goals for the market. We then consider what changes, if any, can be made to the rules to best achieve ComReg's objectives.

5A Conditions in place from the 2018 Pricing Decision

5.3 Following the 2018 Pricing Decision, ComReg imposed a ban on wholesale promotions and discounts for WLA or WCA services. However, it noted that it may permit reductions in wholesale VUA prices in exceptional cases, provided the price reduction met a number of criteria and did not fall below a level consistent with Eircom's full deployment costs in the specific geographic area.

5.4 Specifically, ComReg would assess requests to lower wholesale prices for FTTC/H on a case-by-case basis and subject to pre-conditions, including that the reduction to the price for FTTC/H-based VUA:

- would be an exceptional measure and should not create any legitimate expectation or precedent;
- would not be a short-term measure;
- would not prevent new investment by alternative operators;
- should apply to a substantial geographic region and not just to a very select number of exchanges chosen by Eircom. Following an examination of a request from Eircom, ComReg would exercise its discretion to determine whether a proposed price reduction might be justified in such a specific geographic region.

5.5 Moreover, the price for FTTC/H-based VUA would not be any lower than the price floor. The price floor was set for FTTC VUA services and FTTH VUA services as shown in Figure 5.1.

[44] ComReg (2018), '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', ComReg 18/95, D11/18 (henceforth ComReg 18/95).

Figure 5.1 Price floor for FTTC VUA and FTTH VUA

FTTC VUA, provided that the price was not lower than

- Eircom's full deployment costs for FTTC-based VUA (including EVDSL) in the specific geographic area, calculated using a BU LRAIC+ costing methodology and with Eircom's indexed RAB applied to reusable assets; or
- an alternative operator's FTTC-based VUA price (or its retail price minus retail costs and relevant network costs)

FTTH VUA, provided that the price was not lower than

- Eircom's full deployment costs for FTTH-based VUA in the specific geographic area; or
- an alternative operator's FTTH-based VUA price (or its retail price minus retail costs and relevant network costs)

Source: Oxera based on ComReg 17/26 and D11/18.

5.6 The FTTC price could be assessed against the outputs of the BU LRIC+ model. However, given that there was pricing flexibility on FTTH VUA services and ComReg was not monitoring Eircom's costs for FTTH-based VUA (for example, with reference to a cost model), ComReg considered that the full FTTH-based VUA deployment costs, absent a cost orientation obligation, should be calculated with reference to Eircom's own business case, and checked against the NGA cost model to ensure that all the relevant cost categories are included.[45] ComReg noted that, in exceptional circumstances, Eircom may be permitted to reduce prices below the regulated FTTC/H-based VUA price level, but above the price floor, to align with lower levels set by an alternative operator's prices.[46]

5.7 ComReg outlined that the objective of a price floor was to:[47]

> prevent Eircom from setting prices too low where they could foreclose economically efficient alternative investment by other operators that are either investing or planning to invest

5.8 and that it would:[48]

> prevent the risk that Eircom could set wholesale access prices too low which could be detrimental to efficient infrastructure investment in networks by other operators.

5.9 It also justified the requirement of an assessment of any requests to lower prices against the pre-conditions set out

[45] ComReg (2017), 'Pricing of Wholesale Services in the Wholesale Local Access (WLA) market and in the Wholesale Central Access (WCA) Markets: Further specification of price control obligations in Market 3a (WLA) and Market 3b (WCA)', Consultation 17/26, 7 April, para. 12.61.
[46] ComReg (2017), 'Provision of Universal Service by Eircom 2015 Quality of Service Performance', Consultation 17/27, 7 April, para. 12.51.
[47] ComReg D11/18, para. 12.88.
[48] Ibid.

above (rather than relying on ex post competition law) on the basis that this would:[49]

ensure that the objectives of promoting competition and encouraging investment by other operators is not jeopardised.

5B Recommended adjustments

5.10 The reasons why ComReg introduced restrictions on the commercial freedom of Eircom back in 2018 remain valid; however, we consider that a total ban on promotions and discounts may be too restrictive in some situations.

5.11 Eircom's decision to lower wholesale prices could lead to good outcomes for consumers, and may be needed in some cases—for example, to allow Eircom to compete fairly with alternative wholesale operator pricing, where relevant. Therefore, there may not be justification for an outright ban subject to exceptional cases. On the other hand, handing Eircom complete freedom to make price reductions or offer targeted discounts, promotions and/or geographic pricing subject only to an ex post assessment under competition law would also not strike the right balance to achieve ComReg's objectives.

5.12 To provide safeguards against wholesale pricing practices that can adversely affect investment by alternative operators, we consider that it would be more proportionate to have an approach whereby changes to Eircom's wholesale pricing proposals must first be assessed and approved by ComReg on an ex ante case-by-case basis , in line with a number of key principles.

5.13 These principles should be informed by the objectives of promoting competition and encouraging investment, including by ensuring that existing and prospective investment by alternative network operators is not jeopardised. Specifically, ComReg must be satisfied that Eircom's wholesale pricing practices:

- are unlikely to have a material impact on economically efficient alternative investment by alternative network operators that are either investing or planning to invest in VHCNs; and
- will generate clear and demonstrable benefits, in terms of being a critical element of Eircom's investment plans, and/or the prices will deliver benefits for consumers.

5.14 These principles ensure that ComReg maintains conditions to prevent Eircom from engaging in pricing behaviour (including, for example, through price reductions, geographic differentiation of prices, or targeted discounts and promotions) that could have a material impact on existing and/or nascent competition—i.e. any pricing that could foreclose economically efficient alternative investment by other operators that are investing or planning to invest in VHCNs. This will support the

[49] Ibid.

objective of promoting competition and encouraging investment by alternative operators.

5.15 In assessing any reductions in prices or specific discounts and promotions offered on wholesale NG VUA prices, due regard should be given to:

- price levels—are prices below the costs of provision?
- the terms and conditions attached to the offer—is the promotion or discount offered on terms or conditions that can have loyalty-enhancing effects, such as applying retroactive rebates on all sales conditional on meeting a certain volume threshold; volume discounts targeted at specific operators; or discounts being conditional on exclusivity or quasi-exclusivity arrangements?
- geographic pricing—are discounts targeted at specific areas of the country?

5.16 For each of these factors, we consider how ComReg can identify and assess whether Eircom's pricing practices could be deemed as being incompatible with the principles set out above and have adverse effects on competition, particularly with regard to entry and expansion by alternative network operators.

5B.1 Price levels

5.17 Eircom could be permitted to lower its wholesale VUA prices, if doing so:

- reflects reductions in costs; or
- allows it to react to other commercial prices in the market such that it is not at a competitive disadvantage to any new offers emerging.

5.18 However, consistent with the principle of replicability, ComReg should ensure that Eircom cannot lower prices to levels that could foreclose economically efficient alternative investment by other operators that are either investing or planning to invest. This is particularly important for FTTH services, where we see alternative network operators entering the market and where infrastructure competition may emerge, undermining Eircom's SMP. For example, there could be circumstances where Eircom *may* have an incentive to price its FTTH-based VUA service below costs in order to discourage alternative operators (such as SIRO) from investing in or expanding their FTTH network.

5.19 We consider that the principles of the price floor set out by ComReg in the 2018 Decision are reasonable, and that a price floor set with reference to deployment costs based on the estimates from a bottom-up LRIC model could provide a reasonable benchmark.

5.20 In setting a price floor, we consider that:

- for FTTC VUA, prices should be assessed against the costs of provision from the bottom-up LRIC model (or, going forward, the regulated price based on pricing continuity, in line with the recommendations in section 4F above);
- for FTTH prices, ComReg would ideally assess price levels against the deployment costs indicated in a BU LRIC+ model for the provision of FTTH services. Having a price floor at this level would be effective in ensuring that an efficient operator would be capable of competing with Eircom at this price level, consistent with ComReg's policy objectives.

5.21 We understand that ComReg is in the early stages of developing a draft cost model for FTTH, but that this is not sufficiently developed at this stage to provide a reasonable reference point for the costs of FTTH deployment. Therefore, ComReg may wish to consider setting a reference point for FTTH VUA price floors against the FTTC anchor price point. This is because, absent any reliable benchmark of what the FTTH costs are, it would be reasonable to assume that these costs could not be (much) lower than the FTTC anchor price, which is itself derived from a FTTC BU LRIC model. In this sense, the FTTC anchor price point is taken as a proxy for the costs faced by Eircom in providing the FTTH wholesale service.

5.22 While the specification of these 'price floors' for FTTC and FTTH VUA services will provide a guide, we caution against having a rule whereby these become an absolute floor with price never allowed to fall under it. This is because there may be cases where pricing below this reference level (even in the case of a modelled BU LRIC) may be economically rational. For example, reductions in prices below these levels may be required to encourage take-up and increase demand for FTTH services, especially in the face of rival infrastructure operators adopting aggressive pricing strategies (i.e. if required for financial viability of the investment in the face of competitive threats).

5.23 Therefore, ComReg's review process should allow Eircom the opportunity to justify why prices below the floor may need to be specified.

5.24 In reviewing price reductions for FTTC/H VUA,[50] ComReg could consider adopting the following two-step process.

[50] In practice, these circumstances are more likely to arise in relation to FTTH VUA, as FTTH is expected to be the focus of competition going forward. However, to the extent that there are areas where an alternative network operator invests in FTTH and in which Eircom only has an FTTC network, these considerations also may also be relevant in respect of FTTC VUA.

Box 5.1 Two-step process for reviewing price reductions

Step 1: assess whether the proposed price is below the FTTC anchor price; if it is, proceed to step 2.

Step 2: allow prices below the floor only if Eircom provides evidence demonstrating that the FTTC/H VUA prices charged by other network operators (e.g. SIRO) are below the FTTC anchor price. However, there should be a strong presumption that Eircom should not be allowed to set prices below a proper measure of the cost of its own network, including all sunk costs. This presumption is rebuttable in some circumstances, as explained below.

Under Step 2, ComReg should consider the basis for rivals setting prices below the FTTC anchor price, when assessing whether Eircom should be allowed to match the lower price.

If the alternative network operator is setting prices below the FTTC anchor price because the operator faces costs which are lower than the FTTC anchor, then it should be allowed to take advantage of these efficiencies. If Eircom would have to price below its own costs to match the rival's price, this would negate the efficiency advantage of the alternative network operator and thus have an impact on the operator's investment case and its ability to establish itself in the market. Eircom's pricing below its own costs would not constitute competition on the merits and, in such a case, Eircom should not be allowed to match the rival's price. Hence, in this scenario, Eircom should only be allowed to match the rival's prices if it can provide evidence that its own costs are also lower than the FTTC anchor, as well as being lower or equal to the rival's prices.

If the alternative network operator does not have lower costs than Eircom but is pricing below the FTTC anchor and below Eircom's costs, then Eircom may be allowed to respond if it can be shown that this level of pricing is the efficient market-wide pricing in the short run due to demand conditions. In other words, it must be demonstrated that below cost pricing is economically efficient, rather than a strategy to enhance and maintain market power. In short, there should be a strong presumption that Eircom would not be allowed to set prices below a proper measure of the cost of its own network (including all sunk costs). This presumption is rebuttable in some circumstances (as explained above), but Eircom would need to have a strong body of evidence to support it.

5.25 If the prices being assessed by ComReg are above the floor (as assessed under Step 1), these may in general be allowable. However, if the prices being offered are subject to certain conditions, this should be considered in the round with an assessment of other loyalty-inducing conditions or geographic-

targeting strategies that could undermine alternative investment (as discussed further below).

5B.2 Conditional wholesale pricing offers

5.26 Irrespective of whether wholesale VUA prices are above or below cost, there may be cases where other elements of the wholesale offer have the effect of undermining actual or prospective competition. This may include conditions that have loyalty-enhancing effects, such as exclusivity requirements, volume discounts or loyalty rebates (paid in exchange for customers hitting a given volume target).

5.27 It would not be reasonable or helpful to attempt to codify all possible types of circumstance that might arise. As such, ComReg will have to assess requests for changes to wholesale prices on a case-by-case basis. It will need to take into account any particular circumstances identified by Eircom, and be guided by the overarching principles that, for such pricing practices to be allowed, they must not have a material impact on existing or nascent competition, and must generate clear benefits in terms of being a critical element of Eircom's fibre investment plans.

5.28 As set out above, while some wholesale pricing offers can have benefits—for example, lower wholesale prices for access seekers potentially leading to lower prices for consumers—certain pricing practices could undermine the investment case of alternative network operators, and may therefore be contrary to the consumers' interests in the long run. This is more likely with pricing strategies that have a loyalty-inducing effect.

5.29 For example, while **volume-related discounts** result in lower prices to customers and may have cost-based efficiency justifications, the conditions through which these discounts can be obtained should be carefully considered as there may be a risk that they impede effective competition. In particular, as the discount is linked to the volume purchased by the customer, it can have loyalty-enhancing effects—the larger the volumes required to achieve a given level of discount, the greater the loyalty-enhancing effect. This could strengthen Eircom's market power at the wholesale level by making it harder for alternative network operators to acquire wholesale customers to their networks.

5.30 Any Eircom wholesale discounts should be non-discriminatory and transparent (e.g. available to all retailers on its network) in line with other regulatory obligations. Therefore the volume thresholds at which the discounts apply should not be targeted such that, in practice, they can be met only by Eircom's downstream arm. If Eircom were able to favour its downstream arm (for example, by setting the volume threshold to obtain a discount at a level that only Eircom's retail arm is able to achieve), it could leverage its wholesale market power at the

retail level, which could adversely affect competition to the detriment of consumers.[51]

5.31 Similarly, **exclusivity discounts** (which are available only if the customer buys exclusively or quasi-exclusively from the dominant firm) would incentivise access seekers to avoid multi-supplier arrangements, with potentially significant detrimental effects on alternative wholesale network operator investment. Such discounts are harder to justify for cost reasons and raise stronger potential concerns about foreclosure of new/smaller competitors.

5.32 Furthermore, the strength of the loyalty-enhancing effects is linked to the **duration** of the wholesale offers. For example, if customers are offered **long-term discounts**, this can compound the loyalty-enhancing effects since customers are locked-in to purchasing the specific volume from that supplier for a long time period (e.g. multiple years). Therefore, long-term discounts that are conditional on volumes or exclusivity may be of particular concern for the investment case of alternative network operators.

5.33 When considering the type of discounts that could be offered, there are two main types:

- **retroactive rebates,** granted on all purchases ('back to unit one');
- **incremental rebates,** granted only on purchases over a given volume threshold level.

5.34 Retroactive rebates have greater potential to harm competition, as they make it less attractive for customers to switch incremental amounts of demand to alternative sellers given that the customers would 'lose' the discount on all other volumes. The alternative operator would therefore need to offer a much larger discount on the incremental demand, which may not be sustainable, particularly if the level of discount required is below the costs of provision.

5.35 Careful consideration of conditional wholesale pricing offers in relation to **FTTH services** is of particular importance, given that FTTH is expected to be the focus of competition going forward. If Eircom were to introduce conditional offers which deter efficient investment by alternative network operators in FTTH networks this could enable Eircom to secure an entrenched position of market power at the wholesale level in relation to FTTH services in the long run.

5B.3 Geographically differentiated pricing

5.36 Where there is variation in the costs of provision across different geographic areas, it would not be unreasonable for Eircom to set geographically different prices for FTTC VUA or FTTH VUA services in those different areas. We recognise that

[51] In the Oxera report: Part 3, we outline how wholesale pricing discounts should be considered in the context of the margin squeeze obligations.

where the costs of provision differ, it would be legitimate to have different prices. Pricing in this way could be efficient and could lead to good outcomes for consumers if lower costs lead to lower prices.

5.37 However, there is a concern that if Eircom targets price reductions in specific areas to a level that may deter alternative network roll-out, it will face reduced competition and benefit from a higher market share in that area over the long term. This could lead to worse outcomes for consumers in terms of choice, innovation and price.

5.38 Therefore, there should be conditions in place to ensure that Eircom cannot target discounts only in low-cost areas where there may also be the prospect of competition, while leaving prices higher elsewhere. Not only could this result in disincentives to investment from alternative operators in areas targeted by the discounts, but it could result in significant price disparities across Ireland, with customers not living in areas with infrastructure competition being charged significantly higher prices.

5.39 For this reason, we recommend that the rules and conditions on geographic pricing be strengthened to ensure that any **price differentials have to reflect cost differentials** across different geographic areas.

5.40 That is, we propose that Eircom be allowed to set different prices in different geographic areas **provided it can justify that the price differences are not larger than the difference in the costs of provision between the two areas**. In the absence of a fully specified and agreed BU LRIC cost model, Eircom would need to justify its strategy with reference to the costs it is facing.

5.41 We note that this would be a necessary (but not sufficient) condition for the approval of any such geographically differentiated wholesale offer by Eircom.

5.42 This condition would need to be considered alongside the other conditions outlined above—for example, in respect of how price levels compare to a price floor, or whether the geographically differentiated wholesale offer contains additional conditions that could weaken the prospect of infrastructure competition in the WLA market.

5B.4 Summary of recommendations

5.43 We recommend that rather than imposing a ban on wholesale offers by Eircom in the WLA market, as is currently the case (subject to an exceptional circumstances review), Eircom be allowed to make wholesale offers subject to a case-by-case approval process from ComReg, in line with a number of key principles. These principles should be informed by the dual objectives of promoting competition and encouraging

investment, including by ensuring that existing and prospective investment by alternative operators is not jeopardised.

5.44 Specifically, ComReg must be satisfied that Eircom's wholesale pricing practices:

- are unlikely to have a material impact on economically efficient alternative investment by other operators that are investing or planning to invest in very high capacity networks; and
- will generate clear and demonstrable benefits, in terms of being a critical element of Eircom's investment plans and/or that the prices will deliver benefits for consumers.

5.45 When undertaking its case-by-case assessment, ComReg could consider the following factors:

- FTTC and FTTH VUA prices should not, in general, be lower than a 'price floor', determined by the FTTC anchor price. A two-step process could be followed in this regard:
  - Step 1: assess whether the proposed price is below the FTTC anchor price; if it is, proceed to step 2.
  - Step 2: allow prices below the floor only if Eircom provides evidence demonstrating that the FTTC/H VUA prices charged by other network operators (e.g. SIRO) are below the FTTC anchor price. However, there should be a strong (but rebuttable) presumption that Eircom should not be allowed to set prices below a proper measure of the cost of its own network, including all sunk costs.
- The wholesale offers for FTTC/H-based VUA do not prevent new investment by alternative operators or undermine competition through any conditional or loyalty-enhancing offers that would undermine an equally efficient operator's incentive to compete. Long-term discounts that are conditional on volumes or exclusivity may be of particular concern in this regard.
- Any proposals to set different prices for FTTC/H-based VUA services in different geographies can be justified only on the basis of clear and material cost differences between regions. The difference between prices for VUA services in different areas can be only as large as the difference between those areas in the costs of providing the VUA service.

5.46 We recommend that ComReg assesses all of these issues in the round, taking into account the particular circumstances and evidence identified by Eircom. ComReg would exercise its discretion following an examination of a request from Eircom in line with the principles set out above.

6 FTTH connection and migration charges

6.1 The discussions and recommendations set out above have focused on the need for price controls on the monthly rental charges for NG VUA services. However, in the 2018 WLA/WCA Pricing Decision, ComReg also set conditions on the prices that Eircom could charge for FTTH connections and migrations.

6.2 In this section we consider whether the approach currently in place remains appropriate, or whether the rules need to be amended in view of ComReg's objectives.

6A Conditions in place from the 2018 market review

6.3 In the 2018 WLA/WCA Pricing Decision, ComReg set out its position:[52]

For FTTH connection charges ComReg is of the view that Eircom should have the flexibility to recover the customer specific costs of the connection related investments from a combination of an initial upfront connection charge, a charge for migration to another service provider and a recurring rental charge, but that the new connection charge and the charge for migration to another service provider should be subject to two conditions:

(i) The charges for new connections and migrations to another service provider should be the same;

(ii) The combination of a new connection charge and a charge for migration to another service provider should not exceed the level that would allow Eircom to recover its customer specific connection related investment over the lifetime of the underlying assets

6.4 In reaching its decision, ComReg was seeking to address its concerns that if connection costs were high and migration costs low:

- the high connection costs would disincentivise take-up of FTTH services:[53]

potential distortions to competition arising from having a first time connection charge that was so high that it would be inconsistent with the objective to encourage access to the internet at a reasonable cost to end users.

- the differential in price would distort incentives on retailers to target already connected customers over unconnected customers:[54]

ComReg raised concerns that having a new connection cost that is significantly higher than the cost incurred by the RSP [retail service provider] to migrate an existing customer to another RSP could

[52] ComReg D11/18, para. 2.37.
[53] Ibid., para. 3.19.
[54] Ibid., para. 13.22.

incentivise RSPs to develop a discriminatory pricing measure, differentiating between those end users in premises that already have connection and those that who have no connection

6.5 Specifically, at the time, ComReg considered:

having a charge for connecting a new customer that is significantly higher than the charge for migrating an existing customer to another service provider could be a deterrent to encouraging take-up of NGA services by new end users and there is an obvious reluctance by service providers other than Eircom retail to connect customers to Eircom's FTTH network. There is growing evidence that the existing regime, where a service provider is charged €270 for a new connections but only €2.50 for a migration to another service provider, does not promote competition and is leading to a slower uptake for NGA services to the detriment of end users.[55]

6.6 Given its concerns, ComReg proposed a single fee across the two on the basis that this would avoid the 'distortions' outlined above and that:[56]

ComReg's decision to allow migration charges to contribute to the recovery of FTTH connection specific costs …recognises that the RSP that acquires a new customer through a migration is benefitting from the original connection

6B Assessing the need for continuation of this approach

6.7 We consider that the approach adopted by ComReg in 2018 (and considered again in 2021 – ComReg D11/21) is likely to have been appropriate, given the conditions of the market at the time. In particular, the nascent stage of FTTH roll-out, low migration fees, and high connection fees that could have the effect of discouraging operators from taking up FTTH services, could have been a barrier to deployment and take-up of FTTH services. Such an outcome would not have been aligned with ComReg's policy objectives to encourage the roll-out and take-up of FTTH.

6.8 With ComReg's objectives in mind, we consider that the steps it took to equalise FTTH connection and migration costs—and thereby encourage lower connection charges—were appropriate, such that this could encourage the take-up of FTTH services.

6.9 While ComReg's approach had the impact of increasing migration significantly above cost (to facilitate some cross-subsidisation of connection charges), given the balance of objectives and the desire to encourage take-up of services and get more customers onto FTTH services, any potential distortions to competition caused by setting migration charges significantly above cost are likely to have been minimal.

[55] ComReg D11/18, para. 13.23.
[56] ComReg D11/21, para. 8.70.

6.10 However, there could be a concern that as the number of customers connected to the FTTH network increases, any migration charges significantly above cost could result in a reduction in migrations to competitors if the end-user were to face higher switching costs as a result (i.e. if the RSP were to pass on the migration costs to customers).

6.11 During the early stages of FTTH deployment, the majority of customer acquisitions would require Eircom to incur the cost of a new physical connection, and policy decisions to encourage competition for new customers (new connections) could be justified in line with ComReg's objectives. While the overall connected base remains small, a limited number of customers would have been affected by above-cost migration charges.

6.12 ComReg has stated that since the Decision in 2018 to equalise prices between connections and migrations, wholesale volumes on Eircom's platform have grown significantly and that this has been a positive impact of the proposals.[57] In this regard, ComReg's approach may have had the desired effect.

6.13 In assessing whether changes to the existing policy might be necessary, it is important to consider what the observed pricing practices in the market are today (under the existing regulations) and the degree to which current or revised controls on FTTH connection and migration charges could protect consumers while supporting other ComReg objectives with regard to promoting competition and the take-up of FTTH services.

6B.1 What is happening in the market today?

6.14 Market evidence suggests that charging behaviour at present is that connection and migration charges have been waived by RSPs.

- At the retail level, several operators are waiving the connection fees entirely. In particular, we understand that Eircom retail and Vodafone did not charge customers an upfront connection charge at various points over the last number of years, and Sky has been charging significantly below the wholesale connection fees set by Eircom at the time.
- We also understand Eircom has set the wholesale connection charges to zero at the wholesale level for a period of time starting on 1 October 2022, reducing connection/migration charges to €0.[58]

6.15 This shows that the current cap is not binding—i.e. providers have made a commercial decision to set very low or zero

[57] ComReg D11/21, para. 8.39.
[58] Eircom proposes a Standalone NGA (FTTH) Service Connection and Migration Charge of €0 between 1 October 2022 and 31 March 2023. See Eircom's Reference Access Offer, p. 57, https://www.openeir.ie/wp-content/uploads/2022/09/ARO-Price-List-V23_0-Marked-01102022.pdf.

connection charges and, given the equalisation requirement, low or zero migration charges.

6.16 If this commercial pricing behaviour were to continue and become the norm during the market review period, concerns about the level of connection charges affecting customers' decisions to take up FTTH, and any potential distortions to competition that would come from above-cost migration charges, would also be unwarranted.

6B.2 Options for regulation

6.17 In this market context, we consider that there are two alternatives in with regards to connection and migration charges:

- Option 1: continue with the existing approach of requiring connections and migrations to be equalised and not (together) increase to levels that would lead to over-recovery of connection costs;
- Option 2: take steps to limit migration charges above cost, to avoid distortions to the migration decision as a larger number of customers are already connected to the network, and place limits on connection charges to ensure that new connections remain affordable and are not adversely affecting the take-up of FTTH services.

Option 1

6.18 If the currently observed pricing behaviour (of Eircom lowering connection and migration charges to zero) is repeated after 31 March 2023, the current caps could remain in place, simply as a safety cap, to ensure that, should prices rise in future, they cannot (together) increase to levels that would lead to over-recovery of connection costs.

6.19 While this could mean that migration costs could increase above the costs of migration, the implications of this may be of less concern where the number of migrations remains small (and where RSPs continue to opt not to recover these charges from customers through an upfront charge), such that the distortions considered above may be limited.

6.20 Given that there were around 431,000 FTTH subscribers as at Q2 2022,[59] of which approximately [✂ ✂]k are on Eircom's network,[60] there are still a large number of new connections to be made, and migrations may continue to be a small share of total connections and migrations in the coming years.

Option 2

6.21 If, for example, one thinks prices may increase (above zero) in future (as may well be the case after 31 March 2023, given

[59] ComReg (2022), 'Quarterly Key Data Reports: Data Portal: Internet Statistics', https://www.comreg.ie/industry/electronic-communications/data-portal/tabular-information/, accessed 21 September 2022.
[60] ComReg (2022), 'FTTP Retail Operators'.

Eircom's current Reference Offer[61]), and if there is concern that the current approach, which would allow migration charges significantly above costs, could distort migration incentives, an alternative would be to set migration charges to cost.

6.22 This could be important in the case where:

- RSPs pass through any increases in wholesale migration costs to end-users;
- the number of customers connected to Eircom's FTTH network increases such that the large majority of customers changing RSP would face migration charges;

6.23 In this setting, the distortion to competition that could be caused by continuing to have migration charges set at levels substantially above cost would be materially higher than at the time of the 2018 WLA/WCA Pricing Decision.

6.24 In this case, as the share of migrations continues to increase, ComReg may wish to place more weight on the dampening effect on competition that could arise from continuing with the current approach, particularly with regard to migration charges set significantly above cost. Where this is the case, ComReg could require migration charges to be set in line with their incremental costs, to avoid this dampening effect.

6.25 With migration costs capped at incremental costs, this leaves the question about what price control (if any) should apply on connection charges, particularly taking into account ComReg's previously stated concerns that too high a connection charge could lead to lower take-up of FTTH services.

6.26 Despite current pricing practices (of zero wholesale connection charges), we cannot take this as a signal that connection charges will not increase in future, particularly if controls on migration charges are changed to ensure that those prices are no higher than cost.

6.27 One option available to ComReg would be to cap wholesale connection charges at their most recent levels before Eircom reduced the price to zero (€100—in place between 1 Jan 2019 and 30 Sept 2022).[62] We understand from ComReg that there have been reductions in average customer-specific connection costs over time,[63] such that the incremental costs of connection may be falling closer to this level. In any case, even if this may be below the incremental cost of delivering a new connection, we consider that the regulatory framework affords a sufficient degree of flexibility for Eircom to seek to recover costs through other charges—for example, in the monthly rental charge that we recommend should continue to be

[61] See Eircom's Reference Access Offer, p. 57, https://www.openeir.ie/wp-content/uploads/2022/09/ARO-Price-List-V23_0-Marked-01102022.pdf.
[62] Ibid.
[63] As part of its separated accounting obligations, Eircom is required to provide ComReg with additional financial information pertaining to the costs and volumes of FTTH connections.

subject to pricing flexibility. The recovery of costs from alternative sources is the approach that Eircom must be taking currently, given its observed commercial behaviour and previous behaviour whereby the connection charge was set below the costs of the connection.

6.28 Capped at this level, even if Eircom were to increase its connection charges above the zero level currently observed in the market, we consider that connection charges at or below a €100 cap would not be set at a level that would significantly undermine the take-up of FTTH services by new customers. This level would be below prices observed in the market since the 2018 WLA/WCA Pricing Decision (e.g. between January 2019 and June 2020, Eircom set connection and migration charges to €170[64]), under which ComReg has noted that FTTH connections have increased. Furthermore, as observed by commercial behaviour in the market, access seekers choose to seek to recover the costs through the monthly rentals, such that customers may not face a large upfront cost.

[64] Eircom's Reference Access Offer, p. 57.

