WCA/WLA market review

—

Oxera report: Part 3
Prepared for Commission for Communications Regulation

16 December 2022

Contents

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.

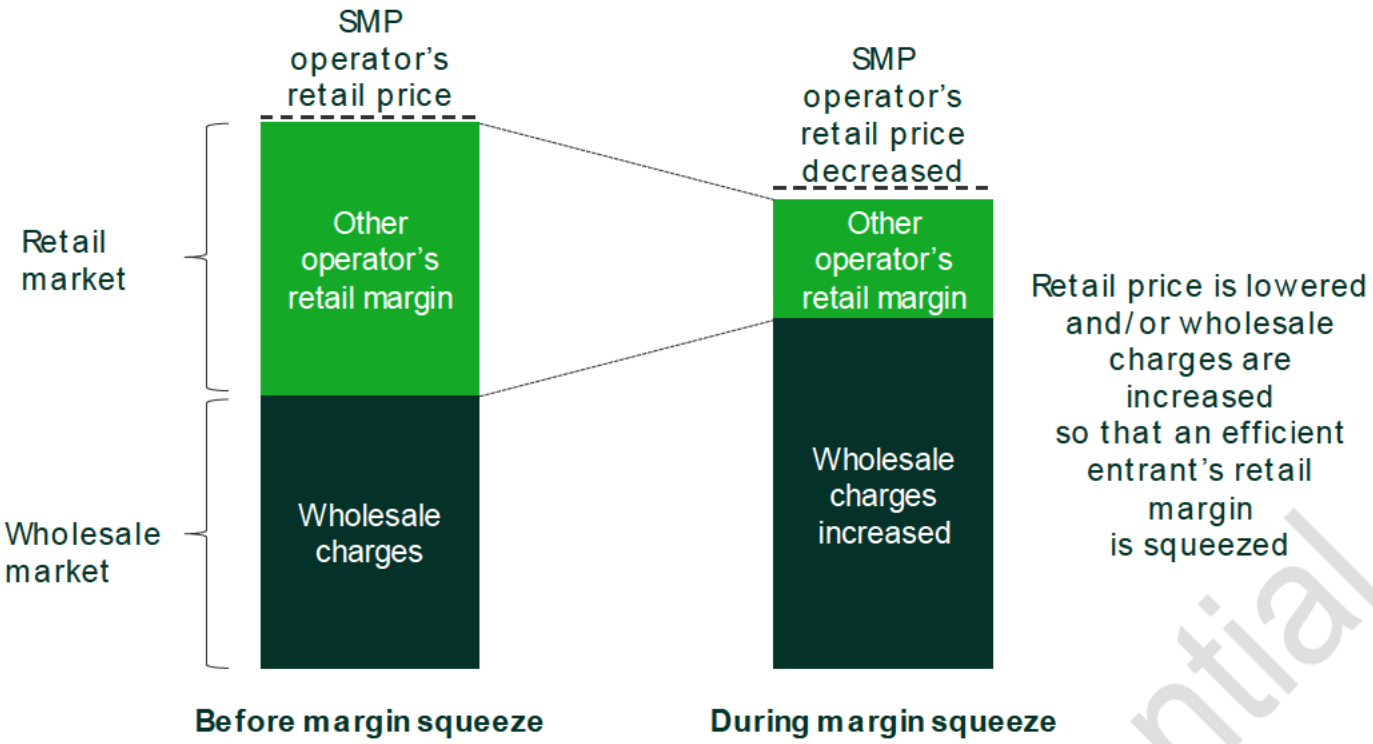
3A The presence (or absence) of a wholesale price control

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.

