Further specification of an appropriate MST for bundled offers

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Executive summary

ComReg currently imposes remedies at the wholesale and retail level on eircom in the retail fixed narrowband (voice) access market, a market where eircom was found to have significant market power (SMP). One of the remedies in the fixed voice access (FVA) market at the retail level is an obligation 'not to unreasonably bundle'. This obligation consists of two separate obligations. The first obligation requires eircom to offer all retail FVA services as stand-alone products, and the second obligation requires that the retail price of a bundle including FVA covers the sum of the costs of inputs to the bundle and relevant retail costs net of any efficiency that arise from bundling. This NRT is meant to ensure replicability of bundled offers by potential competitors.

However, the risk that eircom can leverage its market power from wholesale markets where it has SMP to retail markets remains irrespective of whether it has SMP in the retail fixed voice market. The current net revenue test (NRT), even though it is implemented or anchored in the retail fixed voice market, deals with these anti-competitive effects, and it is important that regulatory remedies remain in place to ensure effective competition in retail fixed voice (and broadband) markets. Given the close links between retail and wholesale markets, one way to ensure this is to impose an appropriate margin squeeze test (MST) in relevant wholesale markets instead of the current NRT in the retail fixed voice market.

Following this, and having consulted on the principle of moving the single bill wholesale line rental (SB-WLR) obligation as well as the margin squeeze test to wholesale markets, ComReg is now consulting in more detail on replacing the NRT element of the 'not to unreasonably bundle' obligation that currently sits in the retail voice market with a potentially analogous test in Market 2 (FACO) and Market 5 (WBA).

In this context ComReg has engaged Oxera to:

- assist in this process and to provide a conceptual economic framework that will assist ComReg in designing an appropriate MST that could be imposed in the relevant wholesale markets; and
- advise on the design and components of such an MST remedy at the wholesale level, and how this relates to the design and components of the current NRT taking into account recent market developments.

Relevant wholesale markets to impose the MST

Our analysis concludes that the appropriate MST in relevant wholesale markets is analogous to the current NRT. This is because the current NRT has the same structure as an MST anchored in regulated wholesale markets, in as much as its aim is to ensure that OAOs (other authorised operators) can earn a sufficient margin between wholesale prices (paid to eircom) and retail prices that they have to charge to compete with eircom to replicate retail bundles sold by eircom.

Furthermore, such an MST anchored in wholesale markets could ensure that competition in the retail fixed voice and broadband markets, to the extent that it is effective, constrains access prices for essential (current and next generation) wholesale inputs required by OAOs for which eircom continues to hold SMP.

The proposed obligation in Market 2 to supply SB-WLR on a retail-minus basis combined with an MST for bundled fixed voice services will allow OAOs using SB-WLR to continue to compete for customers who buy voice services as a

stand-alone service or as part of a bundle.[1] Hence the proposed MST would be a further specification of the price control obligation not to cause a margin squeeze in Market 2.

We consider that it is also important to further specify the obligation not to margin-squeeze in Market 5 (WBA), and the proposed MST would do this. This is because ComReg has found that eircom has SMP in the wholesale broadband access (WBA) market, and hence that eircom could leverage its SMP in supplying Internet access to the retail fixed voice and broadband market—whether sold as a stand-alone or bundled service. While, to date, there have been no significant deployments of managed voice over broadband (VOB) by OAOs or eircom, this may change as operators move customers to stand-alone broadband (SABB) or next generation access (NGA) broadband access products.

In Market 4, existing obligations combined with the proposed further specification of the MST in Markets 2 and 5 (relative to which a margin should be maintained in Market 4), and the use of wholesale input costs in the MST that capture the different technologies used by OAOs (including full and shared LLU), mean that there is no need to further specify the MST in Market 4. The existing obligations in Market 4 include:

- an obligation not to cause a margin squeeze and to maintain an appropriate relative margin among different wholesale access products—i.e. between full LLU, SB-WLR (sold with WBA), and SABB;
- a cost-orientation obligation for LLU and sub loop unbundling (SLU) based on a bottom-up BU-LRIC+ copper access model.

The design of the MST remedy at the wholesale level

Our analysis has taken account of current market developments in Large Exchange Areas (LEAs)/outside LEAs and the bundles market, and considered whether changes are required to the methodological decisions underpinning the calculation of cost components such as:

- differences in competitive conditions in LEAs and outside LEAs (section 3.1);
- the operator cost base to estimate retail costs (section 3.2);
- the cost standard applied to estimate retail costs (section 3.3);
- the level of aggregation to apply the MST—products (bundle by bundle) and/or portfolio basis (section 3.4);
- the treatment of unregulated services in the MST and the cost standard to use for such services (section 3.5);
- the relevant wholesale inputs to calculate wholesale costs (section 3.6).

On balance, we recommend that the proposed MST include changes to the downstream cost benchmark for current generation access (CGA) broadband in LEAs, the downstream cost standard for broadband, and that the proposed MST

[1] It will be necessary to maintain the current obligations to supply SB-WLR and the NRT in Market 1, at least for a transitory period until the obligation to supply SB-WLR and an MST is imposed in Market 2.

allow additional retail margins on double-play bundles (based on regulated wholesale inputs) to offer discounts on unregulated retail services. Each of these changes is discussed below.

At the heart of these methodological decisions and changes lies the need to balance the regulatory objective of promoting competition in the market with a desire to ensure that consumers benefit from the potential for price reductions, and to provide incumbent firms with sufficient flexibility and incentives to compete and invest.

Downstream cost benchmark for CGA broadband in LEAs—section 3.2

We recommend that the proposed MST use a mix of EEO and SEO cost benchmarks for the broadband in LEAs. The current NRT uses an SEO standard.

This makes the proposed MST consistent with the approach taken by ComReg in the wholesale (current and next generation) bitstream access market, and is also justified by current and prospective developments in the bundles market.

As consumers increasingly prefer triple-play (fixed voice, broadband and TV/mobile) to double-play bundles (fixed voice and broadband), and fixed voice bundles which do not include broadband (but include TV or mobile services) proliferate, OAOs such as Sky (traditionally a supplier of TV services) and Vodafone (traditionally a mobile service provider) are likely to be in a stronger market position to supply these bundles. Moreover, these OAOs can exploit economies of scope in supplying these other services (i.e. their unit costs of providing triple-play bundles are likely to be lower as they exhibit cost advantages from providing other related products).

Downstream cost standard for broadband—section 3.3

We recommend that the proposed MST use the LRIC in the bundle-by-bundle test in the LEAs, and ATC in the portfolio test in LEAs and the bundle-by-bundle test outside LEAs. The current NRT uses ATC in all cases.