7 Conclusions and recommendations

7.1 Following the assessment presented in this report, we make a number of recommendations for ComReg to consider in the context of its policy objectives.

7.2 We recommend that price regulation of monthly rental prices for NGA VUA services, in the Commercial NG WLA Market where Eircom has SMP, should comprise:

- pricing continuity of FTTC VUA services, taking as a starting point the current price from the BU LRIC+ model (which in July 2023 will be €19.12), with the price allowed to increase in future by no more than inflation (CPI-0%)—i.e. a flat, real price cap;
- pricing freedom on FTTH VUA services;
- a requirement on Eircom to make available a 100Mbit/s FTTC-like service on its FTTH network wherever there is no parallel FTTC network, and to provide this service at the regulated price of FTTC in line with the recommendation above.

7.3 We recommend that rather than imposing a ban on wholesale offers by Eircom in the WLA market, as is currently the case (subject to an exceptional circumstances review), Eircom be allowed to make wholesale offers subject to a case-by-case approval process ComReg, in line with a number of key principles. These principles should be informed by the dual objectives of promoting competition and encouraging investment, including by ensuring that existing and prospective investment by alternative operators is not jeopardised.

7.4 Specifically, ComReg must be satisfied that Eircom's wholesale pricing practices:

- are unlikely to have a material impact on economically efficient alternative investment by other operators that are investing or planning to invest in very high capacity networks; and
- will generate clear and demonstrable benefits, in terms of being a critical element of Eircom's investment plans, and/or the prices will deliver benefits for consumers.

7.5 When undertaking its case-by-case assessment, ComReg could consider the following factors.

- FTTC and FTTH VUA prices should not, in general, be lower than a 'price floor', determined by the FTTC anchor price. A two-step process could be followed in this regard:
  - Step 1: assess whether the proposed price is below the FTTC anchor price; if it is, proceed to step 2.
  - Step 2: allow prices below the floor only if Eircom provides evidence demonstrating that the FTTC/H VUA prices charged by other network operators are below the FTTC anchor price. However, there should be a strong (but rebuttable) presumption that Eircom should not be allowed

to set prices below a proper measure of the cost of its own network, including all sunk costs.

- The wholesale offers for FTTC/H-based VUA do not prevent new investment by alternative operators or undermine competition through any conditional or loyalty-enhancing offers that would undermine an equally efficient operator's incentive to compete. Long-term discounts that are conditional on volumes or exclusivity may be of particular concern in this regard.
- Any proposals to set different prices for FTTC/H-based VUA services in different geographies can be justified only on the basis of clear and material cost differences between regions. The difference between prices for VUA services in different areas can only be as large as the difference between those areas in the costs of providing the VUA service.

7.6 We recommend that ComReg assesses all these issues in the round, taking into account particular circumstances and evidence identified by Eircom. ComReg would exercise its discretion following an examination of a request from Eircom in line with the principles set out above.

7.7 With regard to FTTH connection and migration charges, we consider that ComReg's approach to date may have had the desired effect at a time when the majority of new customer acquisitions would have required new connections. We also observe that there is evidence that Eircom has lowered its connection (and migration) charges to zero. If this charging behaviour were to continue and become the norm during the market review period, concerns about the level of connection charges affecting customers' decision to take up FTTH, and any potential distortions to competition that would come from above-cost migration charges, may continue to be unwarranted, and ComReg may choose not to make any changes to its current regulatory approach to FTTH connection and migration costs.

7.8 If, however, the number of customers connected to Eircom's FTTH network increases over time such that the large majority of customers changing RSP would face migration charges (and if the wholesale charges increase above zero and these are passed onto end-users), there could be a distortion to competition whereby customers face a higher cost to switching through high migration charges being passed through at the retail level. In this case, ComReg could consider requiring migration charges to be set in line with their incremental costs. Where controls on migration charges are changed to ensure that those prices are no higher than cost, and where there is a concern that Eircom might move away from non-zero connection charges, ComReg could cap wholesale connection charges at their most recent levels before Eircom reduced the price to zero. This will ensure that prices cannot increase significantly to a level that could disincentivise new connections. While this may be below the incremental cost of delivering a new connection, we consider that the regulatory

framework affords a sufficient degree of flexibility for Eircom to seek to recover costs through other charges—for example, in the monthly line rental charge.

A1 Summary of ComReg's 2018 Decisions

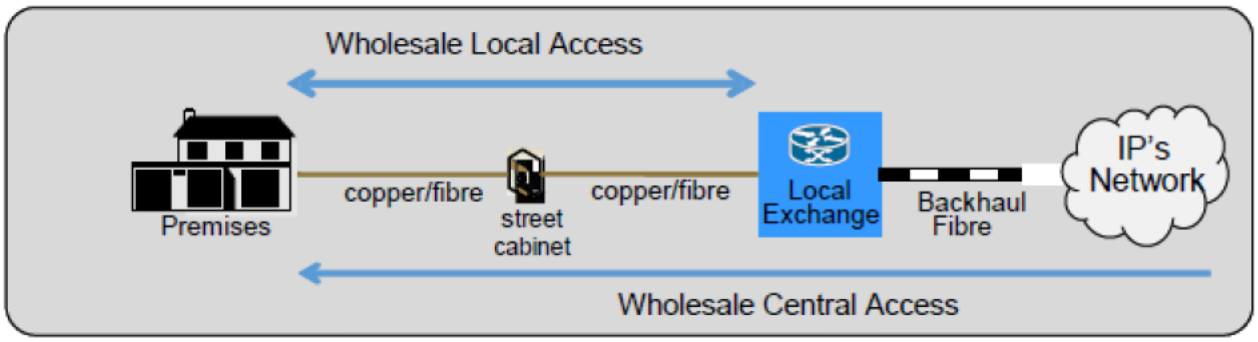
A1.1 The 2018 WLA/WCA Market Review Decision sets out three distinct markets in Ireland:[65]

- **WLA (national),** which includes current generation WLA products (LLU and line share products provided over copper network) and next generation WLA products (VULA[66] products provided over FTTx networks);[67]
- **Urban WCA,** which includes mass-market Bitstream products provided over a copper-only network, over FTTC networks and over FTTH networks, in the urban sub-geographic market comprising 154 Exchange Areas;[68]
- **Regional WCA,** which includes mass-market Bitstream products provided over a copper-only network, over FTTC networks and over FTTH networks, in the regional sub-geographic market comprising 1,049 Exchange Areas.[69]

A1.2 These services are summarised in Figure A1.1.

[65] We recognise that the number of exchanges categorised as being in the Urban WCA and Regional WCA market was updated following a mid-term review by ComReg in 2021. ComReg moved 81 exchange areas from the 2018 Regional WCA market to the Urban WCA market. See ComReg (2021), 'Mid-term Assessment; Regional Wholesale Central Access (WCA) Market; Re-application of geographic assessment criteria set out in ComReg Decision D10/1; Response to Consultation and Final Decision', ComReg 21/120, Decision D10/21, 25 November, p. 58 (henceforth referred to as 'ComReg 21/120').
[66] In its Pricing Decision, ComReg refers to 'VULA' products as 'VUA', since VUA is the wholesale product that is Eircom's implementation of VULA. See ComReg 18/94, pp. 7 and 407.
[67] ComReg 18/94, p. 143.
[68] ComReg also included the self-supply of retail broadband products provided over a cable access television network, as well as retail broadband products supplied by certain service providers that use upstream WLA inputs. ComReg 18/94, p. 20.
[69] ComReg also included retail broadband products supplied by certain service providers using upstream WLA inputs..

Figure A1.1 Summary of WLA and WCA services



Wholesale local access market

- LLU
- Line share
- VUA products

- relevant NGA services in this market are:
  - FTTC VUA
  - FTTH VUA

- defined as a **single National market** in which Eircom has SMP

Downstream

Wholesale central access market

- Bitstream (over copper)
- Bitstream FTTC
- Bitstream FTTH

- relevant NGA services in this market are:
  - Bitstream FTTC
  - Bitstream FTTH

- separate markets for 'Urban WCA' and 'Regional WCA', with Eircom having SMP in the Regional WCA market

Note: IP refers to internet provider.
Source: Oxera based on Figure 1 of ComReg 18/94.

A1.3 In its 2018 Market Review Decision, ComReg designated Eircom, the incumbent operator, as having SMP in WLA Market and Regional WCA Market and imposed regulatory obligations that sought to remedy competition problems that would arise absent regulatory intervention;[70] in particular, Eircom's ability and incentive to behave in an anti-competitive manner.

A1.4 Specifically, for WLA, ComReg noted:[71]

> In particular, absent regulation in the Relevant WLA Market, ComReg considers that Eircom would have the ability and incentive to influence competition through effects on prices, innovation, output and the variety or quality of goods and services provided. A number of competition problems may arise whereby Eircom could:
>
> - Exploit customers or End Users by virtue of its SMP position;
> - Leverage its market power into adjacent vertically or horizontally-related markets with a view to foreclosing or excluding competitors in downstream and/or upstream markets; and
> - Delay or deter investment and market entry into the Relevant WLA Market (and, ultimately, downstream markets).

[70] ComReg 18/94, p. 20.
[71] ComReg 18/94, paras 6.110–6.111

Overall, ComReg does not consider that Eircom would be sufficiently constrained in the Relevant WLA Market, such that it would prevent it from behaving, to an appreciable extent, independently of competitors, customers and End Users. To this end, ComReg considers that the identified competition problems would likely arise in the Relevant WLA Market in the absence of competition.

A1.5 For Regional WCA, ComReg noted:[72]

In the absence of regulation in the Regional WCA Market, ComReg considered that Eircom would have the ability and incentive to influence competition through effects on prices, innovation, output and the variety or quality of goods and services provided. These competition problems include, but are not limited to:

- Exploitation of customers or consumers by virtue of its SMP position;
- Leveraging its market power into adjacent vertically or horizontally related markets through price and non-price means with a view to foreclosing or excluding competitors in downstream retail and/or upstream wholesale markets; and
- Excluding or delaying investment and market entry into the Regional WCA Market, aimed at defending its position and/or foreclosing the market.

[…] ComReg remains of the view that, absent regulation, Eircom, as the SMP undertaking in the Regional WCA Market, has the ability and incentive to engage in actions which could negatively impact on competition and customers in related retail and/or wholesale markets, as well as having the potential to reinforce its SMP position in the Regional WCA Market over time

A1.6 ComReg did not find Eircom as having SMP in the Urban WCA Market, based on its view that existing and potential competition in this market, within the lifetime of the review, were likely to prevent any operator from behaving in a manner consistent with SMP.[73]

A1.7 Table A1.1 provides a high-level summary of the regulatory obligations imposed by ComReg to remedy the competition concerns identified in its market analysis. Given that ComReg found that no operator held SMP in the Urban WCA market, there was no basis for imposing regulatory obligations in that market.

A1.8 In the WLA Market and Regional WCA Market, where Eircom was found to have SMP, ComReg did impose regulatory obligations. Ultimately, the regulatory obligations are designed to promote the development of retail and wholesale competition.

A1.9 We note that the specific obligations imposed were differentiated across the individual products within each

[72] ComReg 18/94, paras 11.45–11.46.
[73] ComReg 18/94, p. 32.

market (e.g. different obligations for FTTC VUA and FTTH VUA in the WLA market).

Table A1.1 Summary of obligations imposed in the relevant markets

Regulatory obligation	WLA	Regional WCA	Urban WCA
Access	✓	✓	×
Non-discrimination	✓	✓	×
Transparency	✓	✓	×
Price control and cost accounting	✓[1]	✓[2]	×
Accounting separation	✓	✓	×

Note: [1] FTTH-based VUA is not subject to cost-orientation obligations, but is subject to margin squeeze obligations, as described below.[2] FTTH-based Bitstream is not subject to cost-orientation obligations, but is subject to margin squeeze obligations, as described below.
Source: Oxera based on ComReg 18/94, pp. 27, 32–34.

A1.10 Concurrently with the 2018 Market Review Decision, ComReg published its Decision on Pricing of Wholesale Broadband Services in the WLA and WCA Markets ('2018 WLA/WCA Pricing Decision' [74]) and the Decision on price control obligations relating to retail bundles ('2018 Bundles Decision').[75]

A1.11 As shown in Table A1.1, ComReg introduced price control obligations in the WLA and Regional WCA markets as part of the package of regulatory obligations. In setting these controls, having had regard to its regulatory objectives and the European Commission's 2013 NDCM, ComReg considered that the prices it imposed would:[76]

> achieve the appropriate balance between ensuring on the one hand that Eircom can **recover costs that are efficiently incurred** (including an appropriate return on invested capital) and that **prices are not excessive**, while on the other hand the appropriate **investment signals are provided to the market place** — in terms of efficient market entry and sufficient incentives to invest especially in the relevant areas of the country [emphasis added]

A1.12 ComReg reflected these considerations in the design of its price control obligations. In particular, for assets that can be reused for the provision of NGA services, such as Eircom's ducts and poles, ComReg used a top-down historical-cost accounting (TD HCA) approach.[77] For other assets, a bottom-up long-run average incremental cost plus (BU LRAIC+) approach is used.[78] This helps send appropriate efficient investment signals since access seekers are charged an access price in line with the cost of deploying its own network, since the costs are linked to the current market value of the assets, while the HCA is applied

[74] ComReg 18/95.
[75] ComReg 18/96.
[76] ComReg 18/95, p. 12.
[77] ComReg 18/95, pp. 12–13.
[78] The LRAIC+ approach includes the long-run average incremental costs plus a mark-up for apportioned joint and common costs. ComReg 18/95, pp. 12–13.

to assets that can be reused for deploying NGA services. We also note that this approach is in line with the Commission's 2013 Recommendation on Non-discrimination and Costing methodologies.

A1.13 Across the WLA and Regional WCA markets, the wholesale prices specified in the 2016 Pricing Decision were re-imposed for LLU, SLU, line share, duct access, pole access and dark fibre, and for ancillary services,[79] in the WLA and WCA markets.

A1.14 ComReg did, however, specify new price control obligations for NGA products, namely FTTC and FTTH products, in the WLA and Regional WCA markets. This included a mix of cost-orientation/price control, price floor and MST obligations.

A1.15 Table A1.2 gives an overview of the obligations on the **standalone** FTTC and FTTH products.

Table A1.2 Summary of price control obligations imposed on NGA services

Service	Cost orientation/ price control	Exceptional price floor	Retail MST[1]	Wholesale MST[2]
Bitstream FTTC	✓	✓	×	×
VUA FTTC	✓	✓	×	×
Bitstream FTTH	×	×	✓	×
VUA FTTH	×	✓	✓	✓

Note: Products considered on a standalone basis. [1] This regulates the difference between retail and wholesale prices, although we note that this remedy is imposed in the wholesale market where SMP is found, with the intention of preventing the SMP operator from leveraging its market power into the retail market. [2] This regulates the difference between Bitstream access and VUA access prices.
Source: Oxera based on ComReg 18/95, p. 14.

A1A Price controls for FTTC services

A1.16 For NGA Bitstream FTTC (in the regional WCA market), ComReg imposed a cost-orientation obligation based on the costs of a hypothetical operator that does not benefit from the same scale efficiencies as Eircom (i.e. a similarly efficient operator).[80]

A1.17 ComReg also calculated a set of monthly rental prices for FTTC Bitstream (including exchange launched very-high-bit-rate digital subscriber line, EVDSL) for each year of the control period. It also imposed exceptional price floor obligations on this product. These meant that, in the exceptional case where Eircom is allowed to reduce the price of FTTC-based Bitstream, any such reductions should be reflected in the FTTC-based VUA product to maintain a sufficient space between these services,

[79] With regard to ancillary services, ComReg did, however, review the pricing options for the recovery of FTTH connection costs, and further specified the obligations related to interconnection and wholesale ethernet interconnection links. See ComReg 18/95, Chapter 13.
[80] ComReg 18/95, p. 14.

and that Eircom complies with the price floor approval mechanisms and requirements.[81]

A1.18 For FTTC-based VUA (in the WLA market), ComReg imposed a cost-orientation obligation, based on the estimated BU LRAIC+ of FTTC VUA (including EVDSL). ComReg also calculated a set of monthly rental prices for FTTC VUA (including EVDSL) for each year of the control period.[82] It also imposed exceptional price floor obligations on this product. These meant that Eircom cannot charge a price below the lowest of either: (i) alternative operators' FTTC VUA prices; or (ii) the full deployment costs for FTTC VUA in a specific area. It also requires Eircom to comply with the regulatory approval mechanism.[83] Moreover, any reduction in the FTTC VUA price should be reflected in the price for NGA Bitstream FTTC.[84]

A1.19 ComReg determined that it was not necessary to impose standalone retail MSTs on FTTC-based services sold singly in the WLA market and the WCA markets; it instead included these services in the retail MST for bundles.[85] The retail MSTs are detailed further under Oxera report: Part 3.

A1B Price controls for FTTH services

A1.20 In relation to FTTH-based services, as stated in the consultation, penetration levels were considered to be low and ComReg noted there were difficulties with the ability to forecast the future penetration rate. In light of this cost and demand uncertainty, ComReg considered there was a risk of setting prices at the incorrect level, which could affect investment decisions.[86] It reached a similar conclusion in relation to FTTH-based Bitstream.[87] In light of this, ComReg considered that a combination of retail and wholesale MSTs might be a more practical way of preventing excessive prices from being charged, thus avoiding the risk of setting prices caps incorrectly.

A1.21 In the WLA market, ComReg decided to allow Eircom pricing flexibility on FTTH-based VUA subject to margin squeeze obligations.[88] In particular, ComReg considered that, given the uncertainty over costs and demand, the FTTH price was likely to be sensitive to the penetration rate.[89] ComReg considered that incorrect forecasts could affect future market developments, and distort investment decision—for example if the wholesale

[81] Ibid., pp. 153–157.
[82] Ibid., p. 15.
[83] Ibid., p. 14.
[84] Ibid., p. 138.
[85] Ibid., pp. 14, 17–18.
[86] ComReg said this was to ensure that operators using WLA inputs to offer retail services in this footprint were protected given the withdrawal of SMP in the urban WCA market. ComReg 18/94, p. 446.
[87] ComReg (2016), 'Market Reviews: Wholesale Local Access (WLA) provided at a Fixed Location; Wholesale Central Access (WCA) provided at a Fixed Location for Mass Market Products', 11 November, p. 659–570.
[88] ComReg 18/94, para. 7.1313.
[89] Ibid.

price were set too high or too low.[90] However, ComReg considered that, without regulation, Eircom had the ability and incentive to cause a margin squeeze in relation to FTTH VUA and downstream retail services using this input.[91] ComReg also noted that, in the absence of cost-orientation obligations, a margin squeeze acted as the main control against excessive pricing.[92]

A1.22 In the regional WCA market, ComReg considered that Eircom should be allowed pricing flexibility on FTTH-based Bitstream, subject to margin squeeze obligations, for the same reasons as in the WLA market.[93] However, ComReg considered that margin squeeze obligations were required in respect of FTTH-based Bitstream and retail services to address its concerns that Eircom had the ability and incentive to set prices so as to squeeze the margins of access seekers at the retail level.[94] In respect of standalone retail products using WCA inputs in the regional WCA market, ComReg considered that margin squeeze obligations should be applied to FTTH-based Bitstream and standalone retail services that use this wholesale input.[95] This is to ensure that access seekers can effectively compete in the retail market.[96]

A1.23 For NGA Bitstream FTTH (in the regional WCA market) and FTTH-based VUA (in the WLA market), ComReg relied on a set of wholesale and retail margin squeeze obligations for the standalone services, in particular:

- a wholesale MST between the FTTH-based VUA service (in the WLA market) and the FTTH-based Bitstream service (in the WCA markets);[97]
- in the footprint area corresponding to the urban WCA market, a retail MST between FTTH-based VUA services and retail broadband delivered by FTTH-based VUA sold singly (i.e. on a standalone basis);[98]
- a retail MST between FTTH-based Bitstream services and retail broadband services delivered by FTTH based Bitstream and sold singly (i.e. on a standalone basis) in the regional WCA market.[99]

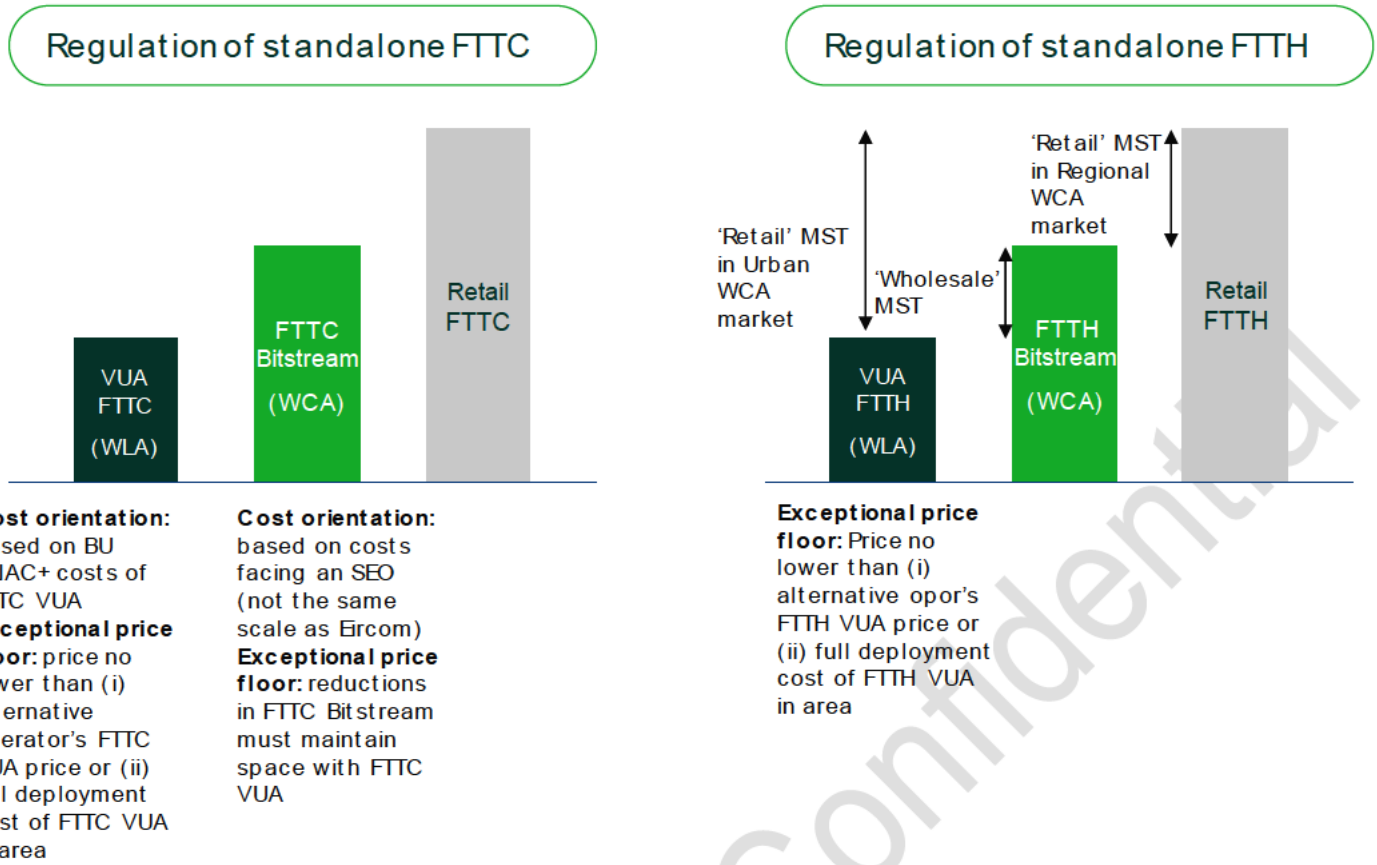
A1.24 ComReg also applied exceptional price floor obligations on FTTH VUA services. These meant that Eircom cannot charge a price below the lowest of either: (i) alternative operators' VUA

[90] ComReg 18/94, para. 7.1313.
[91] Ibid.
[92] ComReg 18/94, para. 7.1379.
[93] Ibid., para. 12.310.
[94] Ibid.
[95] ComReg 18/94, para. 12.351.
[96] Ibid.
[97] ComReg 18/94, p. 484.
[98] ComReg said this was to ensure that operators using WLA inputs to offer retail services in this footprint were protected given the withdrawal of SMP in the urban WCA market. ComReg 18/94, pp. 483–484.
[99] ComReg 18/94, p. 715.

FTTH price; or (ii) the full deployment costs for FTTH VUA in a specific area.[100]

A1.25 The existing price control regulation on standalone FTTC and FTTH services is summarised in Figure A1.2.

Figure A1.2 Summary of 2018 Decision price control regulation



Source: Based on ComReg's 2018 Decision Documents.

[100] ComReg 18/95, p. 14.

Contact

Felipe Florez Duncan
Partner
+44 (0) 20 7776 6654
felipe.florez.duncan@oxera.com

oxera.com

WCA/WLA market review

—

Oxera report: Part 3
Prepared for Commission for Communications Regulation

16 December 2022

Contents

Acronyms 1

1 Introduction and summary 3

2 Context for the current assessment 9

2A Key findings from the market analysis 9

2B Competition concerns to be addressed 10

2C ComReg's objectives 11

3 Assessment framework 13

3A The presence (or absence) of a wholesale price control 14

3B The presence of alternative network operators 21

4 The need for a margin squeeze test on FTTC VUA services 25

4A Incentive to engage in a margin squeeze on FTTC VUA 26

4B Ability to engage in a margin squeeze on FTTC VUA 32

4C Overall assessment of, and recommendation on the need for, an MST on FTTC VUA 33

5 The need for a margin squeeze test on FTTH VUA services 35

5A Incentive to engage in a margin squeeze on FTTH VUA 36

5B Ability to engage in a margin squeeze on FTTH VUA 41

5C Overall assessment and recommendation on the need for an MST on FTTH VUA 41

6 Further specification of the FTTH MST 44
6A The products to which the test should apply 45
6B Cost standard 50
6C Level of product aggregation 54
6D Benchmark operator 59
6E Revenues 61
6F Profitability approach 62
6G Principles for including wholesale and downstream costs 65
6H Summary of recommendations 68
6I Wholesale margin squeeze on Bitstream prices 69
7 Conclusions 70
A1 Summary of ComReg's 2018 Decisions 71
A1A Overview of ex ante retail margin squeeze obligations 74
A1B Margin squeeze obligations: standalone retail products 75
A1C Margin squeeze obligations: bundled retail products 78

Table 1.1 FTTH MST: summary of recommendations 7
Figure 3.1 Mechanics of a margin squeeze: no wholesale price control 15
Box 3.1 Margin squeeze example: no wholesale price control 16
Figure 3.2 Mechanics of a margin squeeze: wholesale price control 18
Box 3.2 Margin squeeze example: wholesale price control 19
Figure 4.1 Retail broadband subscriber lines by technology 26
Figure 4.2 Retail fixed broadband shares (subscriber lines) 28
Figure 4.3 Retail FTTC fixed broadband shares (subscriber lines) [✂] 29
Table 6.1 FTTH MST: summary of recommendations 44
Figure 6.1 Distribution of FTTH subscribers across standalone and bundled retail products (subscriber lines) [✂] 46
Figure 6.2 Distribution of FTTH subscribers across standalone and bundled retail products by operator (subscriber lines, Q2 2022) [✂] 47
Table 6.2 Cost standards 51
Figure 6.3 Cost standard choice and the level of flexibility 52
Figure 6.4 Product aggregation choice and the level of flexibility 54
Figure 6.5 Benchmark operator choice and the level of flexibility 60
Table 6.3 FTTH MST: summary of recommendations 68
Table 7.1 FTTH MST: summary of recommendations on the test specification 70
Figure A1.1 Summary of WLA and WCA services 72
Table A1.1 Summary of obligations imposed in the relevant markets 74

Table A1.2 Summary of ex ante retail margin squeeze test obligations 75
Table A1.3 Overview of MST approach for standalone FTTH retail broadband products 77
Table A1.4 Overview of the bundle MST components 79

Acronyms

—

Term	Definition
AAC	average avoidable cost
ACL	average customer lifetime
ATC	average total cost
AVC	average variable cost
BEREC	Body of European Regulators for Electronic Communications
BU	bottom up
BU LRIC+	bottom up long run incremental cost plus
CGA	current generation access
ComReg	Commission for Communications Regulation
DCF	discounted cash flow
EECC	European Electronic Communications Code
EEO	equally efficient operator
(E)VDSL	(enhanced) very high-speed digital subscriber line
FTTC	fibre to the cabinet
FTTH	fibre to the home
FTTP	fibre to the premises
FWA	fixed wireless access
HEO	hypothetically efficient operator
IA	intervention area
LLU	local loop unbundling
LRAIC	long-run average incremental cost
LRIC	long-run incremental cost
Mbit/s	megabits per second
MST	margin squeeze test
NDCM	non-discrimination obligations and costing methodologies
NGA	next-generation access
NPV	net present value
NRA	national regulatory authority
OOB	out of bundle
PIA	physical infrastructure access
RAB	regulatory asset base
RSPs	retail service providers
SLU	sub-loop unbundling
SMP	significant market power
VHCN	very high capacity network
VUA	virtual unbundled access
VULA	virtual unbundled local access

Term	Definition
WACC	weighted average cost of capital
WCA	wholesale central access
WLA	wholesale local access

Note: this includes acronyms from the Oxera report: Part 1 and the Oxera report: Part 3.

1 Introduction and summary

1.1 Having completed its latest draft market reviews of the wholesale local access (WLA) and wholesale central access (WCA) markets, the Commission for Communications Regulation (ComReg) has made a number of proposals. These are outlined below, together with some of the key findings from its reviews.