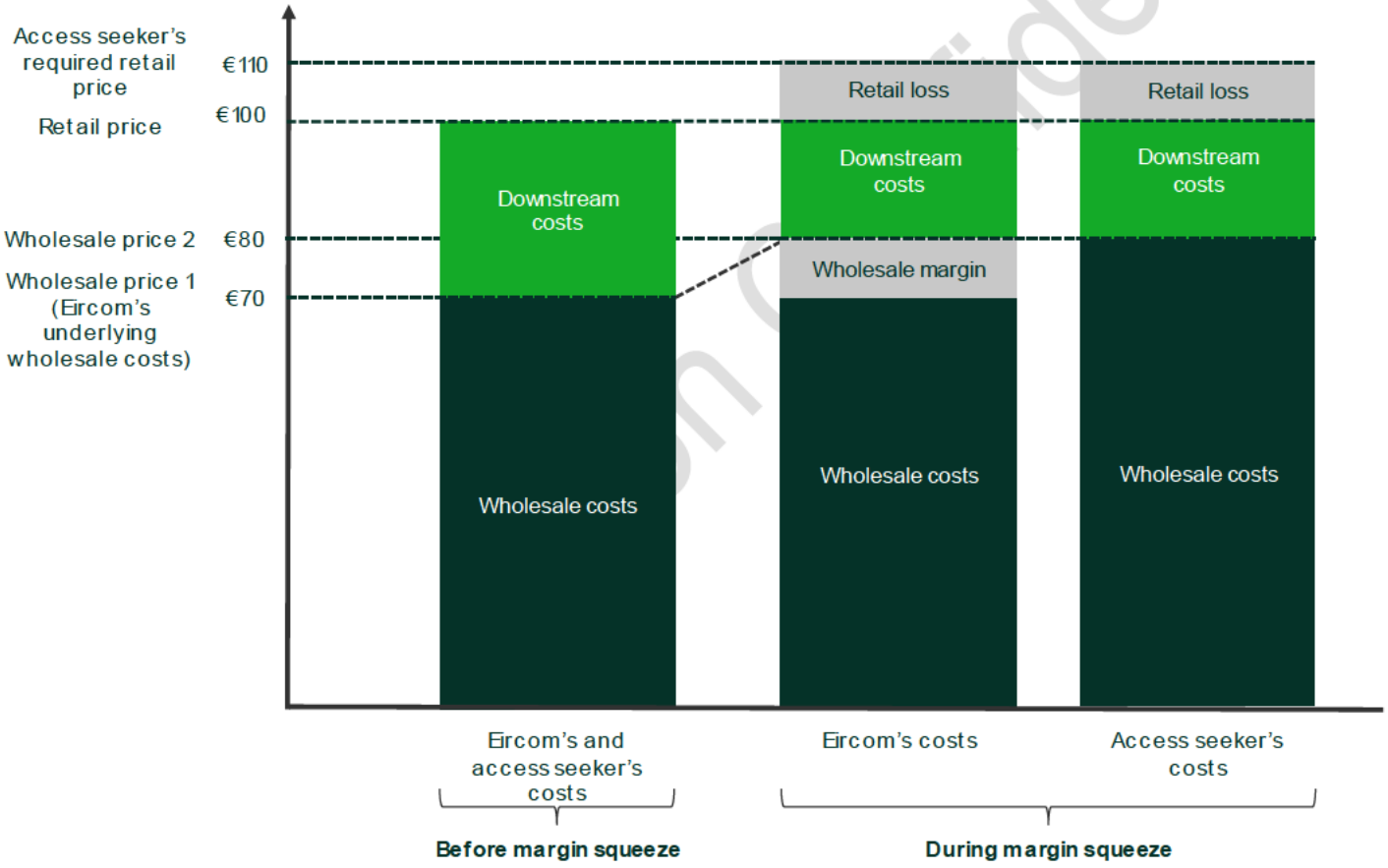
- keeping its retail price at €100.

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.