Again, this reflects current and prospective developments in the bundles market—i.e. the increase in triple-play bundles (fixed voice, broadband and TV/mobile) and the proliferation of fixed voice bundles which do not include broadband (but include TV or mobile services) where OAOs like Sky and Vodafone may have a stronger market position.

Bundles consisting of unregulated retail services (i.e. services for which the wholesale input is not regulated)—section 3.5

We recommend that, like the current NRT, the proposed MST should include the total service LRIC (or AAC in exceptional circumstances) of the unregulated service on a stand-alone basis (including applicable avoidable retail costs) in calculating the total costs of a bundle. This is consistent with the competitive dynamics in the market discussed above and also allows for the fact that eircom will face competition in the provision of these unregulated services from other operators. This means that its ability to leverage market power into these markets will be constrained.

We note that the proposed MST would require that the cost of the bundle including the total service LRIC (or AAC in exceptional circumstances) of the unregulated service on a stand-alone basis should be covered by the retail revenues of the bundle including the unregulated service. This implicitly allows eircom to use additional retail margins on double-play bundles (based on

regulated wholesale inputs) to offer discounts on the unregulated retail service. This is not allowed under the current NRT.

Thus, as long as the bundle passes the MST, the additional retail price charged to include the unregulated service in the bundle does not need to recover its own LRIC. To require it to do so would provide entry assistance for OAOs to supply bundles including unregulated services. As noted earlier, given that OAOs like Sky and Vodafone will be in a stronger market position to supply these unregulated services, such entry assistance is not required.

1 Background and motivation

ComReg currently imposes remedies at the wholesale and retail level on eircom in the retail fixed narrowband (voice) access market, a market where eircom was found to have SMP. One of the remedies in the FVA market at the retail level is an obligation 'not to unreasonably bundle'.[2] This obligation consists of two separate obligations.

The *first obligation* requires eircom to offer all retail FVA services as stand-alone products. This aims to ensure that consumer choice is not limited through tying,[3] and to allow OAOs to compete on single services (in addition to bundles) in the fixed voice and related retail markets. OAOs currently use supporting wholesale remedies in the retail FVA market which require eircom to provide 'a wholesale equivalent for retail offerings offered by Eircom in the Markets' on a non-discriminatory basis[4] to supply these services in the retail market. For example, OAOs can use SB-WLR, currently regulated on a retail-minus basis,[5] to compete for voice-only subscriptions, and Carrier Selection and Pre-Selection to compete on just calls rather than access and calls (although increasingly access and calls are bundled together).[6]

The *second obligation* requires that the retail price of a bundle including FVA covers the sum of the costs of inputs to the bundle and relevant retail costs net of any efficiency that arise from bundling. This NRT is meant to ensure replicability of bundled offers by potential competitors. The test:

- addresses the risk of horizontal leverage[7] of market power from the retail FVA market to prospectively competitive retail services;
- ensures that the sale of bundles does not undermine wholesale retail-minus remedies currently imposed in stand-alone wholesale markets like FVA and broadband. These retail-minus remedies are in place to ensure that eircom cannot leverage its market power vertically from wholesale to retail markets and foreclose competition via a margin squeeze. [8]

However, as explained further in sections 2.2 and 2.3 of our report, the risk that eircom can leverage its market power from wholesale markets where it has SMP to retail markets remains irrespective of whether it has SMP in the retail fixed voice market. Following this and having consulted on the principle of moving the SB-WLR obligation as well as the MST to wholesale markets, ComReg is now

[2] ComReg 07/26, 'Market Analysis: – Retail Fixed Narrowband Access Markets (Response to Consultation 06/39 and Consultation on Draft Decision)', 4 May 2007. ComReg 06/39, 'Market Analysis: – Retail Narrowband Access Markets', 17 August 2006.

[3] This would be the case if eircom were to stop providing a voice-only retail service. Furthermore, consumer choice may be limited if customers could only purchase eircom's FVA service if they are also required to purchase other services (e.g. broadband). This practice is known as tying (or pure bundling). In this context we note that eircom's USO also requires it to provide a voice-only retail service.

[4] Para 5.5(i), ComReg 07/61, Retail Fixed Narrowband Access Markets, 24 August 2007.

[5] ComReg 08/19, Single Billing Wholesale Line Rental: Directions to Eircom regarding retail minus %,22 February 2008.

[6] There are also non-price obligations such as pre- notification periods.

[7] Bundling by dominant operators may give rise to competition concerns as the dominant operator can leverage its market power across related markets ('horizontal leverage'). For example, an operator with SMP in the supply fixed voice access could leverage this market power into related markets by bundling access with related services such as calls and broadband, and offering the bundle at a discount. This makes it difficult for potential competitors to replicate these bundles at a competitive price.

[8] We note that following the introduction of this remedy, ComReg consulted on its application and considered changes required to the retail-minus approach to regulating wholesale line rental (SB-WLR). As part of this consultation, it also considered the pre-notification of bundles, proposing the same 15-day notification as applied to general obligations applicable to SB-WLR product notifications as per decision D01/06. (Ref: ComReg 08/05, 'Treatment of Regulated Services within Bundled Retail Offers', 4 January 2008).

consulting in more detail on replacing the NRT element of the 'not to unreasonably bundle' obligation that currently sits in the retail voice market with a potentially analogous test in Market 2 (FACO)[9] and Market 5 (WBA).[10] ComReg has engaged Oxera to assist in this process. Following this, our report has two main objectives.

First, Oxera has been asked to provide a conceptual economic framework that will assist ComReg in designing an appropriate MST that could be imposed in the relevant wholesale markets. Such an MST should address the competition concerns currently addressed by the 'not to unreasonably bundle' obligation and the NRT at the retail level.

Second, Oxera has been asked to advise on the design and components of such an MST remedy at the wholesale level, and how this relates to the design and components of the current NRT taking into account recent market developments.

The report is organised as follows:

- section 2 discusses recent and likely future fixed voice (retail and wholesale) market developments as relevant to the design of a proposed MST; identifies leveraging and competition concerns in the market; and then makes the economic case for an MST in relevant wholesale markets which would address the competition concerns currently addressed by the NRT;
- section 3 provides an overview of the current implementation of the NRT in the retail FVA market, and elaborates on the structure and composition of the proposed MST in wholesale markets taking into account the recent and likely future market developments.

[9] FACO (fixed access and call origination)
Paras 2.56–2.58 and 9.214, ComReg 14/26, 'Market Review Wholesale Fixed Voice Call Origination and Transit Markets', 4 April 2014.
[10] WBA (wholesale broadband access).

2 Competition in FVA and related markets and the case for MST in relevant wholesale markets

We begin this section by examining some recent trends in the retail and wholesale fixed voice (FVA) market in section 2.1.