1.2 The retail broadband market is deemed to remain competitive in the absence of WCA regulation (and in the presence of WLA regulation and physical infrastructure access (PIA) regulation upstream of the WLA markets) such that the WCA market is proposed to be deregulated.

1.3 For the WLA market, ComReg has defined two separate product markets:

- CG WLA Market: including local loop unbundling (LLU) over Eircom's legacy copper-only network;
- NG WLA Market: including virtual unbundled access (VUA) over fibre to the cabinet (FTTC) and fibre to the home (FTTH), with services provided by Eircom on FTTC and FTTH and by SIRO and NBI on FTTH.

1.4 The CG WLA Market will be deregulated given that it is in persistent decline and that CG WLA numbers are likely to continue to decline over the lifetime of this market review, alongside the likelihood of asymmetric substitution to VUA over FTTH.

1.5 The NG WLA Market has been split across two geographic markets. Specifically, ComReg defines:

- the Intervention Area (the IA NG WLA Market)—areas covered by the national broadband plan (NBP);
- the Commercial Area (the Commercial NG WLA Market)—premises not covered by the NBP where at least Eircom is present in the wholesale market.

1.6 In the IA NG WLA Market, NBI is expected to be the main provider, but no significant market power (SMP) was found as ComReg considers that NBI is sufficiently constrained by the terms of its contract with the State, which means that it cannot act independently of competitors, customers and end-users.

1.7 Eircom has been found to have SMP in the Commercial NG WLA Market, given that this market is not effectively competitive, and that Eircom would not be sufficiently constrained such that it would be prevented from behaving, to an appreciable extent, independently of competitors, customers and end-users in this market.

1.8 In this context, ComReg asked Oxera to produce two Expert Economic Reports outlining the options for wholesale price

controls and ex ante margin squeeze tests (MSTs) on those services where Eircom has been found to have SMP, and to recommend the most appropriate wholesale price control and MST obligations for the next five years. These recommendations should take into account ComReg's concerns that, absent regulation, Eircom as the SMP operator would have the incentive and ability to set excessive wholesale prices and/or engage in exclusionary behaviours through low, or loyalty-enhancing wholesale pricing and/or impose a price squeeze, leading to negative outcomes for consumers.

1.9 In this report, the focus is on the role of ex ante margin squeeze to address the concerns of margin squeeze directly and the options available to ComReg. However, this is considered in the context of recommendations on wholesale price controls to address the concerns of excessive pricing, which we cover in more detail in the Oxera report: Part 1.[1] Based on the recommendations contained in that report, we understand that ComReg is proposing a flat, real price control on FTTC VUA and pricing freedom on FTTH VUA, with the introduction of an emulated FTTC-like service at the regulated FTTC price provided over FTTH and introduced in advance of the implementation of copper switch off such that new FTTC connections are no longer available. Our analysis of the need for ex ante MSTs is conducted taking these proposals into account.

1.10 At a high level, the assessment of the need for an ex ante MST will depend on:

- the risk of a margin squeeze occurring, which in turn depends on the incentives and ability of the SMP operator to engage in a squeeze. The incentive would be driven by whether this proved a profitable strategy for the SMP operator, whereas its ability to engage in a squeeze could be affected by the existence or absence of price caps on the relevant wholesale access services;[2]
- the scope and magnitude of effects that would materialise if a margin squeeze took place, in terms of harming competition and consumers, and how these effects would affect the policy objectives that ComReg wishes to achieve in this market review;
- whether ex post competition law can adequately remedy or address the risk of these effects;

[1] Oxera (2022), 'WCA/WLA market review – Oxera report: Part 1', prepared for the Commission for Communications Regulation, December.

[2] In the Oxera report: Part 1, we recommend pricing freedom on FTTH VUA services. In this context, we note that recital 50 of the 2013 Recommendation on non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment states: 'to prevent such pricing flexibility leading to excessive prices in markets where SMP has been found, it should be accompanied by additional safeguards to protect competition. To this end, the stricter non-discrimination obligation, i.e. [equivalence of inputs] and technical replicability, should be complemented by **guaranteed economic replicability of downstream products** in conjunction with price regulation of copper wholesale access products' [emphasis added].

- the costs for Eircom to comply with the obligation, but also the costs for ComReg to monitor and enforce an ex ante margin squeeze obligation.[3]

1.11 We have assessed these factors separately for FTTC VUA and FTTH VUA and reach the conclusions as set out next.

Ex ante margin squeeze obligations should not be imposed on FTTC VUA

1.12 We consider that Eircom's incentive to engage in a margin squeeze on FTTC VUA are low. In particular, the presence of a wholesale price control on FTTC VUA means that Eircom would be able to implement the margin squeeze only by reducing FTTC retail prices. Doing so would slow down the pace of migration towards FTTH at a time when Eircom is investing heavily in rolling out an FTTH network and, therefore, has the incentive to encourage quick migration to its FTTH network.

1.13 Notwithstanding this key point, there are further reasons why Eircom is unlikely to have the incentive to squeeze on FTTC VUA. In particular, as Eircom would need to lower retail prices to engage in a margin squeeze, it would incur losses during the squeeze that would need to be recouped later. These losses might be significant if Eircom sought to foreclose a material share of downstream competition given the presence of established access seekers. Moreover, Eircom may face challenges in recouping its losses after the margin squeeze, which weakens its incentives to pursue this strategy.

1.14 Given that a margin squeeze on FTTC through a reduction in retail prices would run counter to Eircom's incentive to encourage migration to FTTH, and that pursuing a squeeze would incur losses that Eircom may have difficulty recouping, we consider the risk of a margin squeeze on FTTC to be low.

1.15 The costs of enforcing, monitoring and complying with the ex ante margin squeeze obligation for both Eircom and ComReg are unlikely to be justified given the low risk posed.

1.16 On balance, we consider that it would not be proportionate to have an ex ante MST on FTTC VUA services.

Ex ante margin squeeze obligations should be imposed on FTTH VUA

1.17 Eircom's incentives to squeeze on FTTH VUA are uncertain and may vary over time depending on its FTTH roll-out strategy. During the early stages of fibre roll-out, Eircom has the incentive to 'fill up' its FTTH network with subscribers to support the recovery of the large fixed and sunk costs of the investment, and to enable it to retire its legacy copper network. Access seekers—with existing brands and subscriber bases—could help to incentivise and encourage their customers to take up FTTH services, which are likely to be heavily reliant on

[3] We have not attempted to undertake a quantitative assessment of these costs; rather, this is a qualitative assessment 'in the round'.

Eircom's network. Therefore, Eircom may not have the incentive to foreclose access seekers, which can act as 'allies' and support it in growing the volume of subscribers on its FTTH network more quickly.

1.18 However, once Eircom has sufficient volumes on its network and a clear path towards achieving payback on its investment (which could be reached over the course of this market review period), it may have the incentive to engage in a margin squeeze to increase its retail FTTH share and keep for itself a bigger proportion of the margin available on FTTH services.

1.19 Therefore, Eircom has two possible motivations in relation to the customer bases of access seekers. It may see them as allies, as the customers have an attachment to the strong brands, or it may wish to win the customers at the retail level. While it is unclear how this will play out, the motivation to win the customers at the retail level by engaging in a margin squeeze may become stronger over time.

1.20 At the same time, the potential adverse outcomes that could arise from a margin squeeze on FTTH could be significant. The benefits from decades of promoting retail competition through ex ante regulation could be lost, as the SMP operator's position in the retail market becomes entrenched during the transition to the next generation of technology. A reduction in competition at the retail level following a successful margin squeeze in FTTH services would result in less consumer choice, less innovation, lower incentives to provide good customer services and reduced price competition, among other aspects, which would be a poor outcome for consumers in Ireland. This outcome would also be contrary to ComReg's objectives to promote competition and facilitate access-based competition.

1.21 Moreover, in the presence of limited FTTH infrastructure competition, and in the absence of a direct price control on FTTH wholesale prices, Eircom would be able to engage in a 'costless' margin squeeze without incurring losses on an end-to-end basis, given that it could engage in a squeeze by increasing wholesale VUA prices (which it can internalise for its own retail arm). This gives Eircom a greater ability to engage in a squeeze over the course of the market review period.

1.22 Therefore, given the high potential cost to competition and consumers which could arise if Eircom were to engage in a margin squeeze in FTTH, we consider that it would be reasonable to impose ex ante margin squeeze obligations on Eircom's FTTH VUA services. This risk cannot be adequately addressed by relying on ex post competition law in view of the potentially significant harms that could arise if Eircom did engage in a successful margin squeeze strategy.

1.23 The imposition of an MST alongside pricing flexibility at the wholesale level on FTTH is also consistent with European Commission Recommendations.[4]

1.24 In respect of the FTTH VUA, we consider that the MST should be specified as described in Table 1.1. The rationale and justification for this MST specification are provided in sections 4 to 6 of this report.

Table 1.1 FTTH MST: summary of recommendations

MST building block	Recommendation
Relevant products	All FTTH retail products sold by Eircom, including standalone and bundles
Cost standard and level of aggregation	Product-by-product: LRIC FTTH portfolio: LRIC+ or ATC
Benchmark operator	EEO
Revenues	Promotions and discounts included OOB revenues included (if they are replicable)
Profitability approach	DCF

Source: Oxera.

1.25 This report is structured as follows:

- In section 2, we set out key points of context to be considered in any assessment of the need for an ex ante MST, including the main findings and conclusions from ComReg's updated market review analysis, the competition concerns to be addressed, and ComReg's objectives.
- In section 3 we set out the assessment framework for considering the risk of margin squeeze and the need to impose ex ante margin squeeze test.
- In section 4, we consider the need for an MST on FTTC VUA services and provide our recommendation.
- In section 5, we consider the need for an MST on FTTH VUA services and provide our recommendation.
- Should ComReg decide to take forward an MST on FTTH VUA services, section 6 presents our recommendations on how the MST should be specified.

1.26 For completeness, in Annex A we summarise the existing regulation (as set out in ComReg's 2018 Decisions).[5]

[4] European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU)', Recitals 50–55.

[5] Namely: ComReg (2018), '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', ComReg 18/94, D10/18, 19 November (henceforth referred to as 'ComReg 18/94'); ComReg (2018), 'Pricing of wholesale broadband services: Wholesale Local Access (WLA) market and the Wholesale Central Access (WCA) markets. Response to Consultation and Decision', ComReg 18/95, D11/18, 19 November (henceforth referred to as 'ComReg 18/95'); ComReg (2018), 'Response to Consultation and Decision on price control obligations relating to bundles: Further specification of the wholesale price control obligation not to cause a margin squeeze in the WLA, and WCA markets. Response to Consultation and

Decision', ComReg18/96, D12/18, 19 November (henceforth referred to as 'ComReg 18/96').

2 Context for the current assessment

2A Key findings from the market analysis

2.1 Having completed its latest draft market reviews of the WLA and WCA markets, ComReg has made a number of proposals. These are outlined below, together with some of the key findings from its reviews.

2.2 The retail broadband market is deemed to remain competitive in the absence of WCA regulation (and in the presence of WLA regulation and PIA regulation upstream of the WLA markets) such that the WCA market is proposed to be deregulated. This is consistent with the European Commission 2020 Recommendation on markets susceptible to ex ante regulation.

2.3 For the WLA market, ComReg has defined two separate product markets:

- CG WLA Market: including LLU over Eircom's legacy copper-only network;
- NG WLA Market: including VUA over FTTC and FTTH, with services provided by Eircom on FTTC and FTTH and by SIRO and NBI on FTTH.

2.4 The CG WLA Market will be deregulated given that it is in persistent decline and that CG WLA numbers are likely to continue to decline over the lifetime of this market review.

2.5 The NGA WLA Market has been split across two geographic markets, for which the geographic unit of analysis was Eircom exchange areas. Specifically, ComReg defines:

- the Intervention Area (the IA NG WLA Market)—areas covered by the NBP;
- the Commercial Area (the Commercial NG WLA Market)—premises not covered by the NBP where at least Eircom is present in the wholesale market.

2.6 In the IA NG WLA Market, NBI is expected to be the main provider, but no SMP is found as ComReg considers that NBI is sufficiently constrained by the terms of its contract with the State, which means that it cannot act independently of competitors, customers and end users.

2.7 Eircom has been found to have SMP in the Commercial NG WLA Market, given that the market is not effectively competitive, and that Eircom would not be sufficiently constrained such that it would be prevented from behaving, to an appreciable extent, independently of competitors, customers and end-users in this market.

2.8 While there is scope for a third geographic area for NG WLA markets in which ComReg would deem there to be sufficient presence of alternative operators such that the conditions of competition would be appreciably different (requiring at least

three operators with 60% coverage of the exchange and overlapping coverage for at least 50% of premises in the exchange), ComReg found no areas that currently meet these requirements.

2.9 Therefore, the analysis set out below is focused on the need for price regulation in the Commercial NG WLA Market, where Eircom is found to have SMP. In line with the product market definition, this includes consideration of price controls for FTTC VUA and FTTH VUA services.

2B Competition concerns to be addressed

2.10 In the presence of SMP in the Commercial NG WLA Market, there is a concern that, absent regulation, Eircom as the SMP operator would have the incentive and ability to set excessive wholesale prices and/or engage in exclusionary behaviours through low, or loyalty-enhancing, wholesale pricing and/or impose a price squeeze, leading to negative outcomes for consumers.

2.11 In this report, the focus is on the role of imposing an ex ante MST to address the concerns of margin squeeze directly. This is set in the context of the recommendations of the Oxera report: Part 1, which considers the need for, and form of, wholesale price controls to control the concerns about excessive pricing and/or exclusionary behaviours through low, or loyalty-enhancing, wholesale pricing. Based on the recommendations contained in the Oxera report: Part 1, we understand that ComReg is proposing that, in the Commercial NG WLA Market where Eircom has SMP, price regulation of NGA VUA services follows an anchor pricing approach that includes:

- pricing continuity of FTTC VUA services, taking as a starting point the current price from the BU LRIC+ model (which in July 2023 will be €19.12), with any future price increase limited to no more than inflation (CPI-0%)–i.e. a flat, real price cap;
- pricing freedom on FTTH VUA services;[6]
- a requirement on Eircom to make available an FTTC-like service over its FTTH network wherever there is no parallel FTTC network, and to provide this service at the regulated price of FTTC in line with the above recommendation. This service should be made available in advance of the implementation of copper switch off such that new FTTC connections are no longer available.

2.12 Our analysis of the need for ex ante MSTs has been conducted taking these proposals into account.[7]

[6] We do not recommend a direct price cap, but propose that conditions be put in place to prevent the SMP operator engaging in exclusionary behaviours through low or loyalty-enhancing pricing.

[7] While this report focuses on ex ante MSTs to address the concerns of margin squeeze directly, we also note the role that an MST can have on providing additional safeguards for access seekers where there is pricing flexibility on some key wholesale inputs in line with Recitals 50–55 in European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing

2.13 A vertically integrated operator with SMP at the wholesale level (as Eircom has been found to have) will have the ability to engage in a squeeze. However, Eircom's incentives to do so are a very important part of any assessment of the risk of a margin squeeze, and therefore the need to impose an ex ante MST. In addition to risk (driven by the incentives and ability), any assessment of the need for an ex ante MST must also consider what effects could materialise if a squeeze occurred, what the costs of compliance with an ex ante test would be, and whether the risk can be effectively managed through ex post competition law.

2.14 We consider these factors in more detail in sections 3, 4, and 5 below.

2C ComReg's objectives

2.15 When assessing the form of regulatory intervention, including price controls, ComReg needs to take into account its statutory objectives. Under the Communications Regulation Act of 2002 (as amended), ComReg's objectives regarding the electronic communications market are:

- to promote competition;
- to contribute to the development of the internal market;
- to promote the interests of users within the Community;
- to ensure the efficient management and use of the radio frequency spectrum and numbers.[8]

2.16 According to the Communications Regulation Act of 2002 (as amended), promoting competition can be achieved by:

- ensuring that users, including disabled users, derive maximum benefit in terms of choice, price and quality;
- ensuring that there is no distortion or restriction of competition in the electronic communications sector;
- encouraging efficient investment in infrastructure and promoting innovation;
- encouraging efficient use and ensuring the effective management of radio frequencies and numbering resources.[9]

2.17 Among these objectives, it is clear that ComReg must find a balance between two key ones:

- to encourage the development of alternative infrastructure ('encouraging efficient investment in infrastructure');
- to promote competition.

methodologies to promote competition and enhance the broadband investment environment (2013/466/EU)'.

[8] This objective is not relevant to the context of this report, and is therefore not covered any further.

[9] This means of promoting competition is not relevant to the context of this report, and is therefore not covered any further.

2.18 This is also reflected in ComReg's Strategy Statement:[10]

In general, ComReg has a preference for infrastructure-based competition, based on inter-platform competition as well as access-based competition at the deepest level possible. At all times, ComReg's pricing decisions aim to strike a balance between the following:

- Encouraging investment in VHCN by the network operators. It is important that regulated access prices are not set so low that investment that would otherwise be commercially viable is choked off;
- Encouraging viable investment in own infrastructure by those who purchase access from other networks, particularly those who use regulated access to Eircom's network;
- Ensuring that regulated prices reflect efficient practice and that excessive recovery by the SMP operator does not happen;
- Ensuring that wholesale prices do not lead to price squeezes;
- Wholesale prices do not lead to excessive end user prices; and
- Wholesale prices ensure a timely and efficient migration to new infrastructure over time.

Further, national regulatory authorities of European Member States shall pursue general objectives, as set out in Article 3 EECC. In particular:

a) promote connectivity and access to, and take-up of, very high capacity networks, including fixed, mobile and wireless networks, by all citizens and businesses of the Union;

(b) promote competition in the provision of electronic communications networks and associated facilities, including efficient infrastructure-based competition, and in the provision of electronic communications services and associated services.

2.19 For the purposes of this report, ComReg's objectives of encouraging access-based competition at the deepest level possible, supporting viable investments from those who purchase access from Eircom, and the need to prevent price squeezes, are very relevant and the main focus of our assessment. However, ComReg's decision on which approaches to take forward will be based on its own assessment of the appropriate balance to strike given its overall policy objectives.

[10] ComReg (2021), 'Electronic Communications Strategy Statement 2021 to 2023', para. 4.45, https://www.comreg.ie/media/2021/12/ComReg-ECS-Strategy-Statement-English-Dec-7-Final-Web.pdf.

3 Assessment framework

3.1 While there is currently an ex ante margin squeeze regime in place in the WLA Market (as defined in ComReg 18/95 and ComReg 18/96), our approach to ascertaining whether margin squeeze obligations are required is based on an assessment from first principles. This requires an examination of whether Eircom has the incentive and ability to engage in a squeeze for the various products over which Eircom holds SMP, as per ComReg's market analysis.

3.2 Ex ante margin squeeze obligations should be imposed only if Eircom has the incentive and ability to engage in a margin squeeze and where such concerns cannot be appropriately addressed through ex post enforcement under competition law, or if there are specific policy objectives that would not be met in the absence of an ex ante margin squeeze regime.

3.3 At a high level, the assessment of the need for an ex ante MST will depend on the following factors:

- the risk of a margin squeeze occurring, which in turn depends on the incentives and ability of the SMP operator to engage in a squeeze. The incentive would be driven by whether this proved a profitable strategy for the SMP operator, whereas its ability to engage in a squeeze could be affected by the existence or absence of price caps on the relevant wholesale access services;[11]
- the scope and magnitude of effects that would materialise if a margin squeeze took place, in terms of harming competition and consumers, and how those effects would affect the policy objectives that ComReg wishes to achieve in this market review;
- whether ex post competition law can adequately remedy or address the risk of these effects;
- the costs of compliance and ongoing monitoring of an ex ante margin squeeze obligation.

3.4 In this report, we consider each of these aspects, taking into account ComReg's stated objectives, and we present our recommendations.

3.5 However, other aspects may feed into ComReg's decision that extend beyond our assessment, in light of other reasons why it may make a policy decision to impose an ex ante MST as opposed to relying on ex post competition law. For example:

- there is a policy objective to give access seekers a larger margin than would be available under ex post competition law principles, which may suggest a stricter test aimed at protecting equally efficient competition;

[11] In the Oxera report: Part 1, we recommend pricing freedom on FTTH VUA services. See footnote 2 for the additional safeguards (including an economic replicability test) that are recommended by the 2013 Recommendation in the presence of pricing flexibility.

- the regulator wishes to provide a degree of certainty over the way in which an MST would be defined, rather than leaving questions open for an ex post competition law investigation;
- there is a desire to signal to access seekers that they will continue to play an important role in competitive dynamics and that ex ante regulation would protect them from abusive behaviour by the SMP provider.

3.6 In sections 4 and 5, we consider the specific incentives of Eircom to engage in a squeeze on FTTC VUA and FTTH VUA respectively. We take into account the specifics of the market, including the presence of alternative competing network infrastructure and the presence of the wholesale price controls being proposed by ComReg based on the recommendations in the Oxera report: Part 1. Having assessed the risk of a margin squeeze occurring—which depends on Eircom's incentives and ability to engage in a squeeze on FTTC VUA and FTTH VUA, respectively—we consider whether, in light of this risk and other relevant policy considerations as explained above, ex ante margin squeeze obligations are justified to address any concerns that could materialise in respect of these products.

3.7 Before engaging in the detailed assessment, in the remainder of this section we present a conceptual framework, establishing key principles on the mechanics of the MST and how different market conditions can affect the costs and benefits of engaging in a margin squeeze. More specifically, we discuss two factors in turn:

- the presence of wholesale price controls;
- the presence of competing network infrastructure.

3.8 We rely on the key insights from this section when undertaking our assessment, presented in later sections, of Eircom's incentives and ability to engage in a squeeze on FTTC VUA and FTTH VUA.

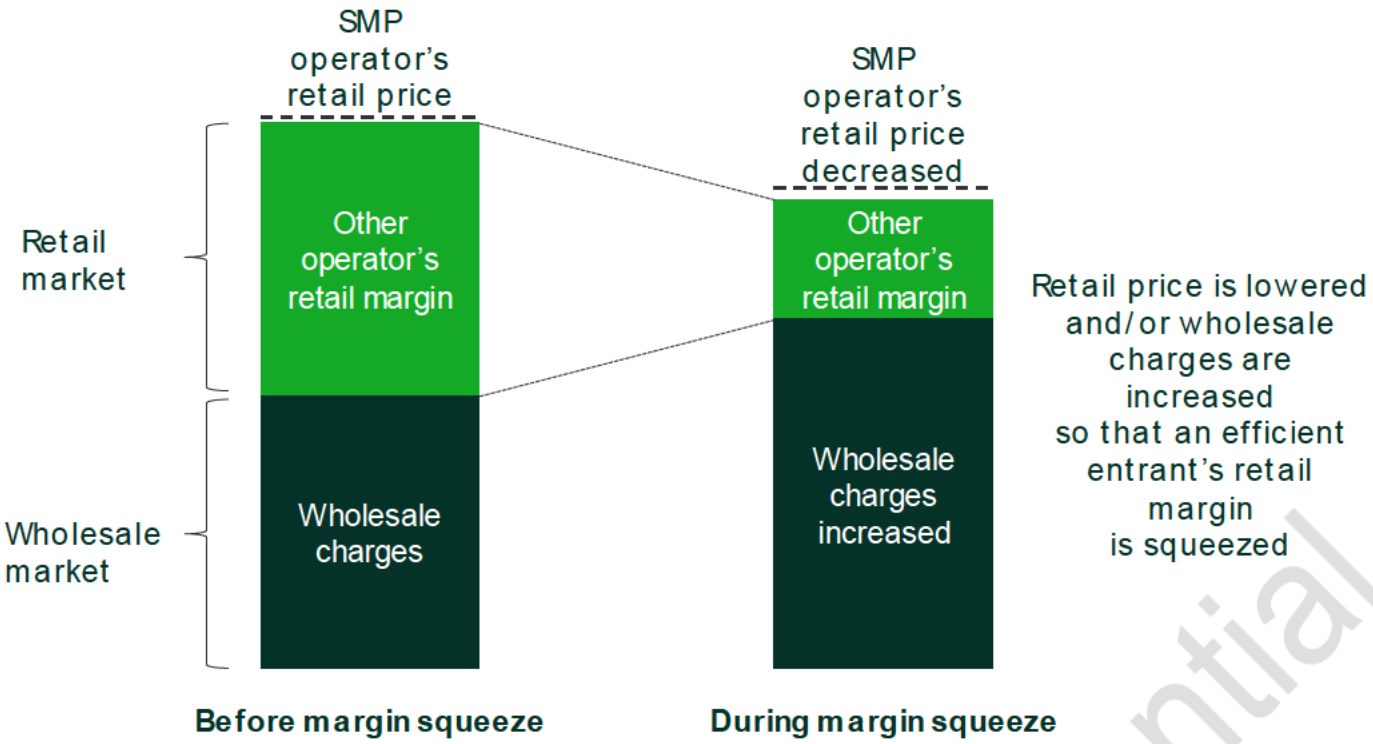
3A The presence (or absence) of a wholesale price control

3.9 The presence of a wholesale price control is an important factor in considering Eircom's ability and incentives to engage in a margin squeeze, as the wholesale price control affects the mechanics of implementing a margin squeeze.

3A.1 A margin squeeze with no wholesale price control in place

3.10 If no wholesale price control is applied to the relevant wholesale products, Eircom would be free to implement a margin squeeze by lowering the retail price and/or increasing wholesale charges. Figure 3.1 illustrates these mechanisms.

Figure 3.1 Mechanics of a margin squeeze: no wholesale price control



Source: Oxera.

3.11 While Eircom could seek to implement a margin squeeze through a reduction in its retail prices, this would lead to a reduction in its revenue at the retail level. As discussed in more detail in section 3A.2 below, this could result in losses to Eircom (relative to not engaging in a margin squeeze).

3.12 If, however, Eircom has the flexibility to implement a margin squeeze through an increase in its wholesale prices, this will allow it to engage in a squeeze without incurring losses on an end-to-end basis. This is because any margin lost at the retail level would be covered through excess profits at the wholesale level, provided that retail prices are set at or above total end-to-end costs. In this regard, the margin squeeze can be said to be 'costless' for Eircom.

3.13 In particular, the marginal cost to Eircom at the wholesale level is determined by the actual costs it incurs for providing this service (rather than the wholesale input charge it sets). Therefore, any changes that Eircom makes to the wholesale input price it charges to access seekers do not affect its underlying marginal costs of providing this service. The extent to which the wholesale input price is above Eircom's wholesale costs in effect creates a (notional) internal margin at the wholesale level. This can be used to subsidise the (notional) internal loss that results at the retail level. Therefore, in the absence of a wholesale price control, a margin squeeze may be implemented through an increase in wholesale prices,[12] and

[12] As we discuss in section 3B below, a squeeze by increasing wholesale prices will be most effective where there is limited infrastructure competition, such that those seeking

Eircom's profits on an end-to-end basis would be unaffected, or at least only marginally affected such that prices are still above costs on an end-to-end basis and it is still making a positive margin on each sale.

3.14 In contrast, for an access seeker, its marginal cost (at the wholesale level) is determined by the wholesale input price charged by Eircom. Therefore, any increase in the wholesale input price will increase the access seeker's marginal costs (at the wholesale level). Against a fixed retail price, this would lower the available margin to a level that would be insufficient to cover the access seeker's incremental downstream costs. Therefore, during the margin squeeze, the access seeker makes a loss on each sale on an end-to-end basis.

3.15 Box 3.1 presents a stylised example to give a practical illustration of how Eircom's vertically integrated position enables it to engage in a costless margin squeeze in the absence of a wholesale price control.

Box 3.1 Margin squeeze example: no wholesale price control

Before the margin squeeze

Suppose that Eircom faces a total cost of €100 to provide a broadband service, comprising:

- wholesale costs: €70;
- downstream costs: €30.

Before the margin squeeze, suppose Eircom's retail price is €100, such that it recovers its total costs.

If an access seeker is providing a competing broadband service using wholesale inputs from Eircom, the access seeker's costs are comprised of:

- wholesale costs: equal to the wholesale input price charged by Eircom;
- downstream costs: €30.

Before the margin squeeze, the access seeker can set its retail price at €100, pay Eircom's wholesale access fee of €70, and recover its total costs.

During the margin squeeze

Suppose that Eircom chooses to implement a margin squeeze by:

- increasing the wholesale input price from €70 to €80;

access to Eircom's network will not have the option of switching to an alternative wholesale provider in response to Eircom's higher wholesale prices.