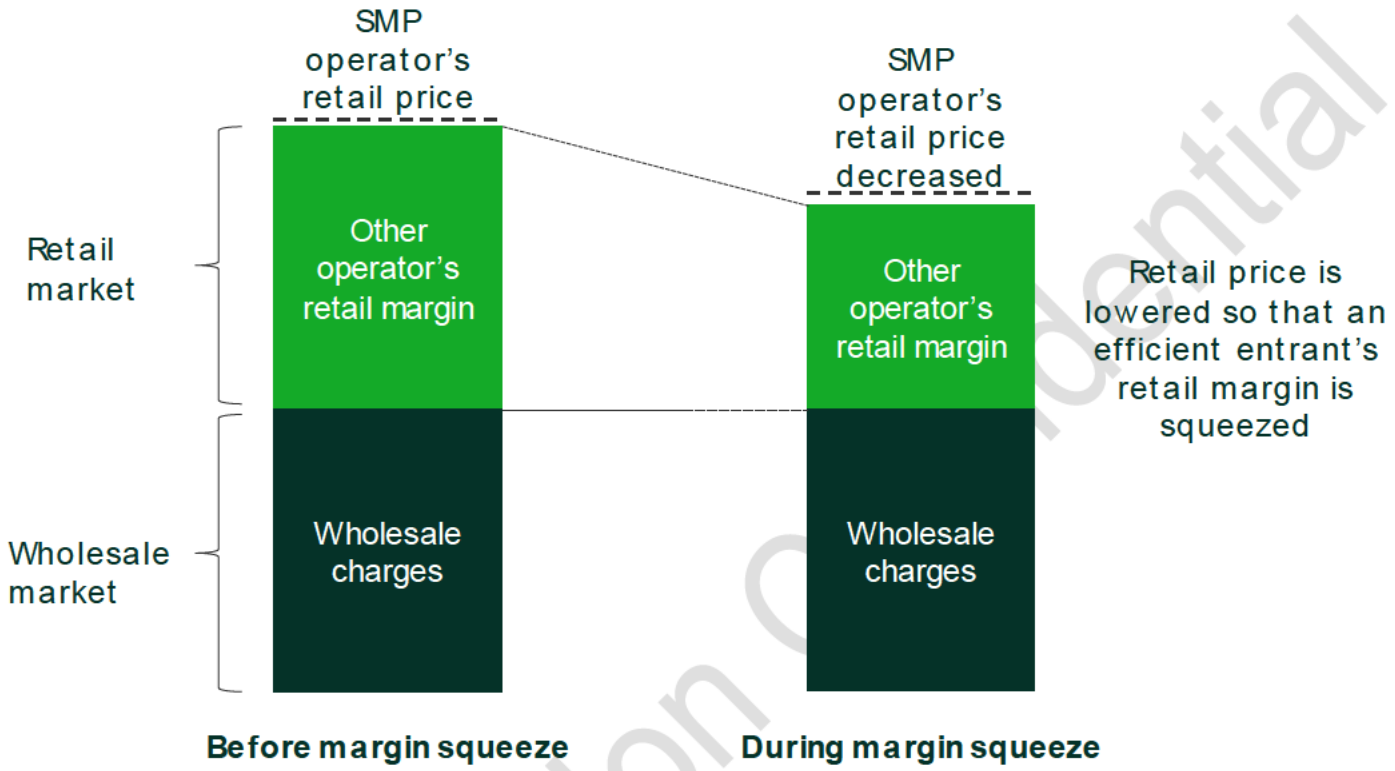
3.16 In this case, as Eircom does not incur a loss—and therefore will not need to recoup any losses—it may have a relatively strong ability to engage in a margin squeeze and sustain this over a

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.