Section 2.2 then analyses potential competition concerns in the FVA market (including cases when voice is sold as part of a bundle), and how the current NRT in the retail FVA market addresses these concerns.

Finally, section 2.3 considers the economic case for an MST in wholesale markets to address the same competition concerns, and the relevant wholesale markets (Market 2—FACO and Market 5—WBA) to implement the MST.

2.1 The FVA market

Developments in the FVA market relating to how products are sold and consumed can have consequences for market definition and/or the regulatory remedies that may be appropriate. In the context of the proposed MST, changes in the retail market might affect the bundles over which the proposed MST should apply, whereas changes in the wholesale market could potentially influence the degree of SMP held there by the incumbent (the source of any vertical leverage from wholesale to retail markets). We discuss relevant developments in each of these markets below.

2.1.1 The retail FVA market

We highlight two trends in the retail FVA market which are relevant in the present context:

1. eircom's retail FVA market share has decreased somewhat in recent years;

2. FVA services are increasingly purchased in bundles.

Retail market shares

Recent trends in the fixed access market indicate that eircom is steadily losing market share in the retail fixed voice market, although it is still by far the largest operator in terms of fixed voice retail subscriptions. As at Q4 2013, eircom had 51% of all fixed voice subscriptions (either stand-alone or as part of a bundle) followed by UPC (19%) and Vodafone (16%).[11]

Splitting these figures into stand-alone fixed voice and bundled subscriptions (which as of Q4 2013 split about [✂]), we note that eircom [✂]. For fixed voice bundled with other services, eircom's market share was [✂], and for stand-alone fixed voice it was [✂], as at Q4 2013. The [✂] in eircom's fixed voice retail market share and the corresponding changes in UPC's, Vodafone's and OAOs' market shares are presented in Figure 2.1 (stand-alone fixed voice) and Figure 2.2 (bundles of fixed voice with a non-voice service).

These figures show that UPC (the only other communications infrastructure provider in Ireland) has an [✂] market share for stand-alone voice subscriptions, but [✂] market share of fixed voice subscriptions sold as part of a bundle based on Q4 2013 data.

[11] ComReg 14/19, Quarterly Key Data Report, p20: Data as at Q4 2013,14 March 2014.

The growth in FVA bundles

An important development in recent years is the bundling of fixed voice with other services. Retail offers in Ireland are increasingly composed of voice and combinations of broadband and television services, with a majority of consumers now purchasing bundles, as shown in Figure 2.3.

By far the most common type of bundle is [✂], as can be seen in Figure 2.4.

Market developments suggest that service providers increasingly expect to compete for subscribers on the basis of bundled services. These developments include:

- the entry of Sky (traditionally a supplier of TV services) into the broadband and telephony market using BT's LLU platform;
- the commercial agreement of Vodafone (traditionally a mobile service provider) to purchase BT's residential broadband and telephony customer base and to use BT's network in addition to eircom's bitstream products;
- the launch of IPTV over eircom's NGA network.

Thus, it is likely that bundles will increase in prevalence over the next few years, although a proportion of customers will continue to purchase stand-alone FVA (and calls) subscriptions.

Conclusion

Overall, the retail fixed voice market continues to evolve as consumers purchase a diverse set of products. eircom's fixed voice retail market share has fallen in recent years within this evolving market, especially for bundled voice services. However, eircom continues to be a major player and is likely to maintain a substantial retail fixed voice presence in the foreseeable future—for stand-alone and bundled subscriptions.

Figure 2.1 Market shares for stand-alone fixed voice subscriptions

[✂]

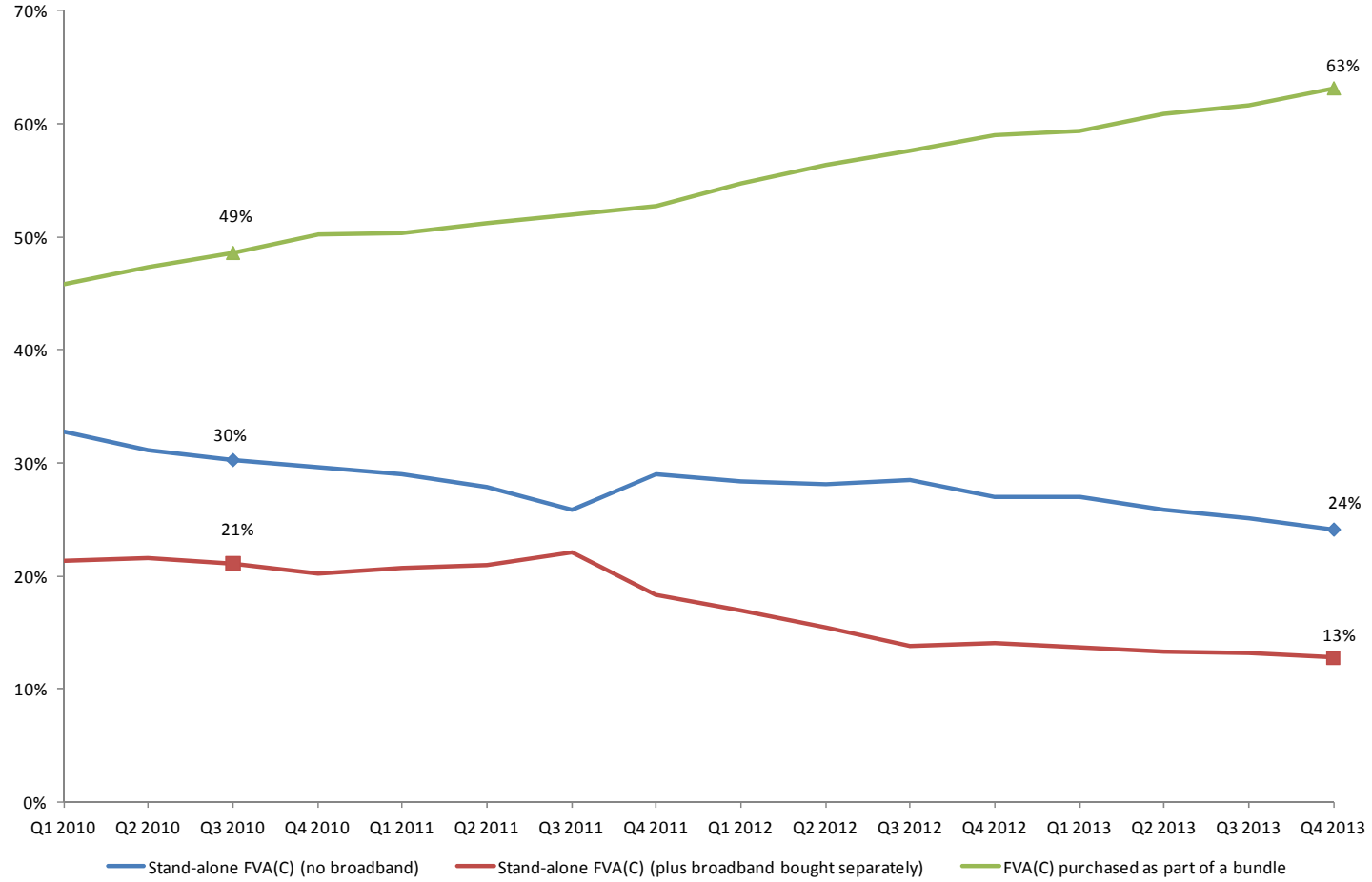
Source: ComReg.