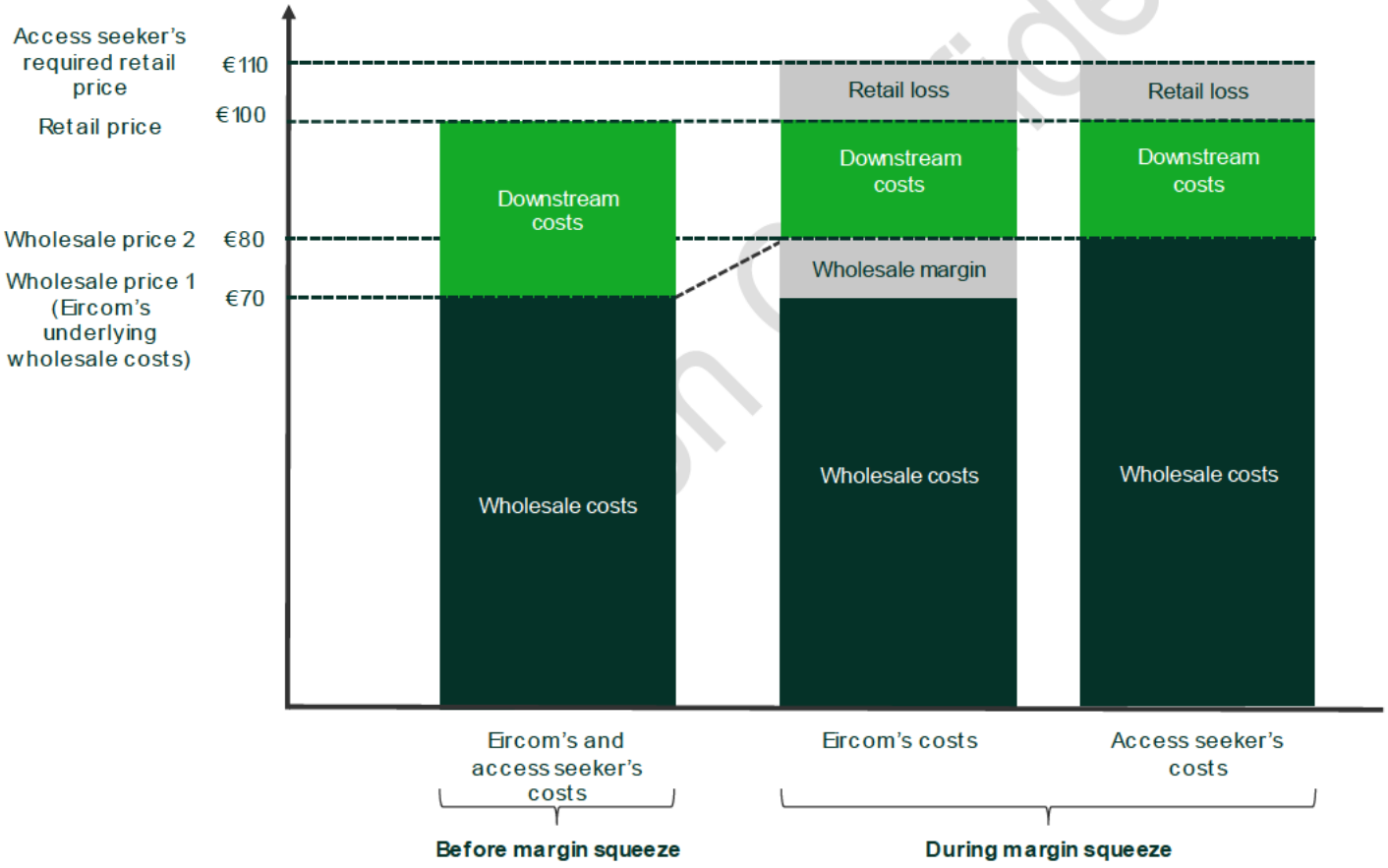
- keeping its retail price at €100.

At the retail price of €100, the access seeker now faces a margin squeeze, as the €20 retail margin available above its wholesale costs (€100 [retail price] - €80 [wholesale price 2]) is not sufficient to recover its downstream costs (€30). The access seeker incurs an end-to-end loss of €10.

On the other hand, Eircom is a vertically integrated operator (with an upstream wholesale arm and a downstream retail arm) and can therefore cover its underlying costs and continue to earn the same level of profit. Once Eircom engages in the margin squeeze:

- its wholesale arm makes a (notional) internal €10 margin on the wholesale input (i.e. the difference between its wholesale costs and the wholesale price it charges its own retail arm);
- its retail arm makes a (notional) internal €10 loss (i.e. the difference between the retail price and its downstream costs plus the wholesale input price).

The internal wholesale margin effectively covers the internal retail loss. Therefore, Eircom would be able to implement a costless margin squeeze without incurring losses on an end-to-end basis..



Source: Oxera.

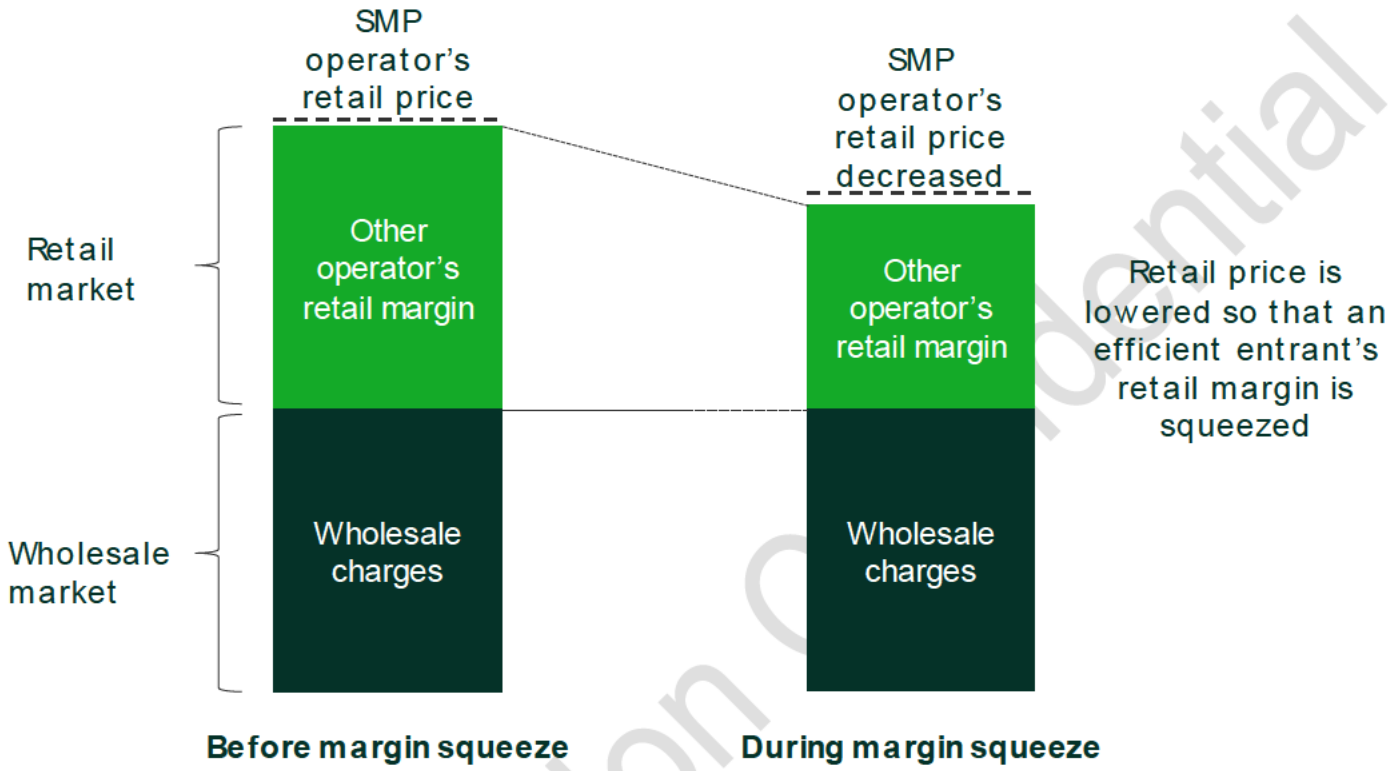
3.16 In this case, as Eircom does not incur a loss—and therefore will not need to recoup any losses—it may have a relatively strong ability to engage in a margin squeeze and sustain this over a

period of time. As such, all else equal, compared with a scenario with a wholesale price control in place (as discussed in section 3A.2 below), Eircom will have a stronger ability and incentive—or weaker disincentives—to impose a margin squeeze without a wholesale price control in place.

3A.2 A margin squeeze with a wholesale price control in place

3.17 If a binding price control is applied to the relevant wholesale product, the SMP operator can implement a margin squeeze only by reducing its own retail prices, as it is unable to increase its wholesale input price. Figure 3.2 below summarises this mechanism.

Figure 3.2 Mechanics of a margin squeeze: wholesale price control



Source: Oxera.

3.18 In this case, the SMP operator engaging in a margin squeeze through lower retail prices will generate lower retail revenues. Assuming its underlying wholesale costs and downstream costs remain unchanged, the margin squeeze will therefore result in a loss during the margin squeeze relative to a situation in which the SMP operator does not engage in a margin squeeze. However, to have the incentive to engage in the margin squeeze in the first place, it would need to be able to at least recoup these losses after successfully implementing the margin squeeze.

3.19 Box 3.2 presents a stylised example, with a cost-based wholesale price control set based on forward-looking incremental costs plus a share of common costs—i.e. equal to the long-run incremental cost plus (LRIC+).

Box 3.2 Margin squeeze example: wholesale price control

Before the margin squeeze

Assume that the scenario before the margin squeeze is as described in Box 3.1, except that here a cost-based price control is set based on the LRIC+ of the wholesale input; assume, too, that the LRIC+ associated with the wholesale input is €70.

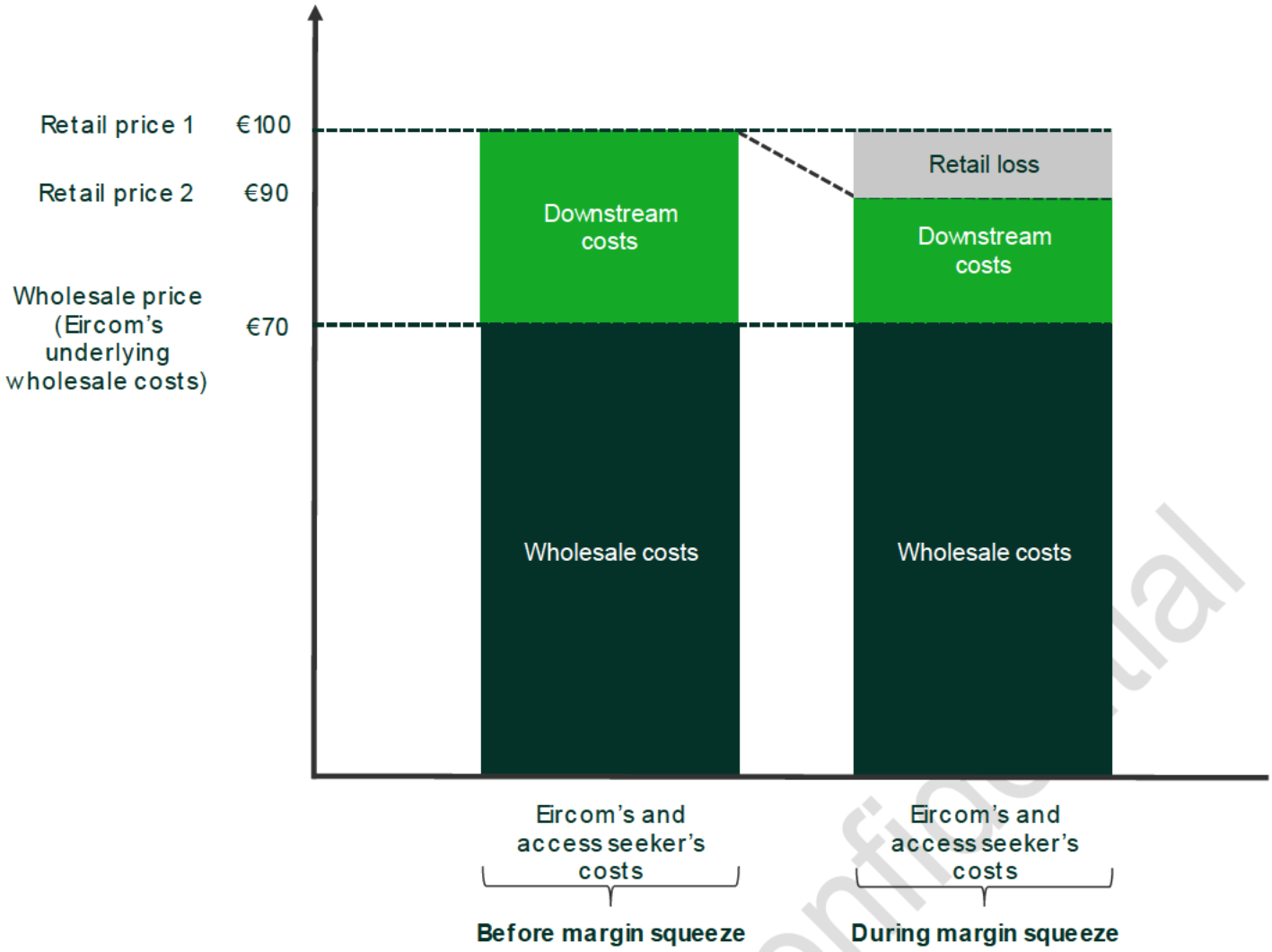
During the margin squeeze

Suppose Eircom chooses to implement a margin squeeze by:

- reducing its retail price to €90;
- keeping its wholesale input price at €70 (as it cannot increase the price above this level).

At the new retail price, the access seeker now faces a margin squeeze, as the €20 retail margin available above its wholesale costs (€90 [retail price 2] - €70 [wholesale price]) is not sufficient to recover its downstream costs (€30). The access seeker would incur a loss of €10.

At the new retail price of €90, Eircom would not be able to recover the LRIC+ of its wholesale input and downstream costs. Relative to a scenario of no margin squeeze, Eircom therefore makes a loss of €10 during the margin squeeze due to the reduction in its retail prices. Eircom would need to at least recoup these losses after having implemented the margin squeeze.



Source: Oxera.

3.20 The simple and stylised example above demonstrates why Eircom will face losses when engaging in a margin squeeze in the presence of a wholesale price control. In this sense, the rationale for engaging in a margin squeeze is similar to that in a predation setting—in particular, the strategy involves incurring losses (relative to not pursuing the strategy) which need to be recouped at a later stage, i.e. after the strategy has been implemented.

3.21 However, there is an important nuance to consider in the context of a wholesale price control based on LRIC+. In particular, the LRIC+ cost standard is a long-run measure of costs. This will therefore include costs that are fixed in the short run (in addition to the short-run variable costs). In the short run, Eircom could in theory sustain a margin squeeze by pricing down to the level of its variable costs, as it continues to earn profits (or, at a minimum, recover its variable costs) during the squeeze. Translating this to the LRIC+ price control, this means that Eircom could set its retail price below its LRIC+ (and even below its LRIC) plus its incremental downstream costs,

and continue to earn end-to-end (short-run) profits on each and every sale.[13]

3.22 In contrast, the access seeker's short-run variable costs are given by the wholesale input price, which is set equal to the LRIC+, plus its incremental downstream costs. In this case, at the lower retail price, the access seeker makes an end-to-end loss on each and every sale, as the retail price is insufficient to recover its short-run variable costs. In summary, as the incumbent SMP provider faces lower short-run variable costs than the access seeker, the SMP provider can sustain a margin squeeze while continuing to make a positive margin on every sale on an end-to-end basis.

3.23 Therefore, Eircom may have a strong ability to engage in a margin squeeze, at least in the short run, as it continues to earn a profit (or, at a minimum, recover its variable costs) during the squeeze. This differs from the traditional predation setting in which a firm sets prices below its short-run variable costs and therefore realises a loss on each and every sale.

3.24 In sections 4A and 5A, we discuss the impact of the presence or absence of wholesale price controls specifically in relation to Eircom's incentives to engage in a margin squeeze on FTTC and FTTH, respectively.

3B The presence of alternative network operators

3.25 In some areas of Ireland, in addition to Eircom's presence, there are alternative network operators, with the prospect of their presence increasing over the market review period. In particular, there may be some competition from alternative *wholesale* network operators with FTTH network infrastructure, primarily SIRO. Eircom may also face competition at the retail level from alternative *end-to-end* operators of broadband services, such as Virgin Media, which provides broadband services using its own cable network infrastructure.[14]

3.26 Consideration of the extent to which alternative wholesale network operators or alternative end-to-end operators are present is an important factor when assessing the need for an ex ante MST, as these alternative operators may respond to Eircom's attempts to engage in a margin squeeze by

[13] The difference between LRIC and LRIC+ is that LRIC+ includes a share of common costs—i.e. any costs that are joint to the provision of multiple services. Therefore, a price control that includes a share of common costs offers headroom above the LRIC, which could improve Eircom's ability to engage in a margin squeeze, provided that these costs can be recovered elsewhere (for example, from other services).

[14] ComReg notes that Eircom faces SIRO in the Commercial NG WLA Market, where their networks overlap, and that SIRO has plans to extend its coverage from [✂ ✂]% of premises in the Commercial NG WLA Market to [✂ ✂]% as part of its Phase 2 roll-out plans. Moreover, Virgin Media's end-to-end cable network covers over [✂ ✂] premises and it has stated its intention to overlay its cable network with FTTP and to use this to provide wholesale access. See ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', sections 6.5.1 and 6.5.2.

strategically changing their prices, which may affect Eircom's incentives to engage in the squeeze in the first place.

3.27 In general, the presence of alternative network operators is likely to weaken Eircom's incentives to engage in a margin squeeze relative to a scenario where it faces no alternative network operators. As explained in more detail below, the mechanisms through which the presence of alternative network operators affects Eircom's incentives may depend on whether the competitor is solely a *wholesale* network operator or an *end-to-end* operator, and the type of margin squeeze strategy that Eircom pursues (i.e. whether this is through a reduction in retail prices and/or an increase in wholesale prices).

Wholesale network operators

3.28 In the presence of an alternative wholesale network operator such as SIRO, access seekers may have a credible and readily available outside option.

3.29 If Eircom engages in a margin squeeze through an increase in wholesale prices, access seekers could switch away to the alternative wholesale network operator. This would act as a constraint on Eircom's incentives, as it could impede the effectiveness of a margin squeeze by enabling access seekers to avoid Eircom's margin squeeze attempt.

3.30 If Eircom engages in a margin squeeze through a reduction in retail prices, the alternative wholesale network operator may seek to compete for access seekers by lowering its own wholesale prices, to provide access seekers with a sufficient margin to remain competitive at the retail level, if the alternative network operator considers that this would be beneficial in the longer term.

3.31 Importantly, the strength of the effect from alternative wholesale network operators on Eircom's incentives will depend on a range of factors. In particular, the alternative wholesale network operator must offer a credible substitute to Eircom's network; this may not be the case if the alternative network operator cannot meet the technical needs of the access seekers and/or if the network coverage is unsuitable. For example, if the alternative network operator has sub-national coverage, the access seeker may be able to switch only in certain areas and would still need to rely, in part, on Eircom's wholesale inputs to maintain the same coverage—this solution may not be feasible in practice. Access seekers must also be able to easily switch away from Eircom's network; this may not be the case if switching is technically complex, slow and/or costly.

3.32 Therefore, the more substitutable the alternative wholesale network is to Eircom's network, and the more easily access seekers can switch between wholesale providers, the stronger the constraint is likely to be on Eircom's incentives to engage in a squeeze.

3.33 We note that there is no alternative wholesale FTTC network operator competing with Eircom in the Commercial NG WLA Market.[15] Moreover, ComReg's preliminary conclusion is that the presence of rival wholesale FTTH infrastructure will not, over the market review period, sufficiently constrain Eircom from acting independently of competitors in the Commercial NG WLA Market.[16] For example, ComReg has found SIRO (which currently covers around 450,000 premises and has ambitions to reach 770,000 premises by 2025) not to have an effect constraint on Eircom in the Commercial WLA NG Market.[17] Therefore, while Eircom faces some competition from alternative wholesale network operators, not all access seekers are likely to have a credible alternative to Eircom to fully undermine its incentives to engage in a margin squeeze.

End-to-end network operators

3.34 The presence of alternative end-to-end network operators—which, importantly, do not rely on Eircom for wholesale inputs, but self-supply and compete with Eircom and others at the retail level—may also affect Eircom's incentives to engage in a margin squeeze. For example, while this will not change Eircom's incentives and ability to engage in a squeeze through an increase in wholesale prices, its incentives and ability to margin squeeze through a reduction in retail prices would be weakened.

3.35 If Eircom engages in a margin squeeze through an increase in wholesale prices, access seekers could seek to strike a wholesale access agreement with the alternative end-to-end network operator and switch away from Eircom (where there is overlapping coverage). However, if the end-to-end operator does not have a readily available wholesale product, such a threat would not be a credible alternative. Therefore, the extent to which the presence of an alternative end-to-end network operator affects Eircom's incentive to engage in a squeeze via increasing wholesale prices depends on the extent to which access seekers view the alternative network operator as a credible outside option.

3.36 If Eircom engages in a margin squeeze through a reduction in retail prices, this could risk the unintended consequence of triggering a retail price war with the alternative end-to-end

[15] ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', section 5.3.3.
[16] Having considered the possibility of market entry or expansion by Virgin Media or SIRO in the Commercial NG WLA Market, ComReg considers that there is insufficient evidence to suggest that the potential competition from these sources would exert an effective competitive constraint on Eircom's provision of NG WLA, given the limited current and expected rollout by SIRO and insufficient data in respect of Virgin Media's entry into NG WLA (see ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', sections 6.5.2 and 6.5.3).
[17] ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', section 6.5.2.

network operator (if present). This could impede Eircom's ability to capture the retail customers of the access seekers disadvantaged by the margin squeeze, as those retail customers may instead divert to the alternative end-to-end network operator that lowers its retail prices on equivalent services to match Eircom's lower retail prices. The risk of this response depends on the strength of retail competition between Eircom and the end-to-end operator.

3.37 In relation to a squeeze through an increase in wholesale prices, we note that there are no alternative end-to-end network operators currently offering wholesale access at a material scale in the Commercial NGA Market. In particular, ComReg provisionally concluded that while Virgin Media has stated an intention to offer a wholesale service, it is unlikely to do so on a material scale over FTTP technology during the market review period such that this would sufficiently constrain Eircom's ability to act independently.[18]

3.38 On the risk of instigating a price war, this will depend on the strength of retail competition between Eircom and other end-to-end providers at the retail level—in particular Virgin Media. In this respect, we note that Virgin Media's cable network covers over [✂ ✂] premises (around [✂ ✂]% of the premises in Ireland).[19]

3.39 In sections 4A and 5A, we discuss the impact of the presence of alternative network operators specifically in relation to Eircom's incentives to engage in a margin squeeze on FTTC and FTTH, respectively.

[18] ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', sections 6.5.1 and 6.5.2.
[19] ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', section 6.5.2.; ComReg (2022), 'Q2 2022 WLA WCA - Broadband Exchange Area Coverage and Lines by Retail Product (network submission data)'.

4 The need for a margin squeeze test on FTTC VUA services

4.1 We consider that Eircom's incentive to engage in a margin squeeze on FTTC VUA, in the presence of a wholesale price control, is likely to be low, for the following reasons.

- FTTC services are showing early signs of decline, with this expected to continue and accelerate across the market review period as the focus of competition shifts towards FTTH services.
- Eircom is undertaking an extensive investment programme in FTTH during the market review period, and will need to monetise this investment by migrating customers from legacy networks to FTTH.
- Given the recommendation in the Oxera report: Part 1 for a price cap on FTTC VUA based on flat, real prices (i.e. pricing continuity based on allowing the current regulated FTTC VUA price to increase in future by no more than inflation), if Eircom were to engage in a margin squeeze on FTTC services, it would have to do so through a reduction in its retail prices.
- Lowering FTTC retail prices is likely to slow the speed of natural migration from FTTC to FTTH, which would impede Eircom's objectives of encouraging migration to FTTH as it rolls out its fibre infrastructure.
- Further, due to the presence of the wholesale price control on FTTC VUA—and therefore the need to lower retail prices in order to engage in a squeeze—Eircom would incur losses during the margin squeeze which would need to be recouped later. These losses could be significant given the presence of established access seekers.
- Eircom may face challenges in recouping its losses after the margin squeeze, which weakens its incentives to pursue this strategy in the first place. First, recoupment through higher FTTC retail prices could be challenging as access seekers can resume providing FTTC and/or customers may have the option of switching to an FTTH service, which will be increasingly available. Second, Eircom may struggle to recoup losses by upgrading these customers to its own FTTH services, given that it faces competition on FTTH at the retail level from access seekers using Eircom's FTTH network (and end-to-end providers, where coverage overlaps).

4.2 For these reasons we consider the risk of Eircom pursuing a margin squeeze on FTTC VUA through a reduction in retail prices to be relatively low. Therefore, given these low incentives, the benefits offered by imposing ex ante margin squeeze obligations of FTTC VUA in terms of avoiding harmful effects on retail competition and consumers are likely to be low. Balancing the low risk of an MST occurring, against the costs of continuing with an ex ante MST requirement, we consider that it would be proportionate to remove the ex ante margin squeeze obligations on FTTC VUA services. We note that Eircom would continue to be subject to competition law rules, and that these offer a backstop that could be used to investigate Eircom if

there were evidence or a complaint of it engaging in a margin squeeze on FTTC VUA.

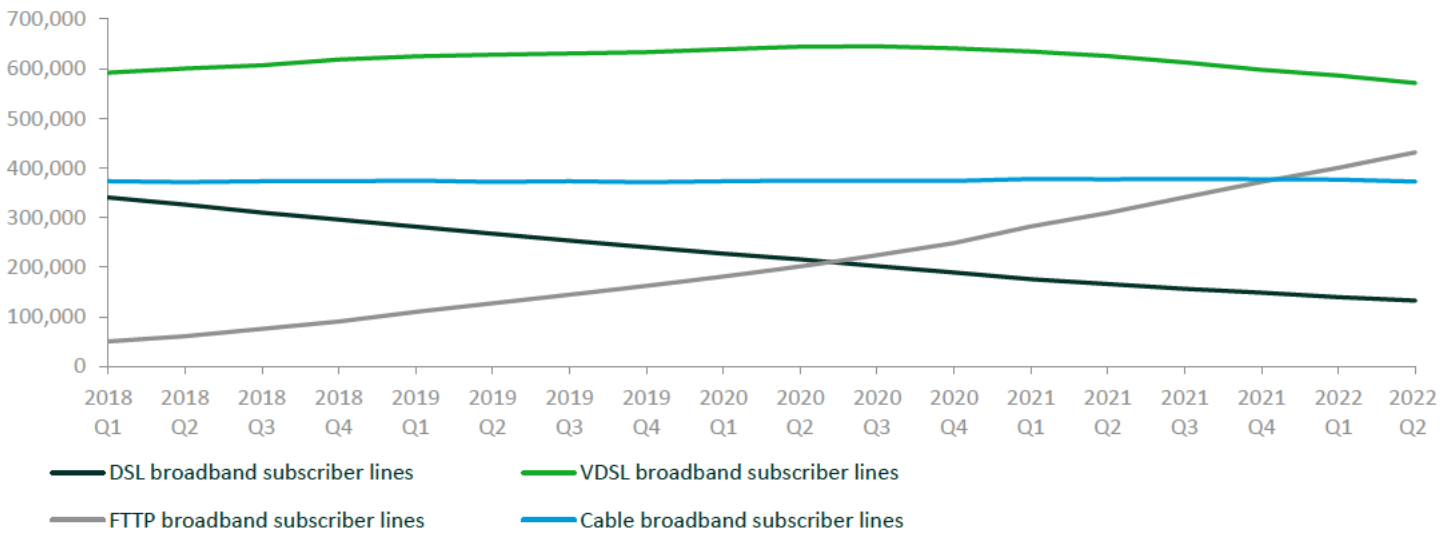
4.3 Below, we expand on our reasoning, presenting an assessment of the need for an ex ante margin squeeze on FTTC VUA, having regard to the provisional conclusions from ComReg's market analysis and to the proposals put forward with regard to wholesale price controls. In particular:

- in section 4A, we present our assessment of Eircom's incentive to engage in a margin squeeze on FTTC VUA;
- in section 4B, we present our assessment of Eircom's ability to engage in a margin squeeze on FTTC VUA;
- in section 4C, we summarise our overall assessment and set out our recommendations on whether ex ante margin squeeze obligations are needed for FTTC VUA, considering the risk and the potential impact on competition and consumers.

4A Incentive to engage in a margin squeeze on FTTC VUA

4.4 While FTTC is currently the most popular form of broadband service, it is showing early signs of decline as subscribers gradually switch towards FTTH services. Figure 4.1 shows that FTTC services (labelled as VDSL in ComReg's Quarterly Key Data Reports (QKDRs)) currently account for the largest share of broadband subscriptions by technology. However, FTTC subscriber volumes peaked in Q3 2020 (at around 645,000) and have since declined in each quarter, falling to around 571,000 as at Q2 2022. In contrast, FTTH broadband subscriptions (labelled as FTTP in ComReg's QKDRs) are increasing significantly, with customers migrating from FTTC and copper products. For example, between Q4 2018 (after the previous market review) and Q2 2022, FTTH subscriptions grew from around 91,000 to 431,000. This trend is expected to continue across the review period, as multiple operators, including Eircom, Siro and NBI, will continue to deploy fibre infrastructure across Ireland.

Figure 4.1 Retail broadband subscriber lines by technology



Note: Excludes satellite, fixed wireless access and mobile broadband subscribers.
Source: Oxera based on ComReg (2022), 'Quarterly Key Data Reports: Data Portal: Internet Statistics', https://www.comreg.ie/industry/electronic-communications/data-portal/tabular-information/, accessed 21 September 2022.

4.5 As the roll-out of FTTH across Ireland will be gradual, FTTC may still be used to serve a material share of subscribers, at least during the early stages of the market review period. Importantly, however, the trend of FTTC subscribers being in decline while FTTH subscribers increase reflects an important shift in competitive dynamics, with the focus of competition moving to FTTH.

4.6 Eircom's incentives to engage in a margin squeeze on FTTC VUA are likely to be low, particularly given that FTTC is expected to continue to decline and a primary focus of Eircom will be on incentivising the take-up on the FTTH network that it is rolling out across Ireland.