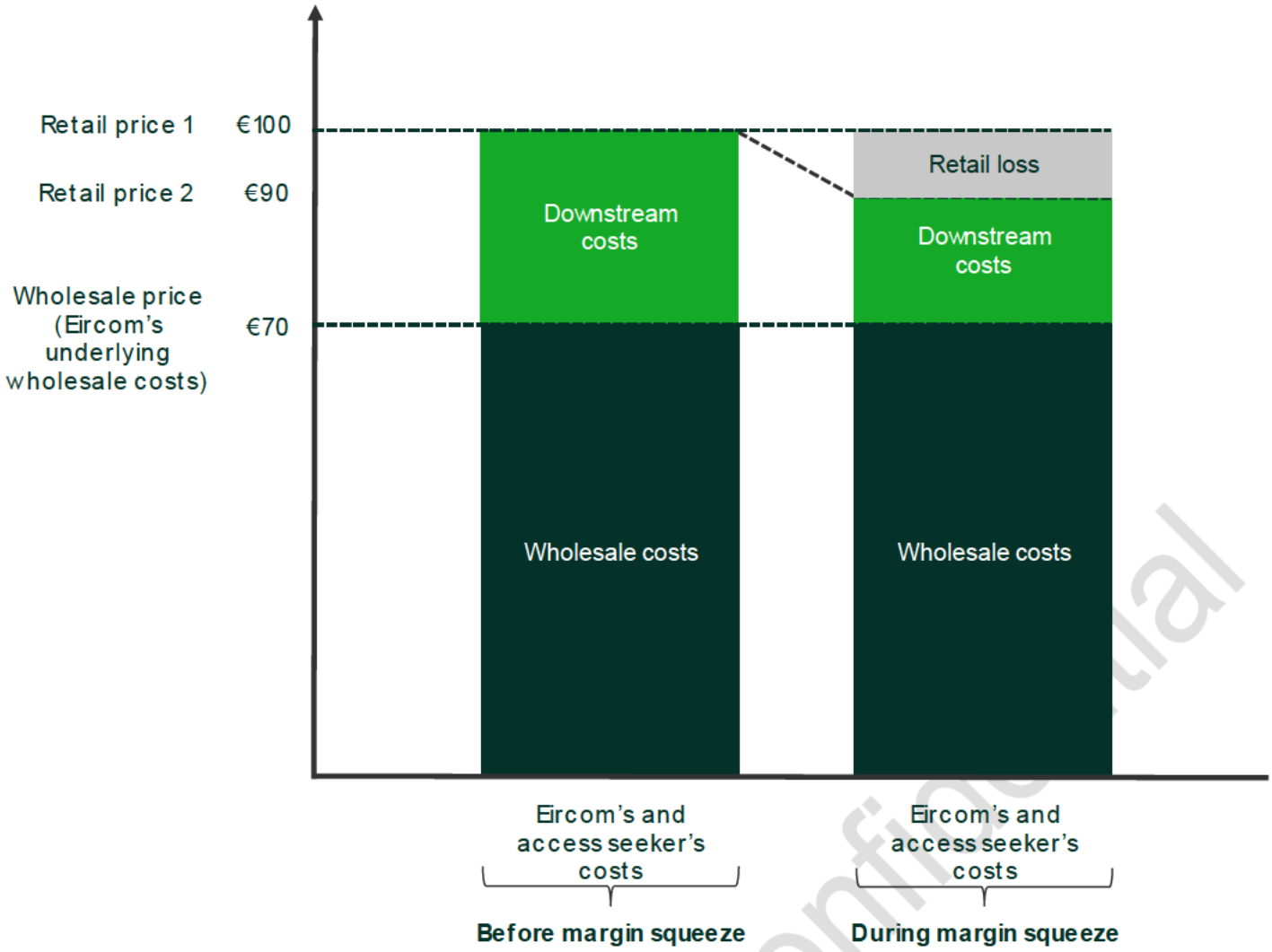
During the margin squeeze

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.

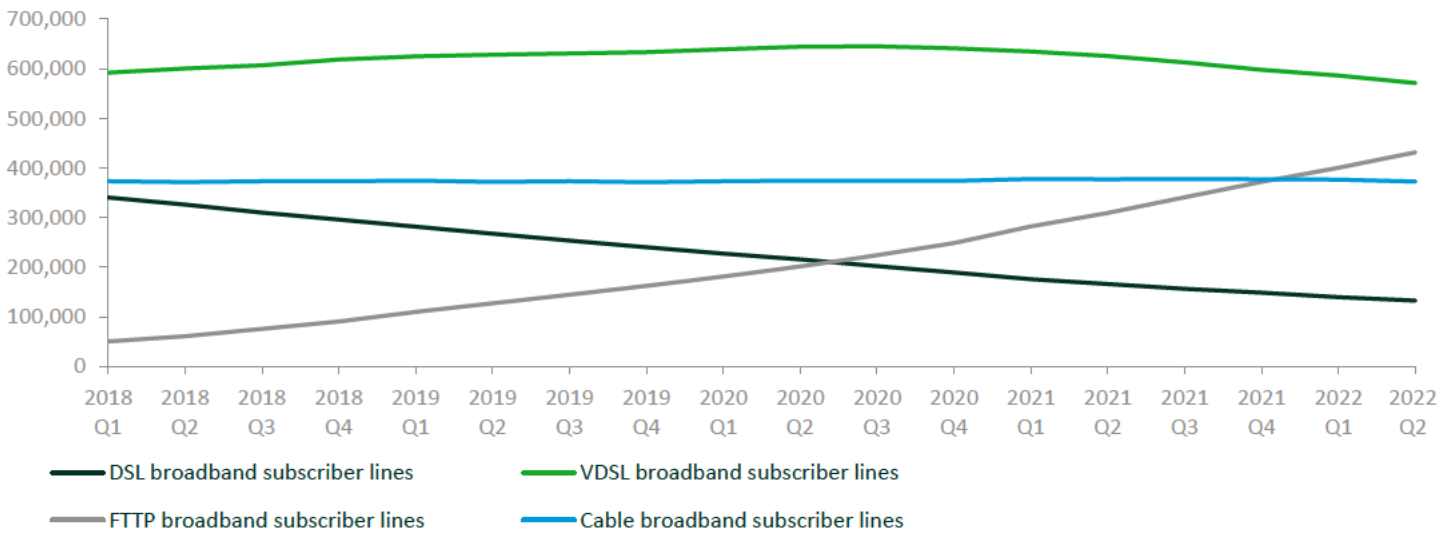
4.3 Below, we expand on our reasoning, presenting an assessment of the need for an ex ante margin squeeze on FTTC VUA, having regard to the provisional conclusions from ComReg's market analysis and to the proposals put forward with regard to wholesale price controls. In particular:

- 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

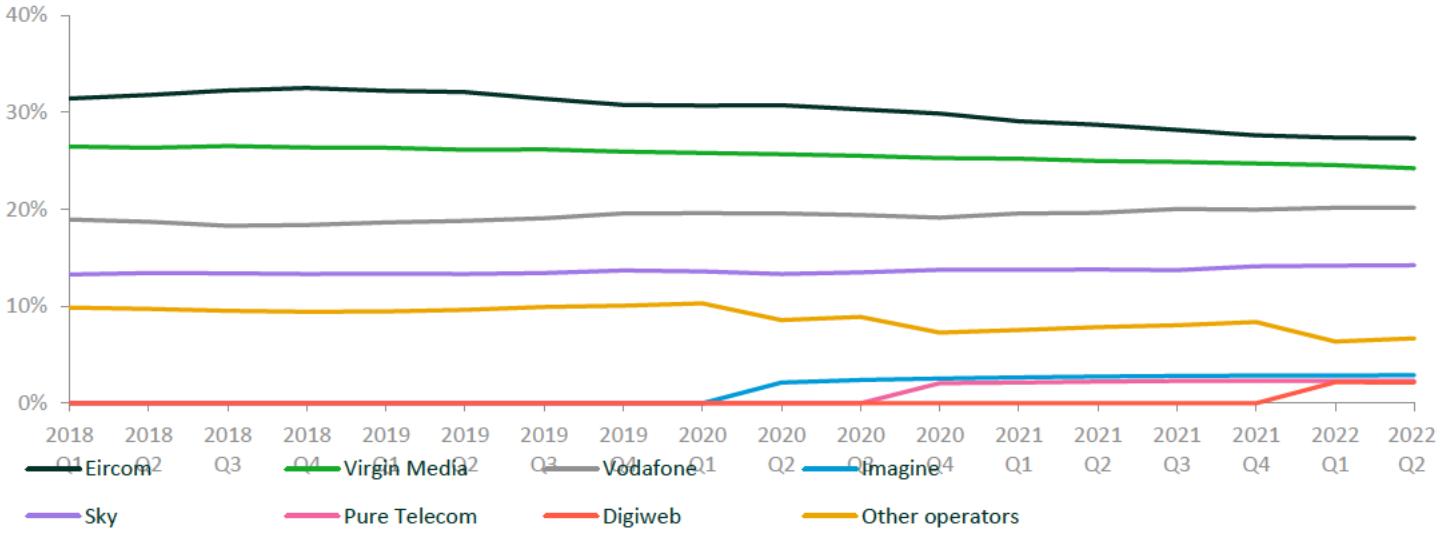
[20] We note that Eircom would be able to increase prices in line with inflation (CPI) in each year. However, in general, inflation trends are a reasonable predictor of how the costs could be expected to evolve. Therefore, we do not consider that this would affect Eircom's incentives or ability to engage 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.