Figure 2.2 Market shares for bundled fixed voice subscriptions

[✂]

Source: ComReg.

Figure 2.3 Consumer demand for fixed voice—stand alone and bundles



Note: FVA(C) is fixed voice access and calls.

Source: ComReg.

Figure 2.4 FVA bundles, Q4 2013

[✂]

Source: ComReg.

2.1.2 The FVA wholesale inputs market

We focus on two features of the FVA wholesale inputs market that are relevant in the present context.

1. All alternative fixed voice retail service providers in Ireland (except UPC) are dependent on wholesale network inputs provided by eircom to compete in the retail market. Without these wholesale inputs, competition in the retail market would be severely constrained.

2. There is variation among areas in Ireland with regard to the take-up of different wholesale network inputs, and in UPC's cable network coverage. These differences are reflected in higher levels of retail competition (especially for bundles) in eircom's exchange areas covered by UPC's cable network and exchanges with higher levels of unbundling.

Wholesale inputs controlled by eircom

In Ireland, eircom is the only wholesale provider with a ubiquitous national network. As such, all other operators, with the exception of UPC (which provides the majority of its services over its cable network), rely on eircom wholesale inputs to provide fixed voice and broadband services, whether sold as a bundle or separately.

eircom wholesale access products that can be used to provide analogue voice services over its copper access network (i.e. a traditional POTS service) are:

- SB-WLR (single bill wholesale line rental): this allows service providers to issue a single bill to customers for both calls and line rental charges through the purchase of a bundled WLR and Call Origination product;[12]

- WLA-voice (white label access—voice access): this wholesale voice access product builds on the SB-WLR service. It allows an OAO to purchase an end-to-end voice service without the need to have its own interconnection infrastructure, as eircom manages all switching and captures all CDR (call detail record) on behalf of the OAO. The WLA-voice wholesale product is unregulated but the key underlying wholesale inputs of the service (call origination, termination, and transit) are regulated;[13]

- full LLU (local loop unbundling) or ULMP (unbundled local metallic path) provides OAOs with the exclusive use of the copper loop between an eircom exchange facility and customer premises.

[12] We note that the CPS service can also be bought without WLR, in which case the user can buy all or a portion of calls (for example national or international) from one provider (usually an OAO), and line rental from another provider (usually eircom). OAOs have continued to migrate their customers from CPS only to SB-WLR or WLA, and as at Q4 2013 the share of CPS-only indirect access paths was 4.9% of all indirect access paths (Ref: ComReg 14/19, Quarterly Key Data Report: Data as at Q4 2013, 14 March 2014).

[13] ComReg D07/11, 'Wholesale Call Origination and Wholesale Call Termination Markets: Response to Consultation Document No. 10/76 and decisions amending price control obligations and withdrawing and further specifying transparency obligations',15 September 2011.

In addition, voice services may be provided over broadband networks using a managed VOB service, a service which ComReg includes in the FVA market.[14] This technology is used by UPC to provide voice services over its cable network, and OAOs can in principle use WBA products supplied by eircom to provide a similar managed VOB retail service.[15] These broadband access products include:

- full or shared LLU: shared LLU or line share allows OAOs to rent only the high-capacity frequencies within the copper loop between an eircom exchange facility and a customer's premises. This can be used to provide broadband services;
- WBA (wholesale broadband access) or SABB: WBA allows OAOs to rent non-physical access by purchasing Bitstream—i.e. to simply resell eircom's broadband product provided over its DSL or NGA network. In July 2013, eircom launched SABB or 'naked' DSL, which allows an ADSL 2/ADSL2plus service to be delivered over a 2-wire copper pair without the requirement to also buy a POTS or SB-WLR service from eircom;
- NGA broadband access products: these include Bitstream Plus and VUA (virtual unbundled access) in exchanges where eircom has rolled out its NGA network.[16]

A managed VOB solution is currently not widely used by either eircom or OAOs, and, as ComReg notes:[17]

> To date there have not been any significant deployments of Managed VOB services by Access Seekers over wholesale broadband products purchased by them from Eircom (either using WBA or WPNIA products).

However, as OAOs move their customer bases to SABB or NGA, they may start offering managed VOB, at least to a subset of their customers. Similarly, while eircom does not currently use VOB to provide voice services, it may do so for NGA customers. For its remaining customers, eircom is likely to continue to deliver traditional PSTN voice services for the next few years.[18]

These different wholesale inputs are used in varying proportions by OAOs (Table 2.1). We note that, based on December 2013 data, OAOs predominantly replicate eircom's bundles by using SB-WLR for voice access and either bitstream (WBA) or line share for the broadband component. In addition, a small proportion uses ULMP (full LLU) to provide voice and broadband services, and SABB to provide broadband services.

[14] ComReg 13/95,'Supplementary Consultation to ComReg Document 12/117: Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non-Residential Customers: Market Definition', 17 October 2013.
[15] Managed VOB is defined as a service provider providing voice services over an IP access path either directly on its own network, or indirectly by renting a broadband access product. A managed VOB service provider will usually also have its own switching platform, interconnected path(s) and numbering allocations. In addition it will be able to manage the quality of VOIP traffic on the IP access path in order to ensure minimum quality of service requirements. (Para 3.34, ComReg 14/26, 'Market Review Wholesale Fixed Voice Call Origination and Transit Markets', 4 April 2014.)
[16] We note that these eircom NGA access products also have variants which include POTS support.
[17] Para 3.40, ComReg 14/26, 'Market Review Wholesale Fixed Voice Call Origination and Transit Markets', 4 April 2014.
[18] Para 3.41, ComReg 14/26, 'Market Review Wholesale Fixed Voice Call Origination and Transit Markets', 4 April 2014.

Table 2.1 Use of wholesale access products by OAOs—all exchanges, December 2013

Wholesale product	Relative OAO use
SB-WLR and WBA	[✂]
SB-WLR and line share	[✂]
ULMP	[✂]
SABB	[✂]

Note: This data does not include SB-WLR purchased without WBA or line share.

Source: ComReg.