4.7 Specifically, as Eircom is in the process of deploying its FTTH network in Ireland, it will have strong incentives to encourage subscribers to migrate to its FTTH service offerings, and thereby to contribute to the recovery of the fixed and sunk costs associated with the investment. A key driver of migration from FTTC to FTTH will be the relative prices of each service—a greater price differential between FTTC and FTTH will discourage customers from choosing to upgrade to FTTH where the services are available in parallel. Therefore, Eircom is likely to be strongly incentivised to set FTTC and FTTH prices to encourage customers to migrate to its FTTH services.

4.8 With the proposal for pricing continuity for FTTC VUA services, with the price allowed to increase in future by no more than inflation (CPI-0%)—i.e. a flat, real price cap, Eircom will be prevented from strategically increasing its wholesale prices to engage in a margin squeeze.[20] Therefore, as illustrated in section 3A.2, in the presence of a wholesale price control, Eircom would be able to implement a margin squeeze only by reducing its FTTC retail prices. All else equal, engaging in a margin squeeze on FTTC is therefore likely to be a costly strategy that would delay migration to FTTH. This would conflict with Eircom's objective to send price signals that encourage customers to migrate to its FTTH network.

4.9 Ultimately, a margin squeeze implemented through a reduction in FTTC retail prices runs counter to Eircom's strategy to encourage migration to its FTTH network. As such, its incentives to squeeze on FTTC VUA are likely to be low.

4.10 Notwithstanding this key point, there may be further reasons why Eircom is unlikely to have the incentive to engage in a squeeze on FTTC VUA. For example, as explained in section 3A.2

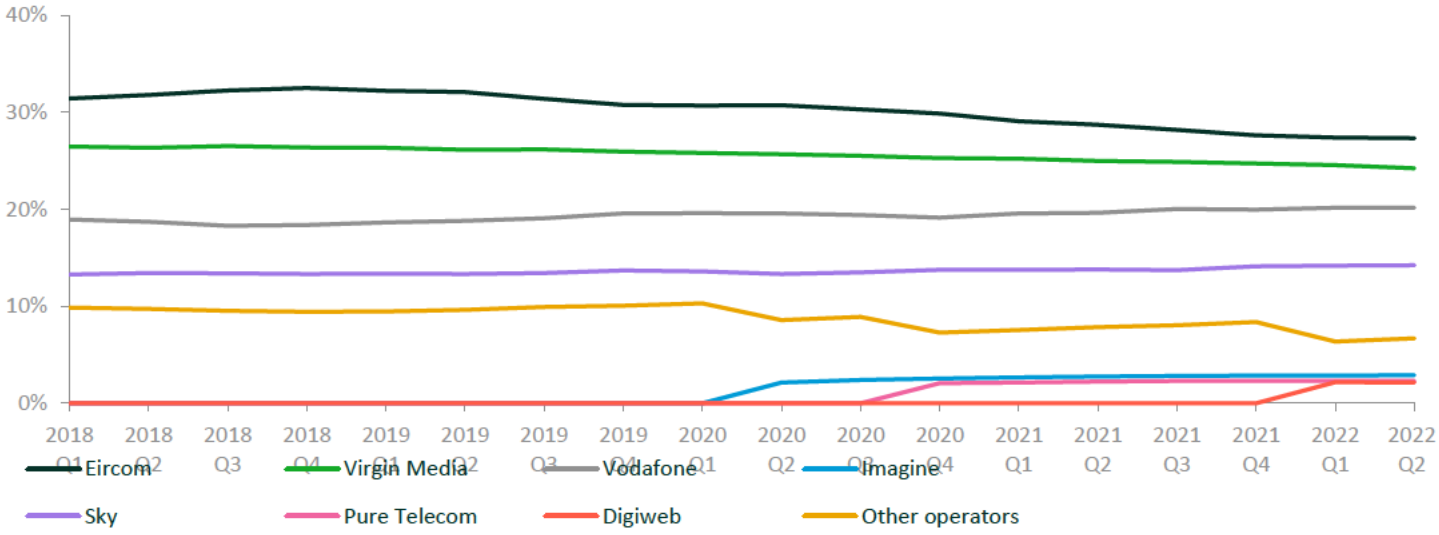
[20] We note that Eircom would be able to increase prices in line with inflation (CPI) in each year. However, in general, inflation trends are a reasonable predictor of how the costs could be expected to evolve. Therefore, we do not consider that this would affect Eircom's incentives or ability to engage in a margin squeeze.

above, imposing a margin squeeze through a reduction in retail prices would mean that Eircom would incur short-run losses, relative to the scenario in which it does not engage in a margin squeeze. The fact that Eircom incurs losses and must, therefore, have a strategy to at least recoup these losses following a squeeze has implications for whether Eircom would have the incentive to engage in a margin squeeze in the first place.

4.11 Larger losses will be incurred, the larger the reduction in retail prices relative to the pre-squeeze level and the longer the duration for which Eircom would need to sustain the margin squeeze in order to have a materially negative impact on downstream competition.

4.12 Larger, well-established access seekers are likely to be better placed than smaller access seekers and new entrants to withstand a margin squeeze by Eircom. These operators are likely to have larger customer bases, more varied product portfolios, and more financial strength. As shown in Figure 4.2, some access seekers are relatively well-established. For example, in Q2 2022, Vodafone and Sky had retail market shares of around 20% and 14% of fixed broadband subscribers, respectively.

Figure 4.2 Retail fixed broadband shares (subscriber lines)



Source: Oxera based on ComReg (2022), 'Quarterly Key Data Reports: Data Portal Internet Statistics', https://www.comreg.ie/industry/electronic-communications/data-portal/tabular-information/, accessed 21 September 2022.

4.13 Focusing on FTTC subscriber lines, we also find that there are large, well-established access seekers present in the Irish market. For example, as shown in Figure 4.3 below, Vodafone and Sky held material and stable shares of FTTC subscriber lines across 2021 and the first half of 2022, with shares of around [✂ ✂]% and [✂ ✂]%, respectively, in Q2 2022.[21] This is also the case when considering both FTTC and FTTH in

[21] Oxera based on ComReg (2022), 'FTTC/FTTP Bundle Services (Retail Submission Data) – All Combinations'.

combination, in which Vodafone and Sky held material and stable market shares, at [✂]% and [✂]%, respectively, in Q2 2022.[22]

Figure 4.3 Retail FTTC fixed broadband shares (subscriber lines) [✂]

Source: Oxera based on ComReg (2022), 'FTTC/FTTP Bundle Services (Retail Submission Data) – All Combinations'.

4.14 The above shows that Eircom faces a number of well-established access seekers that provide retail broadband services and, in particular, FTTC broadband services. Such access seekers may require less protection against a margin squeeze given the relatively low risk of them quickly exiting the market in response to Eircom's strategy. This is particularly important when considered in light of Eircom having low incentives to engage in a squeeze on FTTC VUA.

4.15 Eircom may find it easier to squeeze out smaller, less-established operators providing FTTC services. However, the potential benefits to Eircom of doing so are likely to be small given that Eircom would capture only a small volume of customers from a small-scale operator. Moreover, as the focus of competition will be increasingly on FTTH, on a forward-looking basis the foreclosure of smaller FTTC providers is of less concern due to the limited impact this would have on competitive dynamics over the review period.

4.16 Therefore, to implement a squeeze that forecloses a material share of downstream FTTC competition, Eircom may need to significantly reduce FTTC retail prices for a sustained period of time, in order to weaken the other, well-established players. Given that the potential scale of the resulting losses could be significant, Eircom would need to have clear prospects of recouping these losses following the implementation of the margin squeeze. It could seek to recoup its losses in two main ways, as detailed below.

[22] Ibid.

4.17 First, Eircom could seek to leverage its market power at the retail level and increase FTTC retail prices above the pre-squeeze level, enabling it to earn higher margins per customer than it earned before the margin squeeze. However, this recoupment strategy may be challenging for the following reasons:

- access seekers that stop providing FTTC retail products in response to the margin squeeze could resume providing these services to subscribers if Eircom were to raise the FTTC retail prices above the pre-squeeze level. This would impede Eircom's ability to charge prices that are significantly above pre-squeeze levels for a sustained period of time;[23]
- if customers have the option of switching to an FTTH service, they may choose to switch to FTTH following an increase in FTTC retail prices, as the FTTH price would now be more attractive. This may impede Eircom's ability to charge higher FTTC retail prices to its customers following the squeeze;
- if copper switch-off takes place during this market review period, the timeframe across which Eircom would be able to recoup its losses through higher FTTC retail prices would be limited (since FTTC would be withdrawn at the point of switch off). Moreover, Eircom would be unlikely to have the incentive to delay migrating customers from FTTC to FTTH for this purpose, as this would delay the cost savings that could be realised through the switch off programme.

4.18 Second, if Eircom is successful in increasing its share of the FTTC retail market, it could also seek to recoup its losses if it can upgrade these customers to FTTH products that generate higher margins. However, Eircom may again face challenges when trying to recoup through this strategy for the following reasons:

- if Eircom faces competition at the retail level on FTTH, it may be unable to ensure that it is able to charge prices that allow it to earn higher margins than for FTTC;
- moreover, Eircom would need to ensure that a sufficiently large proportion of customers were upgraded to FTTH on its own network. This could be challenging as it faces some competition at the retail level for FTTH services—as discussed in paragraph 5.18 below, in 2021 Eircom faced competition from several competitors at the retail level, with Vodafone holding the highest retail market share.[24] Consumers choosing to upgrade from FTTC to FTTH may take some time, depending on their willingness to pay for the upgrade.
- in any case, even if Eircom were able to earn higher margins on FTTH products than on FTTC products, it would have a stronger incentive to set FTTC retail prices so as to

[23] We acknowledge that if operators have fully exited the market during the squeeze, re-entry is unlikely to be immediate and costless. However, if operators chose to stop providing FTTC services only, but continued to offer other services (such as copper and FTTH services) during the squeeze, they might be able to quickly revert at a low cost.
[24] ComReg (2022), 'Quarterly Key Data Reports: Data Portal Internet Statistics', https://www.comreg.ie/industry/electronic-communications/data-portal/tabular-information/, accessed 21 September 2022.

encourage its own subscribers to migrate to FTTH, rather than pursuing costly losses from a margin squeeze on FTTC to seek to increase its share of FTTC, with no guarantee of recouping the losses from pursuing this strategy. This further strengthens the reasoning outlined above on why Eircom is unlikely to have an incentive to squeeze on FTTC VUA.

Impact of the presence of alternative network operators

4.19 For the reasons outlined above, the risk of Eircom engaging in a margin squeeze on FTTC is low. Eircom's incentives could be further weakened if there is a significant presence of alternative network operators (including alternative wholesale operators and alternative end-to-end network operators), for the reasons outlined in section 3B.

4.20 In the presence of an alternative *end-to-end* network operator—which would not be reliant of Eircom's wholesale inputs (such as Virgin Media)—an attempt by Eircom to engage in a margin squeeze by reducing FTTC retail prices may cause an alternative end-to-end network operator to respond by reducing its own retail prices on equivalent or comparable services. Therefore, a squeeze through this strategy risks initiating a retail price war.

4.21 This could impede Eircom's ability to capture the retail customers of those access seekers using its wholesale inputs that are disadvantaged by the margin squeeze. Those access seekers' retail customers may instead choose to divert to the alternative end-to-end network operator that lowers its prices on equivalent or comparable services to match Eircom's lower retail prices, instead of diverting to Eircom. In essence, any attempt by Eircom to squeeze through lower retail prices that then results in a retail price war would mean that it may gain fewer customers compared to a scenario where no alternative end-to-end operators are present. Moreover, Eircom would be earning lower margins on those customers whom it would be able to gain (or retain).

4.22 The only alternative end-to-end network operator with a material presence in the retail market is Virgin Media.[25] In this respect, we note that Virgin Media's network covers [✂ ✂] premises (around [✂ ✂]% of the premises in Ireland). Virgin Media's presence could potentially weaken Eircom's already low incentives to engage in a margin squeeze on FTTC. However, consistent with the provisional conclusions from the market review (in which indirect retail constraints from cable to NG WLA may be insufficient to constrain Eircom), there may not be a material effect.[26]

[25] ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', section 3.2..
[26] ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', section 6.4.2.; ComReg (2022), 'Q2 2022 WLA

4.23 The presence of alternative *wholesale* network operators may also affect Eircom's incentive, as they might try to encourage the access seekers facing a squeeze to switch away from Eircom's network to their own wholesale network if this is beneficial in the long run.

4.24 That said, there is currently no alternative wholesale FTTC network operator, so Eircom would not be constrained through this mechanism.[27] While FTTH is also defined as being in the Commercial NG WLA Market, the presence of alternative FTTH networks may be unlikely to offer a sufficiently strong substitute that enables the access seeker to mitigate Eircom's attempted margin squeeze by quickly transferring a large share of its FTTC customers to an FTTH service using the wholesale inputs from an alternative network operator. Moreover, SIRO, the main alternative FTTH wholesale network operator in the Commercial NG WLA Market, currently covers over 450,00 premises in Ireland. While SIRO has ambitions to grow this to over 770,000, this potential presence is materially below Eircom's plans to reach 1.9m premises.[28] This would limit SIRO's effect in terms of mitigating Eircom's incentives to engage in a squeeze.

4.25 Therefore, while alternative network operators are present in the Commercial NG WLA Market, their presence is unlikely to have a material impact on Eircom's incentives to engage in a squeeze, which, for the reasons outlined above, are already likely to be low.

Impact of the presence of Eircom's own FTTH network

4.26 One potential source of recoupment for Eircom could be the opportunity to upgrade customers to its FTTH services, which may offer higher margins. Therefore, the more extensive Eircom's FTTH network roll-out is, the greater the scope for recoupment through this strategy may be.

4.27 However, as noted above, the strategy of engaging in a margin squeeze through a reduction in retail prices could slow the natural migration from FTTC to FTTH, which would conflict with Eircom's incentives to encourage migration to, and take-up of, its FTTH services. Therefore, the presence of Eircom's own FTTH network is likely to weaken (rather than strengthen) its incentives to engage in a margin squeeze of FTTC VUA.

4B Ability to engage in a margin squeeze on FTTC VUA

4.28 Eircom operates as a vertically-integrated provider and holds SMP at the wholesale level with respect to FTTC VUA, a position

WCA – Broadband Exchange Area Coverage and Lines by Retail Product (Network Submission Data)'.

[27] ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', section 5.3.3.

[28] ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', section 5.3.1.

that gives it the ability to engage in a margin squeeze on FTTC VUA.

4.29 Under the recommendations for pricing continuity for FTTC VUA services, with the price allowed to increase in future by no more than inflation, Eircom's ability to engage in a margin squeeze under this approach does not materially differ from its ability to do so under a cost-based price control (as described in section 3A.2).

4.30 Indeed, the starting point for the recommended price control is the current price from the bottom-up LRIC+ model. While the flat, real pricing continuity approach could produce a slightly higher price path for FTTC prices (compared with the continuation of the BU LRIC+ model), given that no explicit efficiency assumptions would be included, it still limits the extent to which prices can rise above general inflation levels.

4.31 Eircom's ability to squeeze would mainly be through reductions in retail prices, with the implications and challenges discussed above.

4C Overall assessment of, and recommendation on the need for, an MST on FTTC VUA

4.32 Overall, we consider that Eircom's incentive to engage in a margin squeeze on FTTC VUA, in presence of a wholesale price control, is likely to be low, for the following reasons.

- FTTC services are showing early signs of decline, with this expected to continue and accelerate across the market review period as the focus of competition shifts towards FTTH services.
- Eircom is undertaking an extensive investment programme in FTTH during the market review period, and will need to monetise this investment by migrating customers from legacy networks to FTTH.
- Given the recommendation in Oxera report: Part 1 for a price cap on FTTC VUA based on flat real prices, if Eircom were to engage in a margin squeeze on FTTC services, it would have to do so through a reduction in its retail prices.
- Lowering FTTC retail prices is likely to slow the speed of natural migration from FTTC to FTTH, which would impede Eircom's objectives of encouraging migration to FTTH as it rolls out its fibre infrastructure.
- Further, due to the presence of the wholesale price control on FTTC VUA, and therefore the need to lower retail prices to engage in a squeeze, Eircom would incur losses during the margin squeeze which would need to be recouped later. These losses could be significant given the presence of established access seekers.
- Eircom may face challenges in recouping its losses after the margin squeeze, which weakens its incentives to pursue this strategy in the first place.

4.33 Therefore, we consider the risk of a margin squeeze on FTTC taking place is low in view of the incentives faced by Eircom.

4.34 The benefits offered by imposing ex ante margin squeeze obligations on FTTC VUA, in terms of avoiding harming retail competition and consumers, are likely to be low given that Eircom is likely to have weak incentives to engage in a margin squeeze on FTTC VUA.

4.35 Moreover, while the extent of the regulatory burden imposed on Eircom and, by association ComReg, in terms of ensuring compliance depends on the specifics of the monitoring regime, we consider that these costs are unlikely to be justified in light of the relatively low risk.

4.36 Balancing this risk against the costs of continuing with an ex ante MST requirement, we consider that it would be proportionate to remove the ex ante margin squeeze obligations on FTTC VUA services. We note that Eircom would continue to be subject to competition law which offers a backstop to investigate Eircom if it were to engage in a margin squeeze on FTTC VUA.

4.37 Based on the above, our recommendation is as follows:

In the presence of the proposed wholesale price control on FTTC VUA, ex ante margin squeeze obligations should not be imposed on FTTC VUA.

5 The need for a margin squeeze test on FTTH VUA services

5.1 Eircom is in the process of deploying its FTTH network. As such, we consider that its incentive to engage in a margin squeeze on FTTH VUA is currently uncertain and is likely to vary over time.

5.2 In the early stages of fibre roll-out, when Eircom's fibre network is deployed in a given area, Eircom might be expected to rely on access seekers to help fill up its FTTH network, supporting the transition away from FTTC to FTTH, given the access seekers' strong brands and large customer base. This will support Eircom to bring volumes to its FTTH network and to recover the large fixed and sunk costs involved in the investment. Therefore, Eircom may have low incentives to foreclose these access seekers during the early stages of roll-out.

5.3 However, once Eircom has sufficient volumes on its FTTH network (which could be reached over the course of this market review period) and there is a clear path towards achieving payback on its investment, it may have the incentive to engage in a margin squeeze to increase its retail FTTH share and keep for itself a bigger proportion of the margin available on FTTH services.[29] Depending on how successful this strategy might be, were Eircom to pursue it, it could lead to reduced competition in the retail market, to the detriment of Irish broadband consumers.

5.4 Therefore, Eircom has two possible motivations in relation to the customer bases of access seekers. It may see access seekers as 'allies', as their customers have an attachment to the strong brands, or it may wish to win the customers at the retail level. While it is not clear how this will play out, the motivation to win the customers at the retail level, by engaging in a margin squeeze, may become stronger over time.

5.5 Moreover, unlike FTTC VUA, which will be price-capped at flat, real levels (under the recommendation in the Oxera report: Part 1), FTTH VUA services will be allowed a further period of pricing flexibility. As noted earlier, this would enable Eircom to engage in a costless margin squeeze without incurring losses on an end-to-end basis, and therefore enhances its ability and incentives to engage in a squeeze over the course of the market review period, relative to FTTC VUA services.

5.6 Given that FTTH services are expected to be the focus of competition going forward, a successful margin squeeze implemented during the transition period from FTTC to FTTH could enable Eircom to secure an entrenched position of market power at the retail level with potentially significant

[29] The incentive would be greatest where the margin on retail customers is more attractive than the margin on wholesale customers, which may be the case under wholesale regulation of FTTH services in future, and limited retail pricing constraints on FTTH services from infrastructure competition. Eircom may be more inclined to engage in this strategy if it expects future regulation on its FTTH wholesale prices, with attractive margins available at the retail level.

negative effects on consumers, in terms of reduced consumer choice, less innovation, lower quality of service (e.g. regarding customer service), and reduced price competition, among other aspects. Therefore, the potential cost to competition and consumers associated with a successful margin squeeze in FTTH is high.

5.7 While the case for whether Eircom would engage in a margin squeeze is uncertain and may change over time, given the high potential cost to competition and consumers that could arise if Eircom were to engage in a margin squeeze in FTTH, we consider that it would be reasonable to impose ex ante margin squeeze obligations on Eircom's FTTH VUA services. This risk cannot be adequately addressed by relying on ex post competition law, given the potentially significant harms that could arise if Eircom did engage in a successful margin squeeze strategy.

5.8 The imposition of an MST alongside pricing flexibility at the wholesale level on FTTH is also consistent with European Commission Recommendations.[30]

5.9 In the following, we expand on our reasoning, providing an assessment of the need for an ex ante margin squeeze on FTTH VUA, having regard to the provisional conclusions from ComReg's market analysis and to the proposals put forward with regard to wholesale price controls. In particular:

- in section 5A, we set out our assessment of Eircom's incentive to engage in a margin squeeze on FTTH VUA;
- in section 5B, we set out our assessment of Eircom's ability to engage in a margin squeeze on FTTH VUA;
- in section 5C, we summarise our overall assessment and present our recommendation on whether ex ante margin squeeze obligations are needed for FTTH VUA, considering the risk, the potential impact on competition and consumers, and the requirements for compliance with an ex ante regime, against the backstop of ex post competition law.

5A Incentive to engage in a margin squeeze on FTTH VUA

5.10 Under the recommendations for pricing flexibility on FTTH VUA services and therefore the absence of a direct wholesale price control for FTTH VUA, Eircom will have greater flexibility in setting its wholesale input prices for FTTH VUA, relative to a scenario where a direct wholesale price control is in place.[31] In this case, Eircom could engage in a costless margin squeeze by increasing wholesale prices and leaving retail prices unchanged

[30] European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU)', Recitals 50–55.

[31] As explained in the Oxera report: Part 1, the anchor pricing approach is intended to constrain Eircom's ability to set excessive prices for FTTH services. Therefore, this will limit to some degree Eircom's ability to set FTTH wholesale input prices freely. However, Eircom will not be subject to a direct price control on FTTH VUA.

(as explained in section 3A.1).[32] This is an important distinction from the assessment of FTTC, as Eircom would not incur losses that would need to be recouped following the implementation of the margin squeeze.[33]

5.11 All else equal, this flexibility would be likely to strengthen Eircom's incentives to engage in a squeeze. However, as discussed below, Eircom would still need to have a clear strategic objective and rationale for engaging in a margin squeeze.

5.12 FTTH is expected to be the main focus of competition going forward. For example, as shown in Figure 4.1 above, FTTH broadband subscriptions are increasing significantly, with customers migrating from FTTC and copper products. This trend is expected to continue across the market review period alongside continued investment in FTTH:

- Eircom plans to increase its FTTH footprint to cover 1.9m premises by 2026;[34]
- SIRO plans to expand its FTTH coverage from 450,000 premises to 770,000 premises.[35]

5.13 Given the importance of FTTH looking forward, Eircom may have the incentive to engage in a margin squeeze to increase its retail share of FTTH subscribers with the objective of entrenching its market power. However, its incentives to squeeze on FTTH VUA are uncertain and may vary over time depending on its FTTH roll-out strategy.

5.14 Eircom's investment in upgrading its existing network to provide full-fibre services will involve large fixed and sunk costs. Therefore, once its fibre network is deployed in a given area,

[32] In the Commercial NG WLA Market, the margin squeeze will be costless. However, if Eircom were to raise its wholesale FTTH prices, the FTTH wholesale prices of NBI would also increase in the IA WLA NG Market as they are linked to Eircom's wholesale prices. Therefore, access seekers using NBI wholesale inputs in the IA will also experience an increase in wholesale prices. If Eircom is using NBI wholesale inputs in this area, it may face an increase in wholesale prices, which could mean that the margin squeeze strategy in the Commercial NG WLA Market is not strictly 'costless'.
However, as all access seekers in the IA would be facing an increase in wholesale input costs, operators may take steps to avoid the squeeze by increasing retail prices in that area. Eircom's ability to compete in that area would remain unaltered, with the only impact being a potential volume effect from higher retail prices affecting all retailers in the IA. However, this is a second-order effect that is likely to be immaterial compared with the potential benefit that would arise from a costless squeeze in the Commercial NG WLA Market.

[33] As explained in section 3A.1, following an increase in Eircom's wholesale prices, any margin lost at the retail level would be covered through excess profits at the wholesale level, provided that retail prices are set at or above total end-to-end costs.

[34] On 11 August 2021 Eircom announced the expansion of the FTTH fibre network roll-out to include a further 200,000 premises in Ireland, which were initially not included within the open eir FTTH roll-out or in the government-backed NBP. The revised target is to have 1.9m premises within the open eir FTTH footprint by 2026. See eir (2021), 'Ireland on track to become one of the most connected countries in the world', press release, 11 August, https://www.eir.ie/pressroom/eirs-Gigabit-Fibre-network-to-expand-to-a-further-200000-homes-and-businesses.

[35] SIRO (2022), 'SIRO Announces €10 Million Investment In A 10 Gigabit-Enabled Broadband Network', 20 September, https://siro.ie/news-and-insights/siro-announces-e10-million-investment-in-a-10-gigabit-enabled-broadband-network/.

and it has an incentive to migrate customers away from FTTC onto its FTTH network, its rational incentive will be to 'fill up' its fibre network with subscribers from whom it can generate revenues that contribute to the recovery of its fibre network investment. Moreover, by avoiding the need to operate parallel networks, Eircom can realise cost savings by switching off the copper network used to serve FTTC customers. Therefore, Eircom has the incentive to encourage quick migration from FTTC to FTTH, enabling it to retire the copper network.

5.15 Retail volumes generated by access seekers—with existing brands and subscriber bases in the Irish market—could help to incentivise and encourage their customers to take-up FTTH services. For example, the current retail fixed broadband market share by subscriber lines of Vodafone is 20% and for Sky 14%,[36] demonstrating the important role these access seekers could play. These providers are an important source of volumes for Eircom, which could enable it to grow the volume of subscribers on its wholesale FTTH network faster than if it were to focus on upgrading only its own retail subscribers. This acts as a countervailing force against Eircom's incentives to engage in a margin squeeze.

5.16 Therefore, in the short term, even in the presence of access regulation, but the absence of wholesale charge controls on FTTH services, Eircom may have relatively low incentives to foreclose access seekers that can offer a valuable route to gaining FTTH subscribers and generating the associated wholesale revenues for Eircom (which contribute to the recovery of fixed and sunk costs).

5.17 As discussed in more detail below, this could be seen to be playing out at present, given that (i) there does not appear to be any attempt by Eircom to squeeze access seekers' margins at present and (ii) that a significant share of Eircom's wholesale FTTH lines are sold to access seekers (such that Eircom is not focused solely on self-supply).

5.18 ComReg has not found any margin squeeze infringements in respect of FTTH products since the previous market review. Moreover, Vodafone holds the highest share of FTTH subscriber lines, at 36% in Q2 2022;[37] Sky has increased its share, to 18% in Q2 2022, since it started providing FTTH services in Q1 2019,[38]

[36] ComReg (2022), 'Quarterly Key Data Reports: Data Portal Internet Statistics', https://www.comreg.ie/industry/electronic-communications/data-portal/tabular-information/, accessed 21 September 2022.
[37] ComReg (2022), 'Quarterly Key Data Reports: Data Portal Internet Statistics', https://www.comreg.ie/industry/electronic-communications/data-portal/tabular-information/, accessed 21 September 2022.
Between Q2 2021 and Q2 2022, around [✂ ✂]% of FTTH VUA and FTTH bitstream lines purchased by Vodafone were supplied by Eircom. (Source: Oxera based on ComReg (2022), 'FTTP Retail Operators').
[38] ComReg (2022), 'Quarterly Key Data Reports: Data Portal Internet Statistics', https://www.comreg.ie/industry/electronic-communications/data-portal/tabular-information/, accessed 21 September 2022.
In Q2 2022, around [✂ ✂]% of FTTH wholesale input lines purchased by Sky were supplied by BT using FTTH VUA and FTTH Bitstream purchased by BT from Eircom (Source: Oxera based on ComReg and Qlik (2022), 'FTTP Retail Operators'.)

with both operators using wholesale access services on Eircom's network. This suggests that in recent years access seekers have been given sufficient economic headroom to provide FTTH services. While this may be due in part to the fact that Eircom is obliged not to squeeze margins under existing regulation, as discussed in more detail in section 6.3, Eircom is [✂ ✂], showing that the current MST is not binding, with Eircom margins above the level that would indicate a desire to squeeze margins to the minimum allowed amount.

5.19 A range of access seekers that currently provide FTTH services at the retail level rely, in part, on FTTH wholesale access from Eircom. For example, between Q2 2021 and Q2 2022, around [✂ ✂]% of Eircom's FTTH VUA and FTTH Bitstream lines were supplied to access seekers (with the remainder being self-supply to its own downstream retail arm).[39] Moreover, [✂ ✂]% of the total volume of FTTH VUA and FTTH Bitstream lines purchased by alternative access seekers (i.e. excluding Eircom) from all FTTH network operators (including Eircom, NBI, Virgin Media and SIRO) were supplied by Eircom between Q2 2021 and Q2 2022.[40] This suggests that wholesale access volumes are currently a key part of Eircom's FTTH portfolio.

5.20 However, looking at past behaviour is not necessarily an accurate predictor of future behaviour. While our provisional assessment is that Eircom *may* currently have limited incentives to engage in a squeeze—particularly in the early stages of roll-out—this is just one possible outcome, and the context could rapidly change during the next five years of the market review period.