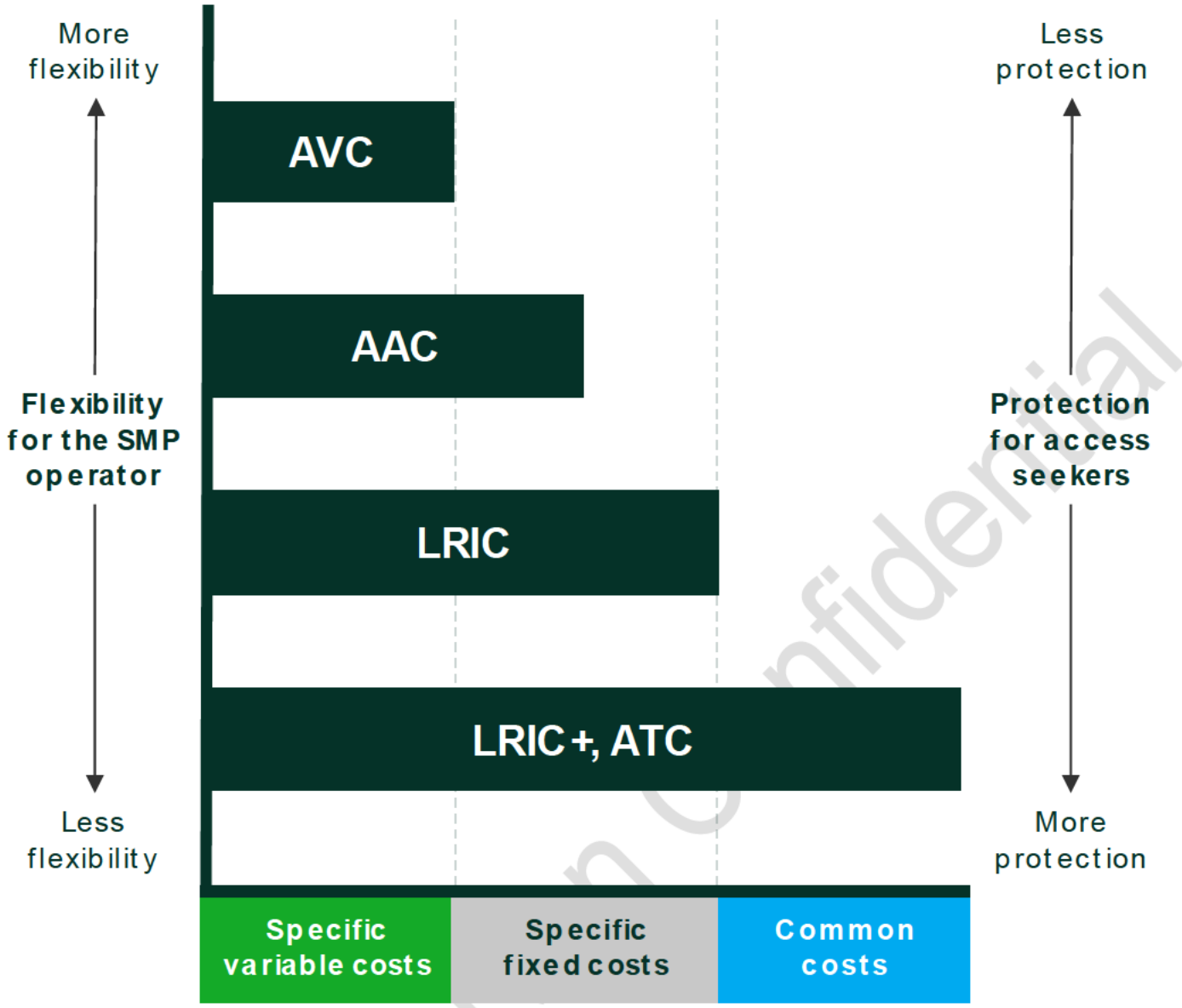
Table 6.2 Cost standards

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.