This data shows that OAOs (except UPC) that have entered the retail fixed voice and broadband markets and won market share depend on regulated wholesale inputs to provide voice and broadband services—whether on a stand-alone or bundles basis.

Regulated access to full LLU is also important for some OAOs and is used to provide voice and broadband bundles. However, full LLU is not used to supply stand-alone voice services in any region in Ireland, and this is likely to remain the case as it usually not economical to use full LLU to provide voice-only services.[19] Similarly, managed VOB (if and when rolled out) is likely to be sold in a broadband and/or pay TV bundle, and may not be a substitute for customers who would like to buy unbundled voice-only services.[20]

Variation between LEAs and outside LEAs

ComReg recently assessed the structural and investment conditions in different areas in Ireland and found that geographic areas differ based on various criteria such as technical decisions made by eircom, the presence of alternative infrastructure providers (for example UPC) and the use of certain wholesale inputs (for example LLU). On this basis, ComReg classifies exchange areas into two kinds with different levels of competition:[21]

- LEAs: exchange areas typically served by eircom's current and next generation access networks, as well as UPC's cable network and/or LLU-based service providers. We note that BT's current LLU footprint (based on eircom's line share product offering) used by Vodafone and Sky lies within the planned NGA footprint area, which in turn largely overlaps LEAs;[22]
- outside LEAs: exchange areas in which competition is based largely on reselling eircom's wholesale access products, and typically not covered by UPC's cable network. These are the more suburban, rural and remote areas with higher costs for potential entrants and where the prospects for entry by a further LLU operator will be limited.

[19] Para 52, ComReg 13/95,'Supplementary Consultation to ComReg Document 12/117: Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non-Residential Customers: Market Definition', 17 October 2013.
[20] Paras 4.87–4.100, ComReg 14/26, 'Market Review Wholesale Fixed Voice Call Origination and Transit Markets', 4 April 2014.
[21] Section4, ComReg 13/90, Wholesale Broadband Access: Price control obligation in relation to current generation bitstream, 19 September 2013.
[22] Para 2.6, ComReg D03/13, 'Next Generation Access ('NGA'): Remedies for Next Generation Access Markets', 31 January 2013.

While the principles used by ComReg to classify an exchange area as being an LEA (or outside LEA) are developed in its Bundles Decision,[23] we note that the boundary between LEAs and outside LEAs can change depending on market developments. For example, more exchange areas may be included in LEAs depending on:

- the impact of Sky's entry into retail broadband on LLU use;
- further expansion of BT's LLU footprint;
- the plan of the national electricity supplier (ESB) to enter the broadband market in the LEA by leveraging its own access network;
- the future take-up of eircom's virtual unbundled access service.

Table 2.2 and Table 2.3 below present OAOs' (excluding UPC) use of different eircom wholesale products in LEAs and outside LEAs as at December 2013. We observe that in both cases (approximately [✂] in LEAs and [✂] outside LEAs), OAOs (except UPC) are dependent on SB-WLR to supply retail voice services and WBA/line share to provide broadband services—as a stand-alone or bundled service. We also note that the use of full LLU (which can be used to provide voice and broadband bundles) is largely non-existent outside LEAs, reflecting the higher costs for potential LLU-based entrants in these areas.

Table 2.2 Use of wholesale access products by OAOs—LEAs, December 2013

Wholesale product	Relative OAO use
SB-WLR and WBA	[✂]
SB-WLR and line share	[✂]
ULMP	[✂]
SABB	[✂]

Note: This data does not include SB-WLR purchased without WBA or line share.

Source: ComReg.

Table 2.3 Use of wholesale access products by OAOs—outside LEAs, December 2013

Wholesale product	Relative OAO use
SB-WLR and WBA	[✂]
SB-WLR and line share	[✂]
ULMP	[✂]
SABB	[✂]

Note: This data does not include SB-WLR purchased without WBA or line share.

Source: ComReg.

Conclusion

Overall, the FVA wholesale inputs market is dominated by eircom, and this is likely to remain the case for the foreseeable future.[24] There are differences

[23] Paras 4.80–4.114, ComReg D 04/13, 'Price Regulation of Bundled Offers: Further specification of certain price control obligations in Market 1 and Market 4', 8 February 2013.
[24] We note that ComReg is also reviewing the local access market in its reviews of Market 2 (ComReg 14/26, 'Market Review Wholesale Fixed Voice Call Origination and Transit Markets', 4 April 2014) and Market 5

between LEAs and outside LEAs, but in both areas all OAOs (except UPC in LEAs) are largely dependent on SB-WLR (i.e. WLR and CPS) to provide retail voice services, and WBA or line share to provide retail broadband services, whether sold in a bundle or as a stand-alone service. Some OAOs also use full LLU (i.e. ULMP) to provide these services. As noted earlier, to date, there have not been any significant deployments of managed VOB by OAOs. However, this may change in the near future as the take-up of SABB and NGA-based access services increases. In these cases, common wholesale access inputs will be used to provide both voice and broadband services.

Thus, to be able to compete with eircom in the retail voice and/or broadband market, whether sold as a stand-alone service or as part of a bundle, OAOs require access not only to various wholesale inputs supplied by eircom, but also on a basis which does not force them to sell their services at a loss—i.e. OAOs should be able to profitably replicate bundles which include voice and/or broadband.

Next, we discuss potential competition issues in fixed voice and related markets, and how the current NRT in the retail voice market helps ensure the replicability of voice bundles by OAOs. We then explore the economic case for an MST at the wholesale level in Market 2 (FACO) and Market 5 (WBA) to deal with these competition issues.

2.2 Potential competition issues arising in the FVA wholesale inputs market

ComReg is currently reviewing the FVA retail market definition, and it may find that there is a market for FVA whether sold inside or outside a bundle. As such, eircom is still likely to have SMP in the relevant FVA market. Separately, the European Commission is also reviewing the list of electronic communications markets subject to ex ante regulation, and it may conclude that the FVA retail market should be removed from this list.

If, for whatever reason, eircom is found no longer to have SMP in the retail FVA market, horizontal leverage of market power—from the retail voice access market to other competitive or prospectively competitive retail markets included in eircom's retail bundles (for example voice and broadband bundles)—which is one of the underpinnings of the current NRT test in the retail market, would no longer be a competition concern.

However, irrespective of whether eircom has SMP in the fixed retail voice market (defined on a stand-alone or bundles basis), subject to the future conduct of market analyses, at least for the next few years, eircom is likely to have (for both current and next generation access):

- SMP in wholesale markets, and hence control over the wholesale inputs required by the significant majority of OAOs (except, for example, UPC in LEAs) to supply retail services such as voice and/or broadband;
- a large retail market presence in the provision of stand-alone and bundled fixed voice and broadband services.