5.21 For example, once Eircom's fibre network is deployed and it has a sufficiently large volume of subscribers on its FTTH network, its incentives to engage in a margin squeeze—to foreclose access seekers and win their retail customers—may increase. In particular, once a sufficient volume of customers has migrated from FTTC to FTTH and Eircom's FTTH investment has a clear pathway towards achieving financial payback that does not rely on access seekers volumes, it could have incentives to engage in a margin squeeze to foreclose access seekers and keep for itself a bigger proportion of the margin available on FTTH services.

5.22 The incentive would be greatest where the margin on retail customers is more attractive than that on wholesale customers, which may be the case under wholesale regulation of FTTH services in future, and if there are limited retail pricing constraints in the presence of limited infrastructure competition. Therefore, Eircom may be more inclined to engage in this strategy if it expects future regulation on its FTTH

[39] Oxera based on ComReg (2022), 'FTTP Retail Operators'.
[40] Ibid.

wholesale prices, with attractive margins available at the (unregulated) retail level.

5.23 The shift from a scenario in which Eircom relies on volumes generated by access seekers to help fill up its FTTH network to one where foreclosing access seekers through a margin squeeze would be advantageous may happen within the market review period and has the potential to do so reasonably quickly. This would depend on the extent to which Eircom is able to migrate a critical mass of its own downstream retail customers onto its FTTH network; and, more generally, how quickly customers migrate to FTTH, such that Eircom is no longer reliant on the support from access seekers to aid the migration.

Impact of the presence of alternative network operators

5.24 As explained in section 3B, pursuing a margin squeeze strategy through an increase in FTTH VUA wholesale prices could lead to access seekers switching to an alternative FTTH *wholesale* network operator. If access seekers are able to switch to a readily available alternative wholesale provider quickly, at a low cost and for a wholesale price that allows a sufficient margin at the retail level, then the presence of rival networks could thwart Eircom's margin squeeze strategy, since access seekers have a credible outside option to Eircom if it sought to increase its wholesale prices.

5.25 ComReg's preliminary conclusion is that the presence of rival wholesale FTTH infrastructure operators will not, over the market review period, sufficiently constrain Eircom's behaviour in the Commercial NG WLA Market as to prevent it from acting independently.[41]

5.26 Therefore, where Eircom does face competition from alternative wholesale network operators, while there may be some constraint on Eircom (given its concern about losing access seekers to a rival network), this disciplining effect on Eircom may be limited in the case where access seekers cannot easily switch due to insufficient coverage of the alternative network, for example.

5.27 Alternatively, as explained in section 3B, following an increase in wholesale price by Eircom, access seekers could attempt to strike wholesale access agreements with *end-to-end* providers. However, in this regard, we note that there are no end-to-end operators offering wholesale access at a material scale other than Eircom. For example, Virgin Media does not currently offer wholesale access services, and is unlikely to do so on a

[41] Having considered the possibility of market entry or expansion by Virgin Media or SIRO in the Commercial NG WLA Market, ComReg considers that there is insufficient evidence to suggest that the potential competition from these sources would exert an effective competitive constraint on Eircom's provision of NG WLA, given the limited current and expected rollout by SIRO and insufficient data in respect of Virgin Media's entry into NG WLA (see ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', sections 6.5.2 and 6.5.3).

material scale over FTTH technology during the market review period.[42]

5.28 Therefore, while Eircom's incentives to engage in a margin squeeze may be affected to some extent by the presence of alternative FTTH networks, this may not be a sufficiently strong constraint to undermine Eircom's incentive to engage in a squeeze (once it has acquired a sufficient volume of customers on its FTTH network).

5B Ability to engage in a margin squeeze on FTTH VUA

5.29 As noted above, Eircom operates as a vertically integrated provider and holds SMP in the market that includes FTTH VUA, a position that gives it the ability to engage in a margin squeeze on FTTH VUA.

5.30 In addition, and as explained in section 3A.1, in the absence of a direct wholesale price control, Eircom could engage in a costless margin squeeze by raising wholesale FTTH VUA prices; in other words, Eircom would not incur a loss during the margin squeeze, relative to the scenario in which it does not engage in a squeeze. Since Eircom could engage in a costless margin squeeze on FTTH VUA through an increase in wholesale prices, it may have a stronger ability to engage in a squeeze, relative to the scenario where a wholesale price control is in place, as it may be able to sustain the margin squeeze over a longer period of time.

5C Overall assessment and recommendation on the need for an MST on FTTH VUA

5.31 Overall, we consider that Eircom's incentive to engage in a margin squeeze on FTTH VUA may vary over time.

- In the early stages of Eircom's FTTH investment programme, access seekers may be seen as allies who can support Eircom with the transition from FTTC to FTTH, to fill up its FTTH network and support recovery of the large fixed and sunk costs involved in the investment. During this period, Eircom may not have the incentive to foreclose access seekers that can act as an important source of volumes.
- Once Eircom has developed sufficient volumes on its network (in particular, after significant volumes of customers have migrated from FTTC to FTTH), it may have the incentive to engage in a margin squeeze to foreclose access seekers, win their customers and expand its retail market share.

5.32 Further, in the presence of limited FTTH infrastructure competition, and in the absence of a direct price control on FTTH wholesale prices, Eircom would be able to engage in a margin squeeze without incurring losses. This would allow it to act quickly and sustain the strategy for a long period of time.

[42] ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', sections 6.5.1 and 6.5.2.

5.33 However, there is a degree of uncertainty over the timing and extent of FTTH network roll-out by both Eircom and alternative operators, and over the speed with which customers will migrate from copper and FTTC services to FTTH. Therefore, this affects the assessment of whether there is a risk of a margin squeeze that needs to be protected against. In particular:

- Going forward, it is not clear how important for Eircom volumes generated by wholesale access seekers will be. If these volumes are not essential in Eircom's FTTH business plan, there may be increased concerns about a margin squeeze in the short run. However, we note that to date there do not appear to have been attempts by Eircom to engage in a margin squeeze and it is [✂ ✂]. Moreover, between Q2 2021 and Q2 2022, around [✂ ✂]% of Eircom's FTTH VUA and FTTH Bitstream lines were supplied to access seekers (with the remainder being self-supply to its own downstream retail arm).[43] This suggests that the access seekers do play an important role in terms of generating FTTH subscriber volumes on Eircom's FTTH network.
- Also unclear is the timing of the shift from a scenario in which Eircom relies on these volumes to help fill up its FTTH network to one where foreclosing access seekers through a margin squeeze would be advantageous. This will depend on the extent to which Eircom is able to migrate a critical mass of its own downstream retail customers from its FTTC network onto its FTTH network; and, more generally, how quickly customers migrate to FTTH such that Eircom is no longer reliant on the support from access seekers to aid the migration. This shift in incentives could happen within the market review period and has the potential to do so reasonably quickly; moreover, given the absence of a wholesale FTTH VUA price cap, it would be a costless strategy for Eircom.

5.34 In considering the need for ex ante margin squeeze obligations on FTTH VUA, it is important to consider the costs and benefits associated with imposing such obligations and the risks associated with not imposing them.

5.35 Specifically, while the risk that Eircom engages in a margin squeeze on FTTH is uncertain over the next market review period, the adverse outcomes that could arise from such behaviour could be significant. This is because FTTH is expected to be the focus of competition going forward, and a successful margin squeeze could enable Eircom to secure an entrenched position of market power at the retail level, harming retail consumers.

5.36 If such a situation were to arise, the significant benefits from decades of promoting retail competition through ex ante regulation could be lost, as the SMP operator's position becomes entrenched and re-monopolisation of the retail market during the transition to the next generation of

[43] Oxera based on ComReg (2022), 'FTTP Retail Operators'.

technology becomes a real possibility. This would be against ComReg's objectives to promote sustainable competition and facilitate access-based competition. A reduction (and potential elimination) of competition at the retail level following a squeeze would result in less consumer choice, less innovation, lower incentives to provide good customer services and reduced price competition, among other aspects, which would be a poor outcome for consumers in Ireland.

5.37 Therefore the potential cost to competition and consumers associated with a successful margin squeeze in FTTH is high.

5.38 The consequence of errors from choosing not to impose an MST and later observing a squeeze compared to imposing an MST and finding it may not have been necessary would suggest that, on balance, it would be proportionate to impose margin squeeze obligations, given the risks of not doing so.

5.39 While in the absence of an ex ante MST, the backstop of competition law always exists, given the expected transition to FTTH over the next market review period, the risk of waiting to see whether a competition issue arises before opening an ex post investigation would be that the SMP operator could already have secured an entrenched position before any resolution can be imposed, which would be difficult and time-consuming to unwind.

5.40 Provided that the costs associated with imposing the margin squeeze obligations on FTTH VUA—notably, the compliance costs imposed on Eircom and ComReg—are not disproportionate, it would be reasonable to impose margin squeeze obligations to safeguard against the unintended consequence of not imposing such obligations and enabling Eircom to engage in a margin squeeze that harms competition on FTTH across the review period and beyond.

5.41 We also note that the imposition of an MST alongside pricing flexibility at the wholesale level on FTTH is consistent with European Commission Recommendations.[44]

5.42 Based on the above, our recommendation is as follows:

On balance, in the absence of a direct wholesale price control on FTTH VUA, ex ante margin squeeze obligations should be imposed on FTTH VUA.

[44] European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU)', Recitals 50–55.

6 Further specification of the FTTH MST

6.1 Following the assessment above, we recommend that Eircom be subject to a margin squeeze obligation in the Commercial NG WLA Market, specifically applied to FTTH VUA. This requires there to be a sufficient margin between prices for Eircom's retail FTTH broadband services and wholesale FTTH VUA prices.

6.2 In further outlining how the MST should be specified, we consider key aspects of the test below, addressing specifically:

- the products to which the test should apply—should it apply to standalone broadband products, bundled broadband products, or both?
- the cost standard to apply—what cost standard should be used and should it vary according to the level of product aggregation?
- the level of product aggregation—should the test be applied on a product-by-product basis, a portfolio basis, or both (i.e. a combinatorial approach)?
- the benchmark operator—should the SMP operator's costs be used as the cost base in the MST, or the costs of a reasonably efficient access seeker?
- the revenues to be taken into account—how should promotions and discounts on retail prices, and out-of-bundle revenues, be taken into account?
- the profitability approach—should the product margins be calculated using a period-by-period approach or a discounted cash flow (DCF) approach?

6.3 For the reasons outlined in more detail below, we consider that the FTTH MST should be specified as described in Table 6.1.

Table 6.1 FTTH MST: summary of recommendations

MST building block	Recommendation
Relevant products	All FTTH retail products sold by Eircom, including standalone and bundles
Cost standard and level of aggregation	Product-by-product: LRIC FTTH portfolio: LRIC+ or ATC
Benchmark operator	EEO
Revenues	Promotions and discounts taken into account Inclusion of OOB revenues (if they are replicable)
Profitability approach	DCF

Source: Oxera.

6.4 In addition to outlining the building blocks of the FTTH MST, we provide guidance on the principles for including wholesale and downstream costs in the MST. We consider each of these aspects in turn below.

6A The products to which the test should apply

6.5 The first step is to determine the FTTH products to which the MST should be applied.[45] In particular, we consider whether the test should be applied to FTTH standalone broadband products, bundled FTTH broadband products, or both.

6.6 We start with the principle that the MST should aim to ensure the replicability of products that actually, in a competitive market, play or are expected to play an important role in terms of competition at the retail level.

6.7 If operators offer standalone FTTH broadband products at the retail level using Eircom's FTTH VUA wholesale input to provide these products, and there is consumer demand for these products, an MST may be needed to prevent Eircom from engaging in a margin squeeze that could force existing providers to exit the market and/or deter prospective entrants from entering. This conduct would harm consumers as it could lead to restricted choice, less innovation and potentially higher retail prices.

6.8 If operators offer FTTH broadband services bundled with other services, which may or may not be regulated (e.g. fixed voice, TV and mobile) and rely on Eircom's FTTH VUA wholesale input to provide the broadband services then, in the absence of an MST on bundled services, ComReg would have no way of determining whether the combination of FTTH VUA wholesale price offered by Eircom and Eircom's FTTH retail bundle prices would provide sufficient economic headroom for access seekers to offer bundled FTTH products at the retail level. A failure to include within the MST the cost of providing unregulated services in the bundles that Eircom offers or sells could undermine the ability of access seekers dependent on Eircom's wholesale inputs to compete in the retail market. As above, this could lead to consumer harm if access seekers are foreclosed in relation to the provision of bundles.

6.9 In the retail broadband market, a material share of FTTH subscribers are taking bundled products, but standalone products are also relied on by a large share of customers. Figure 6.1 below presents the distribution of FTTH subscribers across standalone FTTH broadband products and different bundled products including FTTH broadband. This suggests that bundled FTTH products are collectively more popular (accounting for [✂ ✂]% of subscriptions in Q2 2022) than standalone FTTH products (accounting for [✂ ✂]% of subscriptions in Q2 2022).[46] Moreover, while the distribution of subscribers across bundle types has evolved throughout 2021 and the first half of 2022, the split of subscribers across

[45] By product, we mean an individual retail service offering sold by Eircom to customers. For example, a standalone FTTH broadband product with a specified bandwidth speed and usage allowance reflects an individual product.
[46] Oxera based on ComReg (2022), 'FTTC/FTTP Bundle Services (Retail Submission Data) – All Combinations'.

standalone FTTH products and bundled FTTH products (collectively) remained broadly stable.

Figure 6.1 Distribution of FTTH subscribers across standalone and bundled retail products (subscriber lines) [✂]

Note: SA BB, standalone FTTH broadband. The other products are bundled products including different combinations of FTTH broadband (BB); fixed voice (FV); television (TV); and mobile (MOB).
Source: Oxera based on ComReg (2022), 'FTTC/FTTP Bundle Services (Retail Submission Data) – All Combinations'.

6.10 Figure 6.1 suggests that while bundles are more popular, there remains a material level of demand for standalone FTTH products, and that the distribution of subscribers across standalone and bundles (collectively) is relatively stable. Going forward, this suggests that both standalone and bundled FTTH products are likely to continue to be the focus of competition. However, as the take-up of FTTH services is still nascent, the relative importance of standalone broadband and different bundles may evolve over the market review period.

6.11 In addition to considering the prevalence of standalone and bundled FTTH products at the market level, it is important to assess how this mix varies across operators in the market. This can be informative in terms of assessing the competitive dynamics and the relative risk of Eircom seeking to engage in a margin squeeze on either type of product to undermine competition. For example, if the provision of standalone retail products is important for rivals, even if this currently makes up a small share of Eircom's offering, then Eircom may seek to squeeze the margins on standalone products to put pressure on access seekers that sell standalone products at the retail level.

6.12 We have considered the distribution of subscribers across standalone and bundled FTTH products for each operator in the Irish market based on the latest data available to us (as at Q2 2022). Figure 6.2 below shows how each operator's FTTH

subscriber base is distributed across standalone and different types of bundled FTTH products.

Figure 6.2 Distribution of FTTH subscribers across standalone and bundled retail products by operator (subscriber lines, Q2 2022) [✂]

Note: For the acronym definitions, see Figure 6.1.
Source: Oxera based on ComReg (2022), 'FTTC/FTTP Bundle Services (Retail Submission Data) – All Combinations'.

6.13 First considering the three largest FTTH operators in Q2 2022 (Eircom, with around [✂] FTTH subscribers; Vodafone, with around [✂] FTTH subscribers; and Sky, with around [✂] FTTH subscribers), we make the following observations.[47]

- **Eircom:** only [✂]% of Eircom's FTTH subscriber base purchased a standalone broadband product in Q2 2022, with the remaining [✂]% taking a bundled product. The most popular bundled product was [✂], accounting for [✂]% of all Eircom's FTTH subscribers. This distribution has remained broadly stable since Q1 2021.
- **Vodafone:** a large share of Vodafone's FTTH subscribers take a [✂] product ([✂]%) with the remainder spread relatively evenly across three bundled types. This distribution has remained broadly stable since Q3 2021.
- **Sky:** the focus is primarily on bundles including [✂] ([✂]%), and [✂]% of its overall FTTH subscribers taking a [✂] product. This trend has remained broadly stable since Q1 2021.

6.14 Next, considering three smaller FTTH operators in Q2 2022 (Pure Telecom with around [✂] FTTH subscribers; Virgin Media with around [✂] FTTH subscribers; and Digiweb

[47] Oxera based on ComReg (2022), 'FTTC/FTTP Bundle Services (Retail Submission Data) – All Combinations'.

with around [✂ ✂] FTTH subscribers), we make the following observations:[48]

- **Pure Telecom**: the large majority ([✂ ✂]%) of FTTH subscribers purchase a [✂ ✂] product. Since Q1 2021, [✂ ✂] has accounted for an increasing share of Pure Telecom's FTTH subscriber base.
- **Virgin Media**: the large majority [✂ ✂]% of its FTTH subscribers take [✂ ✂], with the remaining [✂ ✂]% of its FTTH subscribers taking a [✂ ✂] product. Virgin Media has experienced fluctuations in the distribution of subscribers across products, with growth in the share of its FTTH subscribers taking [✂ ✂] since Q2 2021.
- **Digiweb**: the majority [✂ ✂]% of FTTH subscribers purchase a [✂ ✂] product with the remaining [✂ ✂]% of its FTTH subscribers taking [✂ ✂]. Since Q2 2021, [✂ ✂] has accounted for a decreasing share of Digiweb's FTTH subscriber base.

6.15 The above shows that a range of product types are important to the competitive dynamics for FTTH, with operators providing a mix of standalone and bundled products to customers, with a number of rivals having a larger share of standalone broadband offerings than Eircom. This suggests that, to preserve effective competition and ultimately protect consumers, it is important to ensure that access seekers have a sufficient margin to compete on both standalone FTTH broadband products and the range of bundle products.

6.16 We recognise that there will be a large range of different standalone and bundle products as operators will offer FTTH broadband at multiple different bandwidth speeds and usage caps. Moreover, in relation to bundles, there may be variations in terms of the other services included in the bundle. For example, operators may offer different quality TV offerings. Given the large range of products, some will account for a larger volume of subscribers and will be more important for competition than others. For example, a certain bundle type and broadband speed may be more important for competition at a given point in time.

6.17 However, given the nascent nature of FTTH and the potential for evolving competitive dynamics across the market review period, the importance of different individual products is likely to evolve over the market review period. Therefore, we consider that all FTTH retail products sold by Eircom should be included in the FTTH MST.

6.18 Based on the above, our recommendation is as follows:

[48] Ibid.

The FTTH MST should capture all FTTH retail products sold by Eircom, including all standalone and bundled FTTH products.

6.19 In determining the set of products to which the MST should apply, ComReg could also consider a 'flagship' approach. In this case, the MST would be applied only to a sub-set of products that are considered to be the most important for current and forward-looking competitive dynamics. Other products, which are not considered to play an important role in competitive dynamics, would be excluded from the MST.

6.20 The 2013 Recommendation on non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (NDCM) provides for a flagship approach to be adopted by national regulatory authorities (NRAs).[49] As noted by the European Commission, flagship products should be identified based on the NRA's current and forward-looking market observations in relation to the relevance of products to competition. It notes that the choice of flagship product should include 'an assessment of retail market shares in terms of the volume and value of products based on NGA regulated wholesale inputs and, where available, advertising expenditure'.[50]

6.21 The European Commission also notes that NRAs should consider whether a particular retail product, which may not be among the most relevant retail products for the SMP operator, is particularly attractive to alternative operators that may be focused on providing an equivalent service. In this case, the NRA may decide to include such a product among the set of flagship products.[51] Given the differences in the mix of products offered by FTTH providers, we consider that, if a flagship approach were to be adopted, it would be important for ComReg to consider both Eircom and alternative providers' product mixes and the implications of not including some Eircom retail products in the flagship group that are similar to products that may be considered flagship products of rivals.

6.22 Indeed, there may be a product that is not one of the most popular in Eircom's mix today, but may become so in the future if Eircom changes certain terms, such as lowering the price. This can be particularly problematic if this product is similar to the flagship products of rivals. For example, rivals may have a mix of products geared more towards standalone broadband,

[49] European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU)', Recital 66, Annex II.
[50] This could be based on the volume and value of the retail products based on the wholesale input, and advertising expenditure. See European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU)', Annex II.
[51] European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU)', Annex II.

unlike Eircom (as shown in Figure 6.1 and Figure 6.2 above), so a flagship approach may never test an Eircom standalone broadband product until it becomes a flagship product. If Eircom had been engaging in a squeeze on this product, by the time it became an Eircom flagship product, it could be too late because any damage could have already been caused.

6.23 Excluding certain FTTH products from the MST today, on the basis of small volumes, would leave these products at risk of being subject to a margin squeeze by Eircom. Without ex ante measures in place for these products, this could lead to foreclosure in relation to a product that is important to competitive dynamics not being detected in a timely manner. In particular, any new product launch by Eircom would, by definition, not be a flagship product because it has no volumes. If such a product is keenly priced such that it would not pass an MST, by the time it became a flagship product it could be too late, as competition may have already been distorted.

6.24 In theory, adopting a flagship approach may lessen the regulatory burden on the SMP operator by reducing the number of plans that are subject to the MST. The NRA may choose to focus on a small sub-set of products which account for the majority of the SMP operator's subscribers and/or revenue. For example, we understand that in Ireland around [✂ [redacted] ✂]. In this case, a large number of products, which account for a disproportionately small share of subscribers and revenues, would be excluded from the MST.

6.25 While the flagship approach can potentially lessen the regulatory burden associated with monitoring compliance by reducing the number of products that need to be tested, in dynamic markets, such as the provision of FTTH, the relevant set of flagship products may need to be regularly updated. This can add to the compliance burden and may create uncertainty on the relevant set of products if these are regularly updated.

6.26 The decision of whether to adopt a flagship approach or to test all products is one of proportionality, with the ultimate objective of ensuring that effective retail competition is preserved. While a flagship approach may lessen the regulatory burden while offering a degree of protection to access seekers for the most popular Eircom products, there is the risk that emerging products or those that are particularly important to an access seeker's business model may not be captured by the MST, to the detriment of competition and consumers.

6B Cost standard

6.27 The cost standard measures the costs of the services that should be included in the MST in order to calculate the required retail margin for the relevant products. This requires decisions to be made about how common costs are treated, as well as about the time period over which the costs are incurred. Different cost standards consider different allocations of

common costs and time periods. The choice of cost standard is therefore a crucial part of the MST, as it determines the nature and size of the costs that should be included in the test.

6.28 As outlined below, a range of cost standards can be adopted.

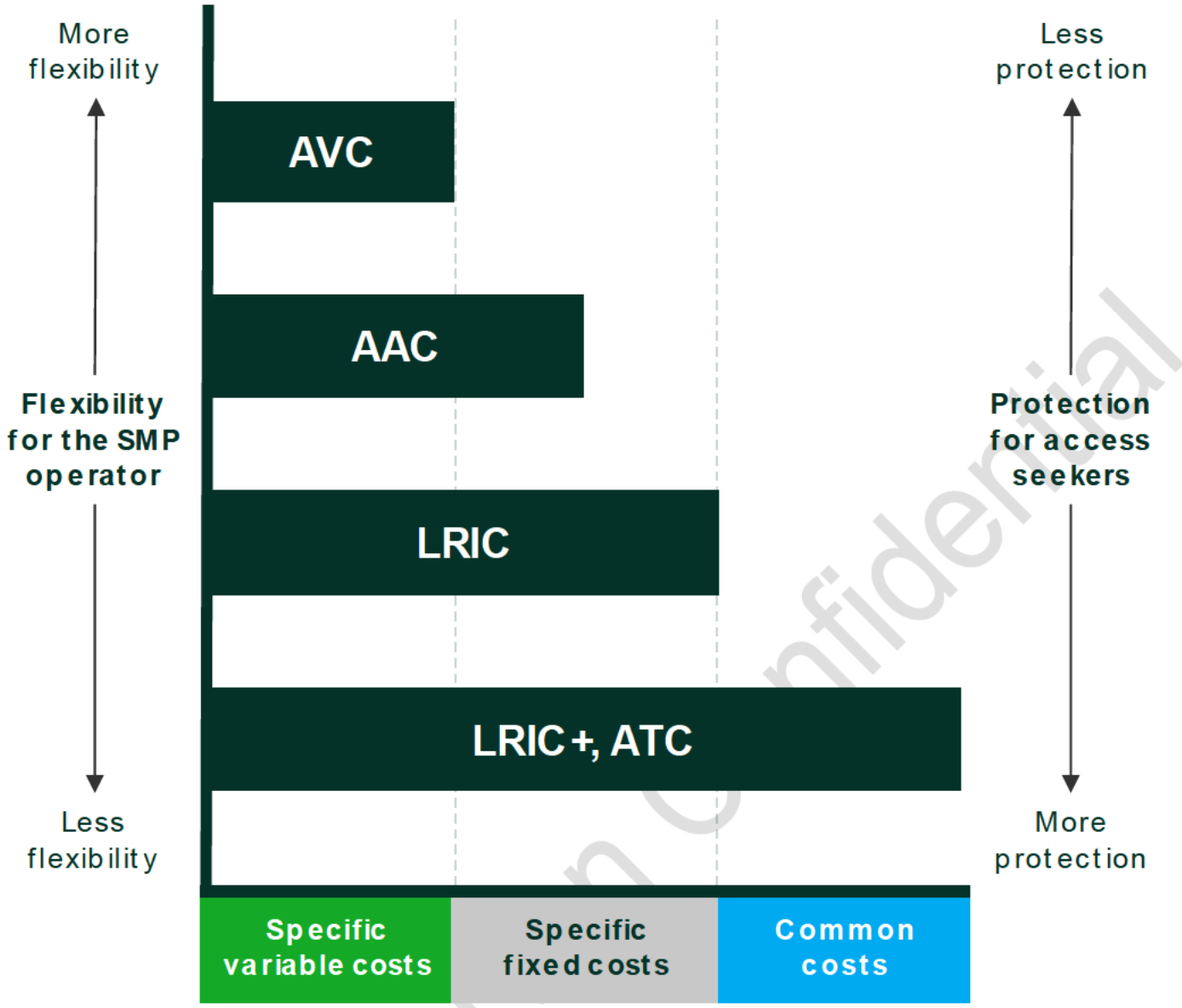
Table 6.2 Cost standards

Cost standard	Definition
Average variable costs (AVC)	These are costs that vary with a single unit of output. They usually refer to small, short-term, discrete output changes, and do not include fixed costs.
Average avoidable costs (AAC)	This is the average of the costs that could have been avoided if the company had not produced a discrete amount of (extra) output. AAC and the AVC may be the same, as often only variable costs can be avoided. However, AAC may include a proportion of the specific fixed costs if the increment is larger than just a discrete unit of output and/or if the timeframe being analysed is long enough.
Long-run incremental costs (LRIC)	These are costs that can be avoided in the long run if the provision of a given service increment (e.g. fibre broadband) ceases. They include: fixed costs directly attributable to the increment; and all costs avoided in the long run if the increment were no longer produced. Common costs are not included in LRIC. LRIC without an allowance for common costs is sometimes referred to as 'pure LRIC'.
Long-run incremental costs plus (LRIC+); average total cost (ATC)	These costs cover the LRIC plus a proportion of joint common costs not directly attributable to any product or service (referred to as LRIC+). In principle, the LRIC+ standard is aligned with the ATC standard, in that both measures seek to allocate long-run costs directly associated with the increment plus an appropriate share of common costs (which are not causally related to the increment of output). Hence the sum of the LRIC+ and the ATC of each product would be equal to the total costs of the company. However, the LRIC+ and ATC of an individual product may not be the same because the methods of calculation are different. A LRIC+ is an economic concept that allocates costs to a given increment (e.g. a product) based on whether such costs are directly caused by the provision of that increment in question. Top-down LRIC models can be used for this purpose. Common costs are then allocated in proportion to these incremental costs (equi-proportional mark-ups). ATC, on the other hand, can be extracted directly from the regulatory accounts. Methods of direct cost attribution in the regulated accounts may or may not rely on LRIC concepts, and common costs could be allocated using different cost drivers (or even via equi-proportional mark-ups). In the absence of a LRIC model to estimate LRIC+, ATC from regulatory accounts may be appropriate, noting that the method is more of an accounting than an economic one.

Source: Oxera; European Commission (2009), '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)', 24 February.

6.29 As outlined in Figure 6.3, the choice of cost standard will generally involve a trade-off between the flexibility provided to the SMP operator and the level of protection offered to access seekers.

Figure 6.3 Cost standard choice and the level of flexibility



Source: Oxera; European Commission (2009), '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, 24 February.

6.30 Consideration of the regulatory objectives is of particular importance for aspects of the MST, since the trade-off balance may change depending on the regulatory objectives. For example, at a high level the choice of cost standard will have the following implications for competitive conditions.

- **AAC:** failure to cover AAC indicates that the dominant undertaking is incurring losses in the short term and that an equally efficient competitor cannot serve the targeted

customers without incurring a loss.[52] Therefore adopting AAC as the cost standard ensures that pricing to cover AAC ensures that the firm's profits are not reduced as a result of the sale of the increment incurring losses in the short run.