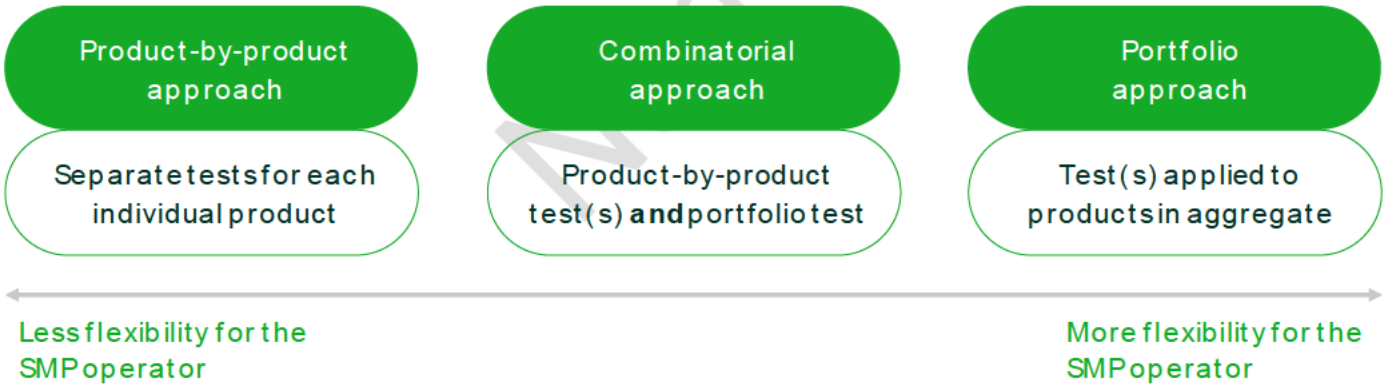
6C Level of product aggregation

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

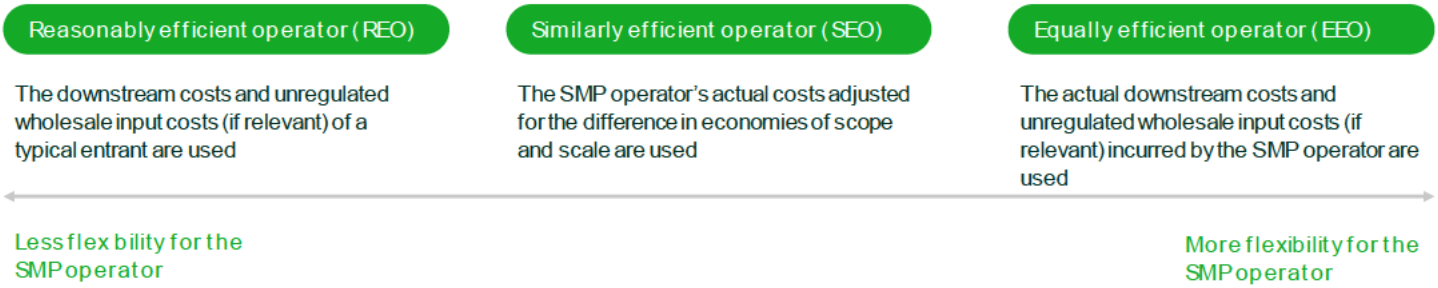
6.61 Having set the cost standard, we need to determine the level of efficiency that should be assumed when calculating:

- 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

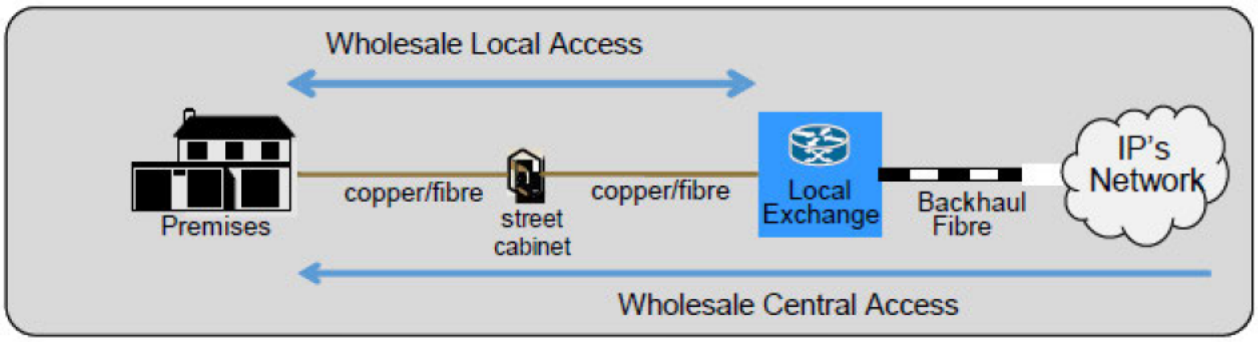
A1.1 The 2018 WLA/WCA Market Review Decision sets out three distinct markets in Ireland:[74]

- **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