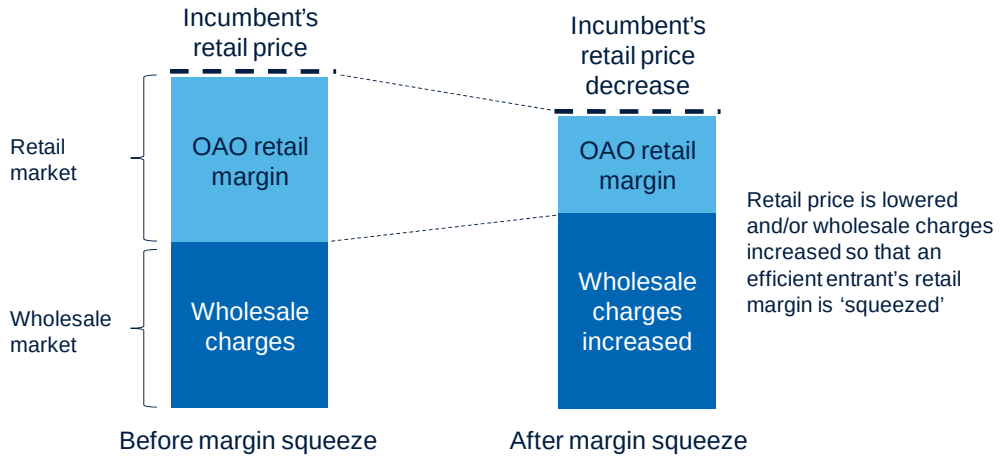
This means that eircom will be capable of leveraging its market power vertically from wholesale markets where it has SMP and engaging in a margin squeeze

(ComReg 13/90, Wholesale Broadband Access: Price control obligation in relation to current generation bitstream, 19 September 2013). Nothing is this report is meant to prejudge the outcomes of these reviews.

(i.e. reduce the retail margin available to OAOs as they match eircom retail prices in a competitive retail market) by either increasing the wholesale charges and/or decreasing the retail price as illustrated in Figure 2.5 below. Indeed, the definition of a margin squeeze is a form of vertical leveraging whereby a 'vertically integrated company attempts to exploit a position of dominance in an input market to restrict competition in a competitive downstream market.'[25]

So, eircom can engage in a margin squeeze irrespective of whether it is found to have SMP in the fixed retail voice market.

Figure 2.5 Margin squeeze mechanics



Source: Oxera.

In order to identify potential competition concerns that can arise via a margin squeeze based on eircom's SMP in wholesale markets, it is useful to consider the types of service bundles available at the retail level and the underlying wholesale markets supplying these retail products. In general, these could be:

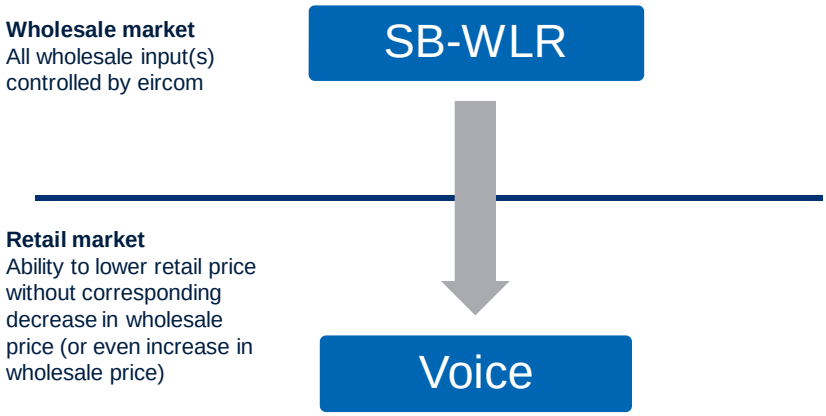
1. a single retail product using a single wholesale input for which eircom has SMP—for example, voice services provided using SB-WLR;
2. a retail bundle consisting of multiple services and where OAOs require eircom wholesale inputs to supply each component of the retail bundle—for example, a voice and broadband bundle provided using SB-WLR and WBA (or NGA bitstream/VUA);
3. a retail bundle consisting of multiple services and where OAOs require eircom wholesale inputs to supply at least some components of the retail bundle—for example, a fixed broadband and mobile voice bundle.

2.2.1 A single retail product using a single wholesale input

This situation is illustrated in Figure 2.6.

[25] p. 239, Niels, G., Jenkins, H. and Kavanagh, J. (2001), *Economics for Competition Lawyers*, Oxford University Press.

Figure 2.6 Margin squeeze for single retail product



Source: Oxera.

In this case, a traditional margin squeeze using vertical leverage is possible, as eircom continues to hold SMP in wholesale access. In the absence of regulation, eircom could increase the wholesale price of SB-WLR or lower the retail price of voice services to a point where OAOs would not be able to supply this service profitably in the retail market. A similar situation exists wherever an entity with SMP in wholesale inputs also competes downstream in the retail market for the same product.

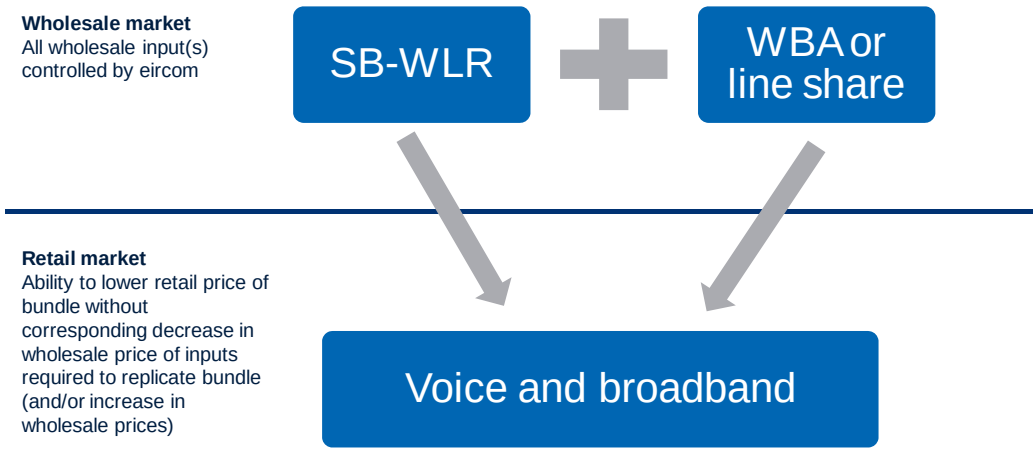
We note that these issues are currently addressed by supporting remedies accompanying the current NRT test. These include the obligation to provide 'a wholesale equivalent for retail offerings offered by Eircom in the Markets' on a non-discriminatory basis, which includes SB-WLR, and an obligation to price SB-WLR on a retail-minus basis in order to provide sufficient retail margin to OAOs.[26]

2.2.2 A retail bundle consisting of multiple services and where OAOs require eircom wholesale inputs to supply each component of the retail bundle

This situation is illustrated in Figure 2.7.