- **LRIC:** failure to cover LRIC indicates that the dominant undertaking is not recovering all the (attributable) fixed costs of producing the good or service in question, and that an equally efficient competitor could be foreclosed from the market.[53] Therefore, adopting LRIC as the cost standard would ensure that equally efficient competitors cannot be foreclosed in the long run.
- **LRIC+:** in a multi-product firm setting, LRIC may be insufficient to prevent a margin squeeze due to the presence of common costs. If the price of each individual product were set equal to its LRIC, without an apportionment of common costs, the SMP operator would not be recovering its total long-run costs across the portfolio of products. Therefore, adopting LRIC+ would ensure that multi-product firms cannot be foreclosed across the portfolio of products in the long run. A LRIC+ standard applied across a portfolio of products would give the SMP operator greater flexibility on how to recover common costs across each individual product.
- **ATC:** this approach is similar to LRIC+, in that it seeks to allocate all the costs of a company to the individual products sold and is typically obtained as the output from the regulatory accounting systems managed by the company. In these accounting systems, cost categories considered to be directly attributable to products are first allocated based on pre-specified cost drivers, and the remaining unallocated or common costs are then allocated using other drivers or even through equi-proportional mark-ups. Compared with LRIC+, there may be a difference in how the direct and share of common costs is calculated, but the principle of adopting an ATC approach is aligned with the description of LRIC+ above since both methods ultimately achieve the aim of allocating all costs, including common costs, to the individual products sold by the company.

6.31 Telecoms operators are often multi-product firms; this is clearly the case in Ireland, as discussed in section 6A. Therefore, the recovery of common costs is highly relevant. Moreover, in relation to the economic replicability test, the 2013 Recommendation on NDCM recommends:[54]

> The incremental cost of providing the relevant downstream service is the appropriate standard. A LRIC + model should be used to calculate

[52] European Commission (2009), '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)', 24 February, para. 26.
[53] European Commission (2009), '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)', 24 February, para. 26.
[54] European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discriminatory obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU)', 11 September, Annex II.

the incremental cost (including sunk costs) and to add a mark-up for common costs related to the downstream activities.

6.32 It is clearly important that Eircom be allowed to recover its common costs. Failure to ensure this could allow it to engage in a margin squeeze and foreclose access seekers. We consider that Eircom should be required to recover a proportion of its total common costs from the provision of retail products included in the MST.

6.33 However, the regulator does not necessarily need to mandate the precise way in which these common costs are recovered across the range of products offered. That is, Eircom can be afforded a degree of flexibility over how it recovers common costs across its range of products. Therefore, there is a clear link between the cost standard and the level of product aggregation in the MST.

6.34 In section 6C, we provide our assessment on the level of aggregation to be used within the FTTH MST. We also specify the relevant cost standards that we recommend, and how these would be applied to the relevant products.

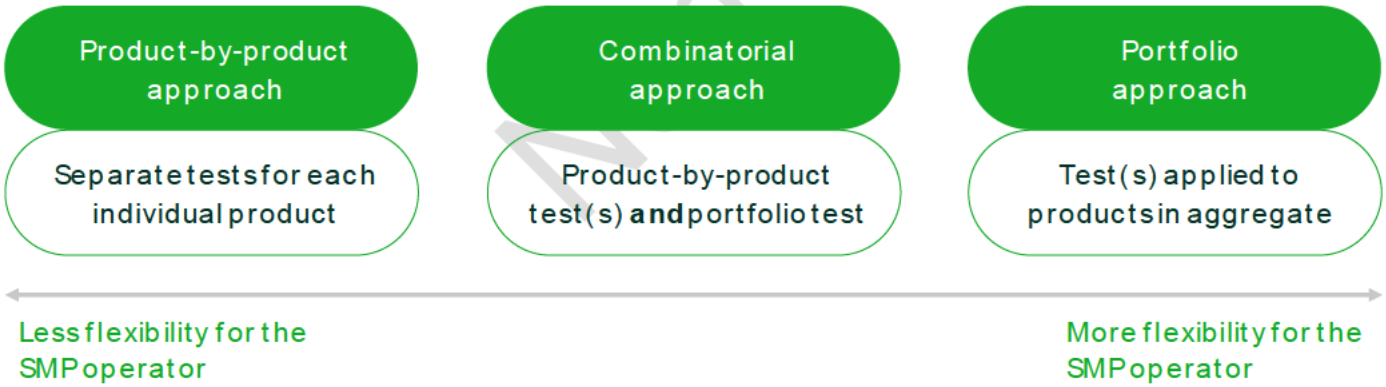
6C Level of product aggregation

6.35 For the reasons outlined in section 6A, we consider that the MST should be applied to all standalone and bundled FTTH products. Therefore, we must determine how this should be done.

6C.1 Recommended level of product aggregation

6.36 In general, three main approaches to the level of aggregation can be used in the MST—see Figure 6.4.

Figure 6.4 Product aggregation choice and the level of flexibility



Note: The level of flexibility associated with each approach will depend on the choice of cost standard, as described above.
Source: Oxera.

6.37 As highlighted above, the level of product aggregation can determine the degree of flexibility afforded to the SMP operator (depending on the cost standard chosen). In general:

- the product-by-product approach ensures that the SMP operator does not earn a negative retail margin on each and

every individual product captured by the MST. This test therefore provides the operator with less flexibility;
- the portfolio approach ensures that the SMP operator does not earn a negative retail margin across a group of products on aggregate, but the approach does not prohibit individual products from having negative margins. This test therefore provides the operator with more flexibility.

6.38 A regulator may choose to apply a product-by-product approach or a portfolio approach, depending on the concerns identified. The former may be suitable where the regulator considers it appropriate to ensure the economic replicability of each and every retail product offered by the SMP provider. The latter may be more appropriate if the SMP provider faces greater competition at the retail level, as this approach affords a degree of pricing flexibility to the SMP provider to recover costs efficiently across the entire portfolio of products. However, these options may offer the SMP provider either too much or too little flexibility to address the concerns identified. In this case, a combinatorial approach may be more appropriate.

6.39 A combinatorial approach uses both the product-by-product and portfolio approaches, typically by applying different cost standards at each level of aggregation which results in a degree of flexibility that lies between the two approaches. Under a typical combinatorial approach, the LRIC cost standard is applied to the product-by-product tests, and the LRIC+/ATC cost standard is applied to the portfolio-level test. Therefore, this approach affords the SMP operator with the flexibility to recover common costs across products in different proportions, but limits the extent of any cross-subsidies, as each product must still recover its specific incremental costs.

6.40 The core principle in the MST is that the SMP operator should be allowed to recover all relevant downstream costs of providing services that rely on a regulated wholesale input. However, flexibility to recover common costs across different products (e.g. different standalone broadband and bundled broadband products) may be permitted depending on the level of competition in the market. In general, the more the competitive market is, the greater the level of flexibility should be.

6.41 As explained in section 5A, Eircom faces competition from access seekers in the provision of FTTH services, with Vodafone and Sky holding a material share of FTTH subscriptions. This could suggest that a portfolio approach would offer access seekers a sufficient degree of protection, and that including strict product-by-product test would be unnecessarily restrictive.

6.42 However, as noted above, FTTH take-up is relatively nascent, and the relative importance of different product types could change across the duration of the market review. Given this uncertainty, there is a risk that providing Eircom too much

flexibility—i.e. across the portfolio of all FTTH products—could allow Eircom to engage in a margin squeeze on products that are particularly important to competitive dynamics. Therefore, there may be considerable risk associated with assessing the MST only across the portfolio of FTTH products (with no restrictions at the individual product level).

6.43 We consider that the combinatorial approach strikes the right balance between protecting competition on FTTH retail services while affording Eircom flexibility to recover its common costs in an efficient manner. Having regard to the 2013 Recommendation on NDCM that all relevant costs (including common costs) should be recovered,[55] we consider that:

- the product-by-product tests should be conducted at the LRIC cost standard;
- the portfolio test should be conducted at the LRIC+ or ATC cost standard.[56]

6.44 This will ensure the relevant forward-looking LRICs are recovered for each product, while providing Eircom the flexibility to recover an appropriate proportion of common costs across the portfolio of FTTH products.

6.45 Based on the above, our recommendation is as follows:

The FTTH MST should adopt the combinatorial approach, whereby:

- the product-by-product tests are conducted at the LRIC cost standard;
- the portfolio test is conducted at the LRIC+ or ATC cost standard.

6.46 Should ComReg choose to adopt a flagship approach and to include only the flagship products in the portfolio test, the portfolio-level test should be conducted at the LRIC+ / ATC standard. Under this approach, all products included in the portfolio should receive an appropriate allocation of common costs. This should be based not only on the costs that are common across the set of flagship products, but rather based on Eircom's total common costs. As noted above, these common costs would typically be allocated to the relevant services based on an EPMU approach.

[55] European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discriminatory obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU)', 11 September, Annex II.

[56] As set out above, in principle, the LRIC+ standard and the ATC standard seek to identify the same set of costs, namely the long-run costs directly associated with the increment plus an appropriate share of common costs (which are not causally related to the increment of output). In practice, the costs under these approaches may differ if a different methodology is used to allocate both direct and common costs to the increment, and/or if they are based on different sources of information. (For example, a bottom-up LRIC+ model may be used to calculate LRIC+ and ATC may be derived from the SMP operator's regulated accounts.) However, either approach will ensure that common costs are apportioned such that the SMP operator would recover its total long-run costs across the portfolio of products, and that multi-product firms cannot be foreclosed across the portfolio of products in the long run.

6C.2 Structure of the FTTH portfolio

6.47 Given the presence of a portfolio test under the combinatorial approach, we need to decide how the portfolio(s) is structured—in particular, whether a single portfolio is appropriate or whether separate portfolios for different product groups are required. Below, we set out our considerations and recommendation on the structure of the FTTH portfolio.

6.48 There could be concerns about the degree to which Eircom is able to cross-subsidise different FTTH products. In particular, there may be a concern about its ability to cross-subsidise between standalone FTTH products and bundled FTTH products.

6.49 In the following, we consider two options:[57]

- **Option 1: a single 'grand' portfolio of all standalone and bundled FTTH products.** This would require product-by-product tests across all FTTH products at the LRIC cost standard, and a single portfolio test across all FTTH products (including both standalone and bundled products) at the LRIC+ or ATC cost standard;
- **Option 2: separate portfolios for standalone FTTH products and for bundled FTTH products.** This would require product-by-product tests across all FTTH products at the LRIC cost standard, and separate portfolio tests for: (i) standalone FTTH products; and (ii) bundled FTTH products at the LRIC+ or ATC cost standard.

6.50 The key factor in deciding between these two options depends on the degree to which there may be a concern about a cross-subsidy between standalone and bundled FTTH services, if all FTTH retail products were included in a single portfolio.

6.51 In particular, Option 2 would be more appropriate if there were concerns that Eircom had the ability and incentive to cross-subsidise the recovery of common costs from products with higher margins above LRIC to another product with lower margins above LRIC. For example, if Eircom were earning significant margins on standalone products, these could be used to subsidise lower margins on bundled products. If bundled products were the focus of competition going forward, and Eircom had significantly larger standalone sales allowing it to cross-subsidise the recovery of common costs in this way, downstream access seekers may find it hard to replicate this strategy and successfully compete in the bundles space. If both standalone and bundled products were assessed in a

[57] As explained in section 6A, ComReg could adopt a flagship approach, which would apply the MST to only a sub-set of flagship products. Under this approach, ComReg could include only the flagship products in the portfolio(s). Alternatively, ComReg could choose to perform portfolio tests on all FTTH products, and adopt the flagship approach only when performing the product-by-product tests.

single portfolio, this would be permitted and therefore may fail to offer access seekers a sufficient degree of protection.

6.52 Having separate portfolios for each product type would therefore limit Eircom's ability to cross-subsidise in this way by ensuring that each separate portfolio recovered the portfolio-level LRIC+ or ATC. In other words, Eircom would need to earn similar levels of margins above LRIC on both standalone and bundled products, although it would still be permitted to cross-subsidise the recovery of common costs within each of these portfolios (for example, a particular bundle could be priced to earn a lower margin above LRIC, provided the portfolio as a whole recovered its LRIC+ or ATC).

6.53 If, however, there are no competition concerns related to Eircom cross-subsidising in the way described above, Option 1 (a 'grand' portfolio of all FTTH services) would be more appropriate.

6.54 As discussed in section 6A, the relative proportion of standalone and bundled FTTH products in the market was relatively stable across 2021 and the first half of 2022. If there were a clear increasing trend in the share of one product type, there may be greater concerns in respect of a margin squeeze on that product, facilitated through cross-subsidy, as Eircom could seek to gain a greater share of the customer base on the growing product. However, we do not observe in the data a clear upward trend for a particular product type.

6.55 Finally, we note that there is evidence to suggest that [✂ ✂]. More specifically, based on a sample of Quarterly Margins Monitoring Reports,[58] the weighted average ATC margin is [✂ ✂]% for standalone FTTH products and [✂ ✂]% for bundled FTTH products.[59]

6.56 This suggests that while Eircom has the ability to cross-subsidise the recovery of common costs, it does not appear to have the incentive to fully exploit its ability to cross-subsidise, as it has positive margins above the ATC for both types of product. For example, Eircom could choose to use the margin above ATC for standalone services to subsidise lower margins on bundles, which would result in a lower (possibly 0%) margin above ATC for bundled FTTH.[60] While the margins on FTTH standalone are slightly higher than those on bundled services,

[58] Our analysis is based on the following Quarterly Margins Monitoring Reports: March 2019, December 2019, December 2020, December 2021, June 2022.
[59] We calculate the ATC margin in percentage terms by dividing the ATC margin for each product by the corresponding revenues for each product. The weights used to calculate the weighted average margins for standalone and bundled FTTH products are based on the product volume as a proportion of the total volume for the corresponding product type (i.e. the total standalone volume and total bundle volume, respectively).
[60] We also note that in the most recent three monitoring reports we consider, the ATC margins are relatively similar for each product type, with margins of [✂ ✂]% for standalone FTTH product and [✂ ✂]% for bundled FTTH products.

the differences are not at a level that would suggest concerns about a cross-subsidy between the two product types.

6.57 Further, as standalone FTTH subscribers account for [✂ [redacted] ✂]. Finally, as explained above, we note that since the combinatorial test also requires each product to recover its LRIC, this limits the extent of any cross-subsidies.

6.58 Therefore, based on the above, we do not consider that there is clear evidence to suggest that there are material concerns regarding Eircom's ability to cross-subsidise margins between standalone and bundled FTTH products to impede the ability of access operators to compete effectively in the retail market. We therefore consider that a single portfolio across standalone and bundled FTTH products (Option 1) strikes the right balance between affording Eircom flexibility and protecting access seekers.

6.59 In particular:

- requiring product-by-product tests at the LRIC standard ensures that the relevant incremental costs associated with a particular product must be recovered by Eircom;
- this limits Eircom's ability to cross-subsidise across standalone and bundled FTTH products—its flexibility is limited to how it chooses to recover common costs efficiently across the retail products included in the portfolio;
- there is no clear evidence to suggest that there may be concerns that Eircom could cross-subsidise the recovery of common costs between standalone and bundled FTTH products to foreclose access seekers using its FTTH VUA input.

6.60 Based on the above, our recommendation is as follows:

There should be a single portfolio including all standalone and bundled FTTH products.

6D Benchmark operator

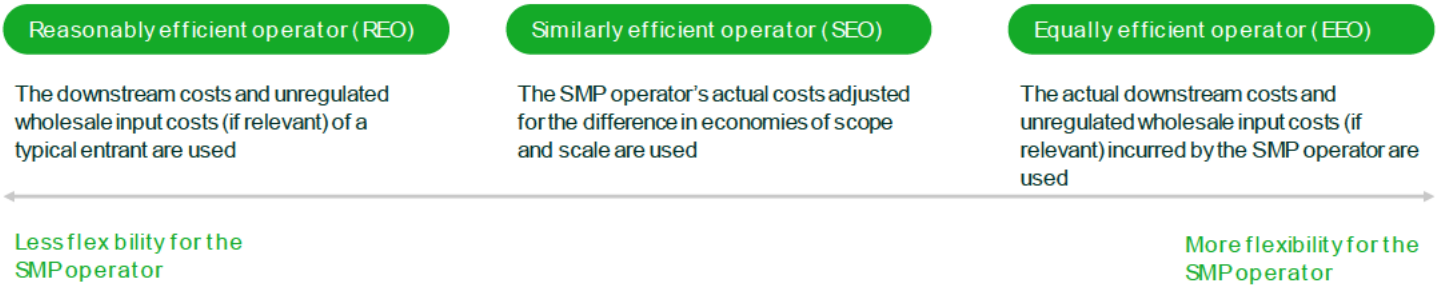
6.61 Having set the cost standard, we need to determine the level of efficiency that should be assumed when calculating:

- the downstream costs incurred by access seekers at the retail level in providing services to end-users;
- the costs of unregulated wholesale inputs (if any are relevant to the product), which, for the reasons explained in section 6G, should be included at a level that reflects the benchmark operator efficiency standard.

6.62 If access seekers have relatively small economies of scale and scope by comparison to Eircom, they may have higher downstream unit costs compared with Eircom.

6.63 Broadly speaking, there are three main choices of benchmark operator, as shown in Figure 6.5 below.

Figure 6.5 Benchmark operator choice and the level of flexibility



Note: The SEO approach is sometimes referred to as the 'adjusted-EEO approach'. In practice, the REO and SEO approach may result in similar cost levels.
Source: Oxera.

6.64 As shown above, the choice of benchmark operator has implications for the degree of flexibility afforded to Eircom. In general, moving from an EEO to an SEO (or REO) standard implies that, due to the lower economies of scale and scope, the benchmark operator used is less efficient than Eircom, and the estimated costs will be higher. For example, owing to the differences in the level of efficiency, a test for an SEO or REO will ensure that a larger margin is available than is needed for Eircom to cover its own downstream costs and any unregulated wholesale costs (if relevant).

6.65 Using an EEO benchmark operator would therefore protect access seekers that are equally efficient to Eircom. This is typically the standard adopted in ex post competition law margin squeeze cases, which focus on preventing the foreclosure of equally efficient entry, rather than promoting entry, even when entrants are less efficient.

6.66 The 2013 Recommendation on NDCM states that for ex ante economic replicability tests, an EEO standard should be used, unless market entry or expansion has been frustrated in the past, or where a low volume of lines or limited geographic reach compared to the SMP operator's network means that the conditions do not favour the acquisition of scale by alternative operators.[61]

6.67 Indeed, NRAs may have an objective to promote entry at the retail level by access seekers that may operate at a smaller scale and therefore be less efficient. In pursuing this objective, there may be a case for departing from the EEO standard in the MST to ensure that such access seekers have a sufficient margin available at the retail level.

6.68 Therefore, the choice of benchmark operator to use in the MST will be closely linked to ComReg's regulatory objectives and, in particular, whether it is seeking to promote entry at the retail level (in which case a REO or SEO benchmark may be

[61] European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discriminatory obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU)', 11 September, Annex II.

appropriate), or to protect competition (in which case an EEO standard may be appropriate).

6.69 We understand that ComReg's objective in respect of FTTH services is to promote sustainable competition. This is distinct from a requirement to protect or promote specific competitors. This suggests that an EEO benchmark may be more suited to ComReg's regulatory objectives.

6.70 We consider that a continuation of the EEO benchmark in respect of the MST to be applied to FTTH VUA is reasonable for two reasons:

- Eircom is competing with well-established access seekers that are active in the retail market, are present across Ireland, and have material market shares which have been stable or increasing since the previous market review (see Figure 4.2, Figure 4.3 and paragraph 5.18). Many of these access seekers are offering a range of FTTH products (see section 6A), and therefore should also be benefiting from economies of scale and scope.
- The MST is not intended to protect inefficient entry by smaller operators. Given the efficiencies (i.e. economies of scale and scope) that access seekers are in a position to enjoy, the EEO cost benchmark is appropriate.

6.71 Therefore, we consider that an EEO benchmark operator approach should continue to be used for the purposes of calculating the downstream costs and any unregulated wholesale costs (if relevant) in the MST to be applied to FTTH VUA.

6.72 Based on the above, our recommendation is as follows:

The FTTH MST should adopt an EEO benchmark operator approach when calculating downstream costs and unregulated wholesale costs.

6E Revenues

6.73 The MST needs to take into account the effective revenues generated by broadband plus other unregulated services. This should include the revenues generated by the monthly retail price (including any promotions and discounts),[62] one-off upfront revenues (such as those generated by connection or activation fees), as well as any out-of-bundle (OOB) revenue associated with the product.[63]

[62] ComReg defines a discount as: 'an offer or sale of a product, service or facility at less than its standard price, for example a price reduction, including a volume related price reduction, a rebate, a reimbursement, a refund, a set-off and any other similar words or expressions'; and a promotion as: 'an offer in respect of a product, service or facility which is available for a finite period of time and which entails a price reduction.' See ComReg (2023), 'Market Reviews; Wholesale Local Access (WLA) provided at a fixed location; Wholesale Central Access (WCA) provided at a fixed location for mass-market products; Consultation and Draft Decision', Annex 1.

[63] The promotion or discount on the retail price could be implemented in the MST either by lowering the revenue value or including the promotion/discount as a cost (alongside the standard retail price). These approaches will have the same effect in the margin

6.74 Using anything other than the effective revenue risks undermining the measurement of the required margin, as promotions and discounts play an important role in competition, with operators routinely offering discounts on headline prices. Discounts and promotions can be taken into account in terms of either the retail price used in the MST (i.e. using the discounted or promotional price level) or the downstream costs (i.e. an increase in the cost to the operator equal to the value of the discount or promotion offered).

6.75 Operators can generate revenue over and above the retail price from the sale of OOB services. For example, if a dual-play bundle is sold with a data cap on the broadband service and a limited volume of inclusive calls, OOB revenues can be generated if a customer exceeds the data cap and/or makes calls outside of the inclusive allowance. This revenue contributes to the operator's margin and should therefore be included in the MST, if these revenues can be replicated by access seekers. However, it is important also to include in the MST the corresponding costs of providing the OOB services.

6.76 There is a typically degree of uncertainty about the value of OOB revenues generated by operators. This is because the revenue is dependent on the specific OOB usage, which might vary significantly across customers and products, unlike the retail price, which is independent of usage. Therefore, there may be a need to estimate the value of OOB revenues the operator could reasonably generate for each product. This should reflect the services included in the bundles; for example, OOB revenues associated with TV consumption should be included for bundles including a TV service, but not for those excluding a TV service. However, if the reality of OOB revenues turns out to be significantly different from those estimates, Eircom must notify ComReg as soon as possible. If the new figures show a squeeze, ComReg might consider requiring the product to be removed from the offer and/or customers to be migrated to a different product. Alternatively, ComReg should require elimination of the margin squeeze by adjusting wholesale and/or retail prices.

6.77 Based on the above, our recommendation is as follows:

The FTTH MST should take into account the effective revenues generated by the relevant products. In particular:

- discounts and promotions should be included in the test;
- OOB revenues should be included in the test.

6F Profitability approach

6.78 The profitability approach brings all the components of the MST together by setting out the methodology to combine the costs

calculation. We note that historically Eircom has included discounts and promotions as a cost.

and revenues to estimate the margin available to access seekers. There are two main approaches:

- a **period-by-period** approach, which assesses the size of the margin in a number of separate periods (for example, on a monthly basis);
- a **discounted cash flow** (DCF) approach, which assesses the size of the margin over a specified period of time (e.g. the average customer lifetime, ACL), and takes into account the time value of money through discounting.

6.79 In the context of economic replicability tests, the 2013 Recommendation on NDCM recommends that profitability be assessed 'on the basis of a dynamic multi-period analysis, such as the discounted cash flow (DCF) approach' and that the relevant time horizon should be set in accordance with the 'estimated average customer lifetime'.[64] Therefore, a DCF approach would be in line with the best-practice approach in the 2013 Recommendation on NDCM.[65]

6.80 A DCF approach allows the margin to be negative in any given sub-period (for example, in an individual month), as long as the overall margin is positive when all the cash flows are aggregated across the ACL. A DCF approach is therefore more appropriate where the (future) profile of cash flows (revenues and costs) (and hence margins) vary over time, for example due to introductory discounts and promotions or other acquisition costs.

6.81 We also note that the application of the DCF approach would not be a material change from ComReg's current approach, to the extent that it already spreads upfront costs (such as the costs of promotions) across the ACL and then assesses the monthly margin. One nuance is that the implication of ComReg's existing approach is that it is equivalent to a DCF approach where the cost of promotions is applied using a discount factor of zero, which does not account for the time value of money. Under the DCF approach, we recommend the cost of promotions would be taken into account in the months within the ACL where they occur, and discounted using Eircom's weighted average cost of capital (WACC).

6.82 An approach which does not reflect the time value of money could be more favourable to the SMP provider in the presence of introductory promotions or discounts that reduce the

[64] European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discriminatory obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU)', 11 September, Annex II.

[65] The Body of European Regulators for Electronic Communications (BEREC) guidance on the application of the economic replicability test does not specify the approach to be adopted when testing bundles. However, using a consistent DCF approach for bundled products, which applies the appropriate treatment of costs associated with regulated and unregulated components of the bundle, would provide a robust and consistent basis for estimating bundles alongside standalone products. See BEREC (2014), 'BEREC Guidance on the regulatory accounting approach to the economic replicability test (i.e. ex-ante/sector specific margin squeeze tests)', 5 December, p. 15.

revenues generated in the earlier periods of the ACL. Under the DCF approach, earlier revenues should receive a greater weight than revenues accrued later in the ACL due to the time value of money. Therefore, the lower revenues (and hence lower margin) associated with an introductory promotion or discount should receive a greater weight, lowering the margin relative to the test without discounting.

6.83 Under the DCF approach, two key parameters need to be specified: the discount factor; and the time horizon. We consider that:

- for the discount factor, best practice suggests using the SMP operator's WACC. This ensures that the SMP operator is able to earn a reasonable rate of economic return;
- for the time horizon, best practice suggests using the ACL. This ensures that a sufficient margin can be generated across the customer's average lifetime. If a period different to the ACL were used, this might allow a margin that is larger or smaller than is necessary to ensure economic replicability.[66]

6.84 Based on the above, our recommendation is as follows:

The FTTH MST should use a DCF profitability approach, where:

- the discount factor is equal to Eircom's WACC;
- the time horizon used is the estimated ACL.

6.85 In terms of the practical implementation of the DCF approach, this would be aligned with ComReg's current approach, with the main change being the inclusion of an explicit discount factor. For the product-by-product tests, we consider that this would involve:

- Assessing the margin based on each product over a period equal to the ACL. This involves assessing the net present value (NPV) of future revenues minus the costs for a given product, assuming that a given cohort of customers purchases the product at the point in time when the NPV analysis is conducted.
- One-off upfront costs (such as installation costs) and revenues (such as installation revenues) should be included in full in the first period (i.e. the first month) of the ACL.
- The stream of revenues over the ACL should include all effective revenues generated on a recurring basis. This should include the monthly retail price, OOB revenues (if appropriate), and any other relevant recurring revenues. The revenues should reflect any promotions or discounts the customer receives over the course of the ACL.[67]

[66] In particular, if a different time horizon to the ACL is used, one-off costs and revenues may be spread over a period that is too long or short, meaning they may be higher or smaller than required on average.

[67] The promotion or discount on the retail price could be implemented in the MST by either lowering the revenue value or by including the promotion/discount as a cost (alongside the standard retail price). These approaches will have the same effect in the margin calculation. We note that historically ComReg has included discounts and promotions as a cost, and it would be appropriate to do so going forward.

- The stream of costs over the ACL should include the recurring costs associated with the provision of the product to the cohort of customers.[68] This should include any one-off capital costs which may, for example, include one-off downstream costs (such as start-up costs associated with setting up a customer services desk). These capital costs should be amortised across the relevant asset life to provide an annualised charge that should be included in the test as a recurring cost.
- The total margin should be estimated across the ACL in NPV terms, to reflect the time value of money. The discount factor used to calculate the NPV should be given by Eircom's WACC.
- The test therefore, in effect, assesses whether the ongoing margin generated by the cohort of customers from that point in time across the ACL is sufficient to cover the net upfront costs associated with acquiring the cohort of customers.

6.86 When conducting the portfolio level test, the same analytical approach should be adopted, taking into account all relevant cohorts of customers. As explained in section 6C, the portfolio test should also include an appropriate proportion of Eircom's common costs.

6G Principles for including wholesale and downstream costs

6.87 In this section, we provide some high-level guidance on some important principles regarding how certain wholesale and downstream costs are included in the MST.

6.88 The main aim of the MST is to ensure that operators using Eircom's regulated wholesale VUA service (and other regulated ancillary services, such as co-location) to provide broadband services at the retail level can earn a sufficient margin. A sufficient margin (i.e. between the regulated wholesale cost and retail price) would cover all necessary downstream costs (including unregulated wholesale costs, if relevant), ensuring that the products are economically replicable.

Inclusion and treatment of wholesale input costs

6.89 Bearing in mind economic replicability, the principles around the wholesale costs included in the MST should be as follows:

- For regulated wholesale inputs for which Eircom has **SMP** (including FTTH VUA in this case), the cost included in the test should be the wholesale input price published in Eircom's price list (or provided separately to ComReg as part of Eircom's regulatory obligations).
- For unregulated wholesale inputs for which Eircom does **not have SMP** (if any), and are thus deemed to be competitive, the costs should be included based on **LRIC**.

[68] Some costs may not be specific to serving the cohort of customers taking the product. For example, the costs associated with some network elements may also be relevant to other products and therefore other cohorts. An appropriate portion of these costs should be included in the test for the cohort of customers taking the product under consideration.

6.90 There may be certain wholesale input costs that Eircom would not incur, but access seekers might. For example, access seekers will incur costs for co-location (an ancillary service in the WLA market) when using the FTTH VUA input, which Eircom would not incur. Failure to include such costs would risk leaving insufficient headroom for the access seekers to compete at the retail level. Importantly, these costs are likely to result from the distinction between Eircom, as the owner of the network, and access seekers using Eircom's network. This is separate from the issue of the suitable benchmark operator, which refers to efficiency. All relevant wholesale costs should be included irrespective of the benchmark used.