[26] Para 5.5(i), ComReg 07/61, 'Retail Fixed Narrowband Access Markets', 24 August 2007.

Figure 2.7 Margin squeeze for retail bundles (voice and broadband)



Source: Oxera

The analysis of a bundling situation where eircom has SMP in all upstream inputs used to supply bundles in the retail market and also competes in the downstream retail market for bundles is similar to the stand-alone case. In the absence of regulation, eircom can impose a margin squeeze using vertical leverage from any of the wholesale markets in which it has SMP to the retail market. It can do this by raising the prices of one or more of the wholesale inputs required to replicate the bundle and/or decrease the retail price of the bundle. Thus, the margin squeeze may allow the SMP operator to extend its dominance to bundles in addition to stand-alone services.

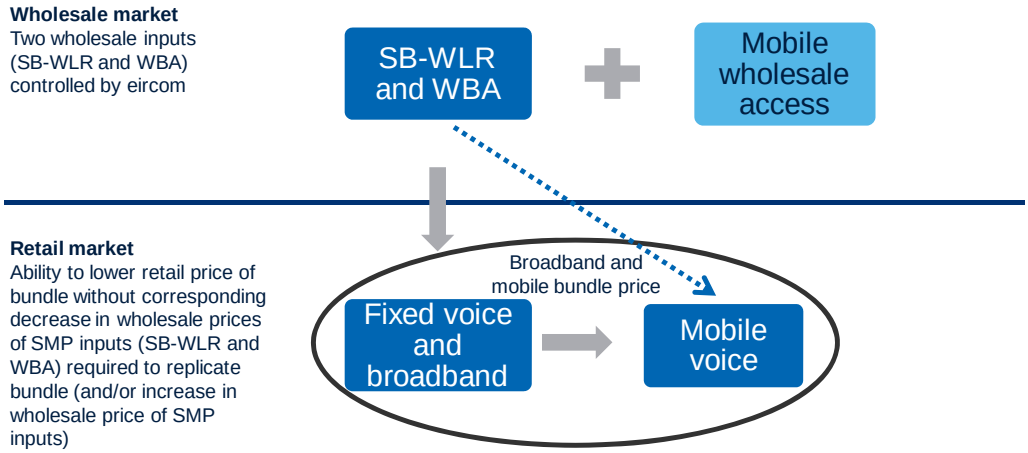
The current NRT at the retail level requires that the retail price of a bundle including FVA covers the sum of the costs of wholesale inputs to the bundle and relevant retail costs net of any efficiency that arises from bundling. Thus, as explained in section 1, the current NRT ensures that there is sufficient margin for OAOs to replicate bundled offers by eircom profitably, and that the sale of bundles does not undermine wholesale 'retail-minus' remedies in wholesale markets.

In effect, the current NRT, even though it is anchored in the FVA retail market, deals with anti-competitive effects that can arise by virtue of eircom's market power in both retail and wholesale markets. In other words, it deals with the risk that OAOs in the retail market may not be able to earn a sufficient margin between the access prices they need to pay and the retail price they need to charge to compete with eircom.

2.2.3 A retail bundle consisting of multiple services and where OAOs require eircom wholesale inputs to supply at least some components of the retail bundle

Finally, replication of a retail bundle may require a wholesale input in which eircom has SMP as well as an unregulated wholesale input. This situation is illustrated in Figure 2.8.

Figure 2.8 Margin squeeze for retail bundles (fixed voice,broadband and mobile)



Source: Oxera.

In this case, there is the risk that eircom is able to extend its market power into retail services (for example mobile services) in which it does not have market power and/or maintain (or exploit) its retail and wholesale market power in regulated services by undermining wholesale SMP remedies in those markets. It can do this by either increasing the price of the SMP wholesale inputs it controls and/or decreasing the price of the retail bundle to a point where OAOs would not be able to supply the bundle profitably in the retail market.

In the example above, eircom leverages its SMP in the wholesale fixed voice and broadband access markets 'diagonally' or indirectly (shown by the dashed blue arrow in Figure 2.8) to retail mobile services and/or maintains its dominance in the fixed voice and broadband access markets by bundling mobile, fixed voice and broadband services at the retail level.

We note that the outcome of this 'diagonal' or 'indirect' leverage is similar to the horizontal leverage concern underlying the retail NRT as explained in section 1. Bundling allows eircom to leverage its SMP in wholesale inputs from one market into prospectively unrelated competitive retail markets and/or maintain its SMP position in the regulated markets. Again, the current NRT—even though it is implemented or anchored in the retail fixed voice market—deals with anti-competitive effects that may arise from eircom leveraging its market power 'diagonally' or 'indirectly' from wholesale markets, as described above, and/or maintaining its dominance in regulated markets. The current NRT does this by requiring that the retail price of *any* bundle including fixed voice (irrespective of whether eircom controls other wholesale inputs required to provide the bundle) covers the sum of the costs of inputs to the bundle and relevant retail costs (net of efficiency). As such, without the current NRT, there are no pricing remedies which ensure that a retail bundle supplied by eircom can be profitably replicable by OAOs.

We note that the ability of a dominant operator to leverage market power 'diagonally' or indirectly, as described above, will depend on the retail demand for bundles, including the unregulated service supplied by the dominant operator compared with retail demand for the same service supplied on a stand-alone basis or as part of a bundle by other service providers.

For example, eircom could include TV at a discount in a voice and broadband bundle—two markets in which it is dominant at the wholesale inputs level—hoping to extend its market power to triple-play bundles including TV and/or the stand-alone TV market. However, its ability to do so will depend on the demand for stand-alone TV and for double- or triple-play offers supplied by UPC. If there is sufficient demand for TV services supplied by UPC then eircom may not be able to leverage its market power into the TV market. A similar analysis applies to mobile services.

2.3 The case for a wholesale MST remedy

As explained above, the risk that eircom can leverage its market power from wholesale markets where it has SMP to retail markets remains irrespective of whether it has SMP in the retail fixed voice market. This is because eircom can leverage its market power from (current and next generation) wholesale markets where it has SMP to the retail fixed voice and broadband markets, whether sold as stand-alone services or in bundles. Furthermore, such bundling may allow eircom to leverage its SMP in wholesale inputs into prospectively unrelated competitive retail markets using 'diagonal' or 'indirect' leverage and/or exploit its retail and wholesale market power in regulated services by undermining wholesale SMP remedies in those markets.