6.91 In terms of practical implementation, while Eircom's regulatory accounts may be a suitable source for some of the costs falling into the second cost category (inputs for which it does not have SMP), ComReg should be mindful that these may be historical fully allocated costs. This would not necessarily correspond to the forward-looking incremental costs that should be included in the MST. For example, the regulated accounts might include very low (or zero) costs for fully depreciated capital costs, which would be an unsuitable estimate for the forward-looking incremental costs faced by an EEO. In these cases, a cross-check of the costs from Eircom-regulated accounts or MST submission may be needed. This could be based on cross-checking the relevant costs against separate modelling, such as a BU LRIC model, where available, or undertaking a DCF analysis to understand these costs.[69]

6.92 For regulated wholesale inputs for which Eircom has **SMP** (including FTTH VUA in this case), but where there is pricing flexibility and where Eircom may offer different wholesale prices to different access seekers (depending on conditional offers such as volume discounts), there is a question about what wholesale price should be included in the MST.

6.93 In the presence of rules (as recommended in the Oxera report: Part 1) around whether wholesale pricing discounts should be allowed, Eircom should not be able to access discounts that no other access seeker can achieve. This is also consistent with the 2013 NDCM, which notes that any volume discounts received by the downstream arm of the vertically integrated incumbent should not exceed the highest volume discount offered to third-party access seekers. The same applies to long-term volume discounts.[70] Without this in place, Eircom could undermine the effectiveness of the MST if it were to offer its downstream arm lower wholesale prices than it offers to

[69] We understand that ComReg currently uses a DCF model to calculate the monthly retail costs per customer associated with broadband services, using information from Eircom's regulated accounts. See ComReg 18/96, 19 November, p. 134.
[70] European Commission (2013), 'Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU)', Recital 19.

other access seekers, and thus were able to set retail prices that no access seeker could replicate.

6.94 In the case where there are wholesale discounts available to some access seekers, including Eircom's downstream arm, ComReg could consider one of two approaches:

- Require that the MST be passed with reference to the undiscounted wholesale price. Such an approach would have the benefit that all downstream competitors would be able to match Eircom's retail prices. However, competitors that qualified for discounts would be able to undercut Eircom's retail prices, and Eircom would be unable to respond to those lower prices. This would take away Eircom's incentive to offer wholesale discounts as it would create a situation where it was rendered uncompetitive at the retail level. This would lead to the potential efficiency gains from discounts being forgone;[71]
- Subject to the limitation that Eircom retail cannot achieve a discount greater than the discount enjoyed by at least one other access seeker, the MST could be conducted using the discounted price paid by Eircom's downstream arm. This approach would be in line with the principles of the EEO test, under which the downstream arm of the incumbent is treated as though it were a separate company purchasing wholesale inputs on the same basis as competing downstream operators. This formulation of the rule would allow the downstream arm of the vertically integrated firm to compete on level terms with the largest access seekers, which get the same discount. Smaller access seekers, or those not eligible for the discount, would be disadvantaged not only relative other access seekers but also relative to the downstream arm of the vertically integrated firm as a result.

6.95 Where wholesale discounts are permitted, including to Eircom retail, under the criterion that Eircom should not be able to access discounts that no other access seeker can achieve, the second approach above would be in line with EEO principles and first approach would be equivalent to not allowing Eircom retail to benefit from discounted prices.

Inclusion of all relevant downstream costs for access seekers

6.96 To ensure that the MST provides sufficient economic headroom for access seekers to replicate economically the products offered by Eircom, all the relevant downstream costs (including any unregulated wholesale costs), i.e. those costs over and above the regulated wholesale costs, incurred by access seekers to provide retail services to end users should be

[71] Wholesale discounts can, in some cases, promote economic efficiency in circumstances where marginal costs are significantly below average costs; they are likely to expand output and result in greater overall economic welfare. However, for this to be the case, discounts at the wholesale level need to translate into lower prices at the retail level.

included in the test.[72] In general, downstream costs will typically include the following cost categories:

- **own network costs,** which reflect the costs incurred by access seeker in relation to network elements that are required to provide the retail service (these costs are distinct from the regulated wholesale input costs);[73]
- **selling, general and administrative (SG&A) costs,** which generally reflect the everyday operating expenditure associated with running the business, such as marketing, HR and bad debt provisions;
- **subscriber acquisitions costs,** which reflect the costs associated specifically with acquiring and retaining customers;
- **customer premises equipment (CPE) costs,** which reflect the cost of providing CPE to the end user, such as a broadband modem and, where relevant, a TV set-top box.

6.97 For the same reasons outlined above—that is, since no operator has SMP in respect of these services and they are therefore deemed to be competitive—these costs should be included in the test at the LRIC cost standard and calculated with reference to the chosen benchmark operator efficiency standard.

6.98 As discussed in section 6A, the costs of unregulated services included in bundles should also be included in the bundles MST. If unregulated retail services were not covered in the MST on FTTH bundles, Eircom could sell these bundles (including unregulated services) at a loss, undermining wholesale SMP remedies. In assessing the margin for bundles including unregulated products, the costs associated with taking the unregulated services should be included. For the same reasons outlined above—that is, since no operator has SMP in respect of these services and they are deemed to be competitive—the costs of these services should be included at the LRIC cost standard and calculated with reference to the chosen benchmark operator efficiency standard.

6H Summary of recommendations

6.99 For the reasons outlined above, we consider that the FTTH MST should be specified as described in Table 6.3.

Table 6.3 FTTH MST: summary of recommendations

MST building block	Recommendation
Relevant products	All FTTH retail products sold by Eircom, including standalone and bundles
Cost standard and level of aggregation	Product-by-product: LRIC FTTH portfolio: LRIC+ or ATC
Benchmark operator	EEO

[72] Since Eircom does not have SMP over the unregulated wholesale products, these costs are typically considered to be part of the set of downstream costs.
[73] This could be in relation to broadband network elements, but also fixed voice and TV network elements, if relevant.

MST building block	Recommendation
Revenues	Promotions and discounts included OOB revenues included (if they are replicable)
Profitability approach	DCF

Source: Oxera.

6I Wholesale margin squeeze on Bitstream prices

6.100 While ComReg also imposed a 'wholesale' MST in the 2018 WLA/WCA Market Review Decision, monitoring the margin between FTTH VUA and FTTH Bitstream services, we consider that this is not required in light of the MST on FTTH VUA described above, and the de-regulation of the WCA market.

6.101 As set out in section 6G above, we note that the inclusion of all the relevant costs incurred by access seekers should help to ensure there is economic replicability in wholesale markets that may be downstream of the market in which the MST is imposed. For example, inputs from the WLA market (such as FTTH VUA) may be used to provide downstream wholesale access services, such as those in the WCA market (such as FTTH Bitstream).

6.102 Imposing margin squeeze obligations in the WLA market should ensure that FTTH VUA provides sufficient room for operators to use this wholesale input to provide a FTTH Bitstream service to downstream operators. This is because the costs included in the FTTH MST would include both the FTTH VUA input price, plus the additional LRIC costs associated with backhaul and other network costs. This should ensure that the wholesale FTTH VUA price and retail FTTH price provides sufficient room for the efficient provision of FTTH Bitstream services by other providers.

6.103 If Eircom decided to lower Bitstream prices to engage in a squeeze relative to FTTH VUA, then downstream rivals using Eircom's wholesale Bitstream input would be able to lower their retail prices (as their wholesale costs would fall). Eircom would not be able to respond by matching those lower retail prices given that the FTTH VUAN MST (with VUA plus backhaul and other costs) prohibits this, in the absence of Eircom also lowering FTTH VUA prices. Therefore, the Bitstream-based access seekers' retail prices would undercut Eircom's retail prices. In this case, Eircom would be faced with losing customers at the retail level, who may divert to the Bitstream-based access seekers offering lower retail prices.

6.104 This would undermine any attempt to squeeze an operator that self-provides the backhaul and network elements to create its own Bitstream service. In other words, the proposed FTTH MST would ensure that Eircom has no incentive to engage in a profitable squeeze between FTTH VUA and FTTH Bitstream. Therefore, a separate 'wholesale' MST between VUA and Bitstream is not recommended.

7 Conclusions

7.1 Following the assessment above, we make a number of recommendations to ComReg, which it should consider, taking into account its policy objectives.

1 Ex ante margin squeeze obligations should not be imposed on FTTC VUA.
2 Ex ante margin squeeze obligations should be imposed on FTTH VUA.
3 In respect of the FTTH VUA, we consider that the MST should be specified as described in Table 7.1.

Table 7.1 FTTH MST: summary of recommendations on the test specification

MST building block	Recommendation
Relevant products	All FTTH retail product sold by Eircom, including as standalone and bundles
Cost standard and level of aggregation	Product-by-product: LRIC FTTH portfolio: LRIC+ or ATC
Benchmark operator	EEO
Revenues	Promotions and discounts included OOB revenues included (if they are replicable)
Profitability approach	DCF

Source: Oxera.

A1 Summary of ComReg's 2018 Decisions

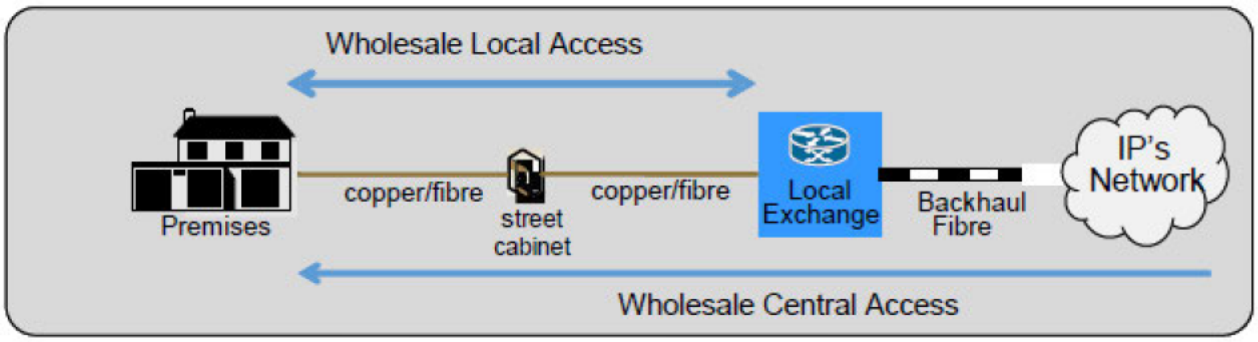
A1.1 The 2018 WLA/WCA Market Review Decision sets out three distinct markets in Ireland:[74]

- **WLA (national),** which includes current generation WLA products (LLU and line share products provided over copper network) and next generation WLA products (VULA[75] products provided over FTTx networks);[76]
- **Urban WCA,** which includes mass-market Bitstream products provided over a copper-only network, over FTTC networks and over FTTH networks, in the urban sub-geographic market comprising 154 Exchange Areas;[77]
- **Regional WCA,** which includes mass-market Bitstream products provided over a copper-only network, over FTTC networks and over FTTH networks, in the regional sub-geographic market comprising 1,049 Exchange Areas.[78]

A1.2 These services are summarised in Figure A1.1.

[74] We recognise that the number of exchanges categorised as being in the Urban WCA and Regional WCA market was updated following a mid-term review by ComReg in 2021. ComReg moved 81 exchange areas from the 2018 Regional WCA market to the Urban WCA market. See ComReg (2021), 'Mid-term Assessment; Regional Wholesale Central Access (WCA) Market; Re-application of geographic assessment criteria set out in ComReg Decision D10/1; Response to Consultation and Final Decision', ComReg 21/120, Decision D10/21, 25 November, p. 58 (henceforth referred to as 'ComReg 21/120').
[75] In its Pricing Decision, ComReg refers to 'VULA' products as 'VUA', since VUA is the wholesale product that is Eircom's implementation of VULA. See ComReg 18/94, pp. 7 and 407.
[76] ComReg 18/94, p. 143.
[77] ComReg also included the self-supply of retail broadband products provided over a cable access television network, as well as retail broadband products supplied by certain service providers that use upstream WLA inputs. ComReg 18/94, p. 20.
[78] ComReg also included retail broadband products supplied by certain service providers using upstream WLA inputs.

Figure A1.1 Summary of WLA and WCA services



Wholesale local access market

- LLU
- Line share
- VUA products

- relevant NGA services in this market are:
  - FTTC VUA
  - FTTH VUA

- defined as a **single National market** in which Eircom has SMP

Downstream

Wholesale central access market

- Bitstream (over copper)
- Bitstream FTTC
- Bitstream FTTH

- relevant NGA services in this market are:
  - Bitstream FTTC
  - Bitstream FTTH

- separate markets for 'Urban WCA' and 'Regional WCA', with Eircom having SMP in the Regional WCA market

Note: IP refers to internet provider.
Source: Oxera, based on Figure 1 of ComReg 18/94.

A1.3 In its 2018 Market Review Decision, ComReg designated Eircom, the incumbent operator, as having SMP in WLA Market and Regional WCA Market and imposed regulatory obligations that sought to remedy competition problems that would arise absent regulatory intervention;[79] in particular, Eircom's ability and incentive to behave in an anti-competitive manner.

A1.4 Specifically, for the WLA Market, ComReg noted:[80]

In particular, absent regulation in the Relevant WLA Market, ComReg considers that Eircom would have the ability and incentive to influence competition through effects on prices, innovation, output and the variety or quality of goods and services provided. A number of competition problems may arise whereby Eircom could:

- Exploit customers or End Users by virtue of its SMP position;
- Leverage its market power into adjacent vertically or horizontally-related markets with a view to foreclosing or excluding competitors in downstream and/or upstream markets; and
- Delay or deter investment and market entry into the Relevant WLA Market (and, ultimately, downstream markets).

[79] ComReg 18/94, p. 20.
[80] ComReg 18/94, paras 6.110–6.111

Overall, ComReg does not consider that Eircom would be sufficiently constrained in the Relevant WLA Market, such that it would prevent it from behaving, to an appreciable extent, independently of competitors, customers and End Users. To this end, ComReg considers that the identified competition problems would likely arise in the Relevant WLA Market in the absence of competition.

A1.5 For the Regional WCA Market, ComReg noted:[81]

In the absence of regulation in the Regional WCA Market, ComReg considered that Eircom would have the ability and incentive to influence competition through effects on prices, innovation, output and the variety or quality of goods and services provided. These competition problems include, but are not limited to:

- Exploitation of customers or consumers by virtue of its SMP position;
- Leveraging its market power into adjacent vertically or horizontally related markets through price and non-price means with a view to foreclosing or excluding competitors in downstream retail and/or upstream wholesale markets; and
- Excluding or delaying investment and market entry into the Regional WCA Market, aimed at defending its position and/or foreclosing the market.

[…] ComReg remains of the view that, absent regulation, Eircom, as the SMP undertaking in the Regional WCA Market, has the ability and incentive to engage in actions which could negatively impact on competition and customers in related retail and/or wholesale markets, as well as having the potential to reinforce its SMP position in the Regional WCA Market over time

A1.6 ComReg did not find Eircom as having SMP in the Urban WCA Market, based on its view that existing and potential competition in this market, within the lifetime of the review, were likely to prevent any operator from behaving in a manner consistent with SMP.[82]

A1.7 Table A1.1 provides a high-level summary of the regulatory obligations imposed by ComReg to remedy the competition concerns identified in its market analysis. Given that ComReg found that no operator held SMP in the Urban WCA market, there was no basis for imposing regulatory obligations in that market.

A1.8 In the WLA Market and Regional WCA Market, where Eircom was found to have SMP, ComReg did impose regulatory obligations. Ultimately, the regulatory obligations are designed to promote the development of retail and wholesale competition.

A1.9 We note that the specific obligations imposed were differentiated across the individual products within each

[81] ComReg 18/94, paras 11.45–11.46.
[82] ComReg 18/94, p. 32.

market (e.g. different obligations for FTTC VUA and FTTH VUA in the WLA market).

Table A1.1 Summary of obligations imposed in the relevant markets

Regulatory obligation	WLA	Regional WCA	Urban WCA
Access	✓	✓	×
Non-discrimination	✓	✓	×
Transparency	✓	✓	×
Price control and cost accounting	✓[1]	✓[2]	×
Accounting separation	✓	✓	×

Note: [1] FTTH-based VUA is not subject to cost-orientation obligations, but is subject to margin squeeze obligations, as described below.[2] FTTH-based Bitstream is not subject to cost-orientation obligations, but is subject to margin squeeze obligations, as described below.
Source: Oxera based on ComReg 18/94, pp. 27, 32–34.

A1A Overview of ex ante retail margin squeeze obligations

A1.10 As part of ComReg's package of price controls, ex ante 'retail' margin squeeze obligations are imposed in both the WLA market and Regional WCA market. These obligations regulate the difference between the prices of wholesale inputs and the downstream retail prices of services provided using these inputs. ComReg also imposes ex ante 'wholesale' margin squeeze obligations, which regulate the difference between the prices of WLA and WCA wholesale inputs, where WLA inputs are upstream from the WCA inputs.[83]

A1.11 At the time of the 2018 Decision, ComReg considered that ex ante margin squeeze obligations were required since ex post enforcement would be inadequate given the objective of ex ante regulation to promote competition by facilitating entry, and that identifying a margin squeeze after it occurred would be insufficient to protect against possible market foreclosure and consumer harm.[84]

A1.12 ComReg applied retail margin squeeze obligations to:

- **standalone** retail broadband products (retail broadband services sold singly to customers);
- **bundles** containing retail broadband products (retail broadband services sold as part of a bundle with other telecommunication services, such as telephony and/or TV, to customers).

[83] We note that ComReg imposed a margin squeeze obligation at the wholesale level. In particular, it required Eircom not to cause a margin squeeze between the FTTH-based VUA service (in the WLA market) and the FTTH-based bitstream service (in the WCA markets). See ComReg 18/94, p. 484.
[84] ComReg (2018), 'Consultation on Price control obligations relating to Bundles: Further specification of the price control obligation not to cause a margin squeeze: FACO and WLA (Market 3a) and WCA (Market 3b). Consultation and draft decision, ComReg 17/51, para. 3.24 (henceforth referred to a ComReg 17/51).

A1.13 Table A1.2 gives a high-level overview of the set of ex ante retail MSTs that ComReg applied to standalone and bundled retail services in the 2018 Market Review Decision.

Table A1.2 Summary of ex ante retail margin squeeze test obligations

Wholesale input	Standalone retail broadband products	Bundled retail broadband products
WLA market		
CGA WLA products	No	No
FTTC-based VUA	Yes (tested only as part of the NGA bundles portfolio)	Yes
FTTH-based VUA	Yes (only in the footprint area of the Urban WCA Market)	Yes
Regional WCA market		
CGA Bitstream	Yes (tested only as part of the CGA bundles portfolio)	Yes
FTTC-based Bitstream	No	No
FTTH-based Bitstream	Yes	No

Note: In addition to the VUA costs included in the wholesale cost stack for NGA services, ComReg includes backhaul costs which reflect usage/throughput. See ComReg18/96, Table 7. We understand this backhaul cost in effect reflects the additional costs above the VUA costs that would be incurred to provide a Bitstream service; therefore, in theory access based on FTTC-based Bitstream should be replicable if access based on FTTC-based VUA is replicable.
Source: Oxera based on ComReg 18/94, ComReg 18/96, and ComReg 18/95, D11/18.

A1.14 In the following sections we provide further details on the specification of the ex ante retail MSTs applied in relation to standalone retail services (section A1B) and bundled retail services (section A1C).

A1B Margin squeeze obligations: standalone retail products

A1.15 As outlined above, ComReg had concerns over Eircom's ability to leverage its vertically integrated position into the retail market. In its Market Review Decision (ComReg 18/94), ComReg specified which standalone retail services would be covered by margin squeeze obligations; these were further specified in its decision on price control obligations (ComReg 18/95).

A1B.1 Standalone FTTH

A1.16 ComReg imposed obligations requiring Eircom not to cause a margin squeeze between FTTH-based wholesale inputs and the standalone retail broadband products these inputs are used to provide.

A1.17 In the WLA market, ComReg decided to allow Eircom pricing flexibility on FTTH-based VUA subject to margin squeeze obligations.[85] In particular, ComReg considered that given the uncertainty over costs and demand, the FTTH price was likely to be sensitive to the penetration rate.[86] ComReg considered that incorrect forecasts could affect future market developments,

[85] ComReg 18/94, para. 7.1313.
[86] Ibid.

and distort investment decision—for example, if the wholesale price were set either too high or too low.[87] However, ComReg considered that without ex ante regulatory obligations, Eircom had the ability and incentive to cause a margin squeeze in relation to FTTH VUA and downstream retail services using this input,[88] and noted that without cost orientation obligations, a margin squeeze acted as the main control against excessive pricing.[89] It is worth noting, however, that an MST will act to prevent excessive wholesale pricing only if there are effective retail pricing constraints; otherwise, an MST does not directly control against excessive wholesale prices.

A1.18 Therefore, ComReg determined that Eircom should be required not to cause a margin squeeze in respect of FTTH-based wholesale inputs and retail services.[90] In respect of standalone FTTH retail products using WLA inputs, ComReg considered that margin squeeze obligations should be applied to FTTH-based VUA and standalone retail services that use this wholesale input, but that this remedy would be limited to the footprint area of the Urban WCA Market.[91] This was to address ComReg's concerns that, given SMP regulation was withdrawn in the Urban WCA Market, Eircom would have the ability and incentive to foreclose downstream operators using WLA inputs to provide downstream services.[92] In particular, the decision to deregulate the Urban WCA Market was predicated on there being effective regulation upstream in the WLA Market.[93]

A1.19 In the Regional WCA Market, ComReg considered that Eircom should be allowed pricing flexibility on FTTH-based Bitstream, subject to margin squeeze obligations, for the same reasons as in the WLA market.[94] However, ComReg considered that margin squeeze obligations were required in respect of FTTH-based Bitstream and retail services to address its concerns that Eircom had the ability and incentive to set prices such that the margins of access seekers at the retail level are squeezed.[95] In respect of standalone retail products using WCA inputs in the Regional WCA Market, ComReg considered that margin squeeze obligations should be applied to FTTH-based Bitstream and standalone retail services that use this wholesale input,[96] so as to ensure that access seekers can effectively compete in the retail market.[97]

A1.20 In ComReg 18/95, ComReg specified the key parameters for the ex ante retail MSTs that would be applied to FTTH-based

[87] Ibid.
[88] Ibid.
[89] ComReg 18/94, para. 7.1379.
[90] ComReg 18/94, paras 7.1313 and 7.1379.
[91] ComReg 18/94, paras 7.1240–7.1242, 7.1338.
[92] ComReg 18/94, paras 7.1240–7.1242, 7.1338.
[93] ComReg 18/94, para. 7.1344.
[94] ComReg 18/94, para. 12.310.
[95] Ibid.
[96] ComReg 18/94, para. 12.351.
[97] Ibid.

wholesale inputs and the associated standalone retail services. Table A1.3 gives an overview of the key parameters.

Table A1.3 Overview of MST approach for standalone FTTH retail broadband products

	FTTH-based VUA and relevant retail service	FTTH-based Bitstream and relevant retail service
Operator cost base	EEO	EEO
Cost standard	ATC	ATC
Model type	DCF	DCF
Level of aggregation	Portfolio approach	Portfolio approach

Source: Oxera based on ComReg 18/95, pp. 233 and 249.

A1.21 In addition to the obligations applied to FTTH-based standalone retail products using FTTH wholesale inputs, ComReg applied ex ante retail MST obligations on standalone retail broadband products using other wholesale inputs:

- standalone retail products using FTTC-based VUA wholesale inputs, which are included in the NGA bundles portfolio test;
- standalone retail products using CGA Bitstream wholesale inputs, which are included in the CGA bundles portfolio test.

A1B.2 Standalone FTTC

A1.22 ComReg considered that, in addition to the cost-orientation obligation on FTTC-based VUA, there was a need for margin squeeze obligations for this wholesale input in order to address concerns about Eircom's position as a vertically integrated operator and its ability and incentive to leverage its market power into the downstream retail markets.[98] This obligation applies to both standalone and bundled FTTC retail service using FTTC-based VUA.[99] ComReg considered that, given the sufficiency of the access, transparency and cost-orientation obligations, a separate standalone MST for FTTC-based services was not needed.[100] Therefore, in respect of WLA inputs, standalone FTTC services are tested alongside bundled FTTC services as part of the NGA portfolio, but not at the individual product level.[101]

A1B.3 Standalone CGA

A1.23 In the Regional WCA Market, ComReg considered that, in addition to the cost-orientation obligation on CGA Bitstream, there was a need for margin squeeze obligations for this wholesale input in order to address concerns about Eircom's position as a vertically integrated operator and its ability and incentive to leverage its market power into the downstream retail markets.[102] As with the controls on standalone FTTC-based VUA, ComReg considered that CGA standalone services

[98] ComReg 18/94, paras 7.1339–7.1340, 7.1342.
[99] Ibid., para. 7.1342.
[100] Ibid., para. 7.1342.
[101] ComReg 18/96, para. 5.264 and Figure 6.
[102] ComReg 18/94, paras 12.326–12.328, 12.352.

would be tested alongside bundled CGA services as part of the CGA portfolio, but not at the individual product level.[103]

A1.24 ComReg did not consider that any margin squeeze obligations were required on CGA products in the WLA market due to the sufficiency of other measures (including obligations of access, transparency and cost orientation) and the decline in the use of CGA WLA services.[104]

A1C Margin squeeze obligations: bundled retail products

A1.25 As outlined above, ComReg had concerns over Eircom's ability to leverage its vertically integrated position into the retail market. In its Market Review Decision (ComReg 18/94), ComReg specified which standalone retail services would be covered by margin squeeze obligations; these were further specified in its decision on price controls relating to retail bundles (ComReg 18/96).

A1.26 In the WLA Market, ComReg considered that:[105]

> Eircom shall have an obligation not to cause a margin squeeze between NG WLA services and retail services sold singly or as part of a bundle and delivered by NG WLA services.

A1.27 This covers FTTH-based and FTTC-based bundled retail services using WLA inputs. As explained in ComReg 18/96, this was to address competition concerns stemming from Eircom's position as a vertically integrated operator with SMP at the wholesale level.[106]

A1.28 In the Regional WCA Market, ComReg considered that:[107]

> Eircom shall not cause a margin squeeze between Current Generation Bitstream and retail services, whether sold singly or as part of a bundle, delivered by CG Bitstream.

A1.29 This covers CGA-based services sold as part of a bundle using WCA inputs.

A1.30 The primary motivation for applying margin squeeze obligations to bundled products was to ensure that Retail Service Providers (RSPs) using Eircom's wholesale inputs could profitably replicate Eircom's bundled retail services.[108]

A1.31 In ComReg 18/96, ComReg specified the components of the retail bundle margin squeeze tests which it would use for NGA- and CGA-based retail products. Table A1.4 gives an overview of the key components of the retail bundle margin squeeze tests.

[103] ComReg 18/96, para. 5.264 and Figure 6.
[104] ComReg 18/94, para. 7.1378.
[105] Ibid., para. 7.1381(j).
[106] ComReg 18/96, para. 3.79.
[107] ComReg 18/94, para. 12.353(g).
[108] ComReg 17/51, para. 3.15.

Table A1.4 Overview of the bundle MST components

MST component	NGA—where available	CGA—regional WCA
RSP modelled retail costs	EEO for calls, PSTN and broadband	EEO for calls, PSTN and broadband
Level of aggregation	Bundle-by-bundle and portfolio	Bundle-by-bundle and portfolio
Cost standard	Bundle: LRIC Portfolio: ATC	Bundle: LRIC Portfolio: ATC
Wholesale input	WLA and FACO inputs	WCA and FACO inputs
Unregulated products	LRIC or AAC on a case-by-case basis	LRIC or AAC on a case-by-case basis
Cross-subsidy	Allowed both ways	Allowed both ways

Source: Oxera based ComReg 18/96, Figure 6.

A1.32 As shown in Table A1.4, the margin squeeze obligations applied to WLA inputs are limited to NGA retail products—i.e. FTTC-based and FTTH-based products. As noted above, the portfolio of NGA bundles also includes standalone FTTC-based retail products (although these are not tested as individual products). Standalone FTTH-based retail products using FTTH-based VUA are tested as part of a separate standalone portfolio, and are not included in the NGA portfolio.[109]

A1.33 As also shown in Table A1.4, the margin squeeze obligations applied to WCA inputs are limited to CGA retail products—i.e. those provided over Eircom's copper network. As discussed above, standalone CGA-based retail products will be tested as part of the CGA portfolio, but not at the individual level.

A1.34 ComReg determined that a two-step approach should be used for assessing products in the MST: a bundle-by-bundle test (using the LRIC cost standard) and a portfolio test (using the ATC cost standard).[110] ComReg considered that such an approach would give Eircom pricing flexibility for its individual bundles, while ensuring that RSPs could profitably replicate Eircom's overall range of bundles at the portfolio level.[111]

[109] ComReg 18/96, para. 4.49 and Figure 6.
[110] ComReg 18/96, Figure 6 and para 5.257. In its consultation, ComReg also outlined the merits of adopting a one-step bundle-by-bundle approach, one-step portfolio approach and a two-step approach comprising a bundle-by-bundle test followed by a portfolio test. See ComReg 17/51, paras 5.106–5.118.
[111] ComReg 17/51, para. 5.115; ComReg 18/96, paras 5.14–5.16 and 5.257.

Contact

Felipe Florez Duncan
Partner
+44 (0) 20 7776 6654
felipe.florez.duncan@oxera.com

oxera.com