The current NRT, even though it is implemented or anchored in the retail fixed voice market, deals with these anti-competitive effects, and it is important that regulatory remedies remain in place to ensure effective competition in retail fixed voice (and broadband) markets. Given the close links between retail and wholesale markets described above, one way to ensure this is to impose an appropriate MST in relevant wholesale markets instead of the current NRT in the retail fixed voice market—i.e. Market 1. However, in the interim, before the appropriate remedies are implemented in relevant wholesale markets, it is important that the NRT and associated remedies are maintained in Market 1.

The appropriate MST in relevant wholesale markets is potentially analogous to the current NRT. This is because the current NRT has the same structure as an MST anchored in regulated wholesale markets, in as much as its aim is to ensure that OAOs can earn a sufficient margin between wholesale prices (access prices they pay) and retail prices (that they have to charge to compete with eircom). This allows OAOs to replicate retail bundles sold by eircom.

Furthermore, such an MST anchored in wholesale markets could ensure that competition in the retail fixed voice and broadband markets, to the extent that it exists, constrains access prices for essential (current and next generation) wholesale inputs required by OAOs for which eircom continues to hold SMP. We note that the margin squeeze test imposed on eircom's NGA product range deals with similar competitive concerns.[27]

Next we discuss the wholesale markets to anchor the MST, and then the structure and composition of the proposed MST in the subsequent section.

2.3.1 Wholesale markets to anchor the MST

To be effective in dealing with the competition concerns identified above, the MST should be anchored in:

[27] ComReg D03/13, 'Next Generation Access ('NGA'):Remedies for Next Generation Access Markets', 31 January 2013.

- Market 2 (FACO); and
- Market 5 (WBA: which includes current/next generation bitstream, VUA and SABB).

As discussed above, OAOs can use a variety of regulated wholesale inputs to supply retail fixed voice, broadband and VOB services. In particular, OAOs can use:

- SB-WLR and full LLU to supply PSTN voice services;
- wholesale Internet access inputs (such as WBA and LLU) to supply broadband and VOB services.

Further specification of MST in Market 2 (FACO)

The majority of the OAOs (except UPC in LEAs) depend on SB-WLR to provide retail voice services, whether sold in a bundle or as a stand-alone service. As ComReg notes:[28]

> As such, SB-WLR has become the main wholesale product used by FSPs to provide competing retail fixed calls and access services

Thus, eircom can leverage its SMP in supplying SB-WLR (and other wholesale inputs like LLU) to the retail fixed voice market—whether sold as a stand-alone or bundled service—and other related markets, as discussed in section 2.2. Reflecting this and its own analysis, ComReg's recent Market 2 consultation and draft decision on wholesale voice call origination and transit markets proposes to impose, among other price control remedies, the following:[29]

> A retail minus 'X' price control obligation whereby Eircom must provide WLR to Access Seekers at a price that is at least 14% below Eircom's retail line-rental price. Other price control options for WLR such as cost orientation will be examined in the Separate Access Network Pricing Consultation.
>
> ....
>
> An obligation not to cause a margin squeeze, including with respect to an SB-WLR margin squeeze (the details of which will be consulted upon in the NRT Margin Squeeze Consultation) and a Wholesale SV Margin Squeeze (the parameters of which will be further considered and consulted upon in the Separate FVCO Price Control Consultation).

This proposed obligation in Market 2 to supply SB-WLR on a retail-minus basis combined with an MST for bundled fixed voice services will allow OAOs using SB-WLR to continue to compete for customers who buy voice services as a stand-alone service or as part of a bundle.[30] The proposed MST would be a further specification of the price control obligation not to cause a margin squeeze in Market 2.

Further specification of MST in Market 5 (WBA)

[28] Para 9.65, ComReg 14/26, 'Market Review Wholesale Fixed Voice Call Origination and Transit Markets', 4 April 2014.
[29] Para 9.275, ComReg 14/26, 'Market Review Wholesale Fixed Voice Call Origination and Transit Markets', 4 April 2014.
[30] It will be necessary to maintain the current obligations to supply SB-WLR and the NRT in Market 1, at least for a transitory period until the obligation to supply SB-WLR and an MST is imposed in Market 2.

In its 2011 decision, ComReg found that eircom had SMP in the WBA market,[31] and hence that eircom could leverage its SMP in supplying Internet access to the retail fixed voice and broadband market—whether sold as a stand-alone or bundled service.

While, to date, there have been no significant deployments of managed VOB by OAOs or eircom, this may change as operators move customers to SABB or NGA broadband access products. Thus, it is important to further specify the obligation not to margin squeeze in the WBA market, and the proposed MST would do this. We note that ComReg is currently reviewing the WBA market, and once completed the review findings may lead to further changes to proposed margin squeeze remedies in this market.[32]

No need to further specify the MST in Market 4 (wholesale physical network infrastructure access, including shared or fully unbundled access)

As discussed earlier, a small proportion of OAOs in LEAs use full LLU to provide bundled voice and broadband services, and full or shared LLU may also be used to provide VOB. However, existing regulatory obligations imposed on eircom in Market 4 mean that there is no need to further specify an MST in this market. These obligations include:[33]

- an obligation not to cause a margin squeeze and to maintain an appropriate relative margin among different wholesale access products—i.e. between full LLU, SB-WLR (sold with WBA), and SABB;
- a cost-orientation obligation for LLU and SLU based on a bottom-up BU-LRIC+ copper access model.

These existing obligations combined with the proposed further specification of the MST in Markets 2 and 5 (relative to which a margin should be maintained in Market 4), and the use of wholesale input costs in the MST (see section 3.6) that capture the different technologies used by OAOs (including full and shared LLU) mean that there is no need to further specify the MST in Market 4.

[31] ComReg 11/49, 'Market Review: Wholesale Broadband Access, Response to Consultation and Decision', Decision No. D06/11, 8 July 2011. We note that ComReg is currently reviewing the WBA market, and once completed the review findings may lead to further changes in the remedies proposed in the market.
[32] ComReg 13/90, 'Wholesale Broadband Access: Price control obligation in relation to current generation Bitstream, 19 September 2013.
[33] ComReg D05/10; Document 10/39, 'Market Review: Wholesale (Physical) Network Infrastructure Access (Market 4)', 20 May 2010; ComReg Document 10/10, 'Response to Consultation and Decision – Local Loop Unbundling ('LLU') and Sub Loop Unbundling ('SLU') Maximum Monthly Rental Charges', 9 February 2010; ComReg D04/13; Document 13/14, 'Price Regulation of Bundled Offers: Further specification of certain price control obligations in Market 1 and Market 4, 8 February 2013.

3 The composition and structure of the proposed MST

As explained in the previous section, an MST anchored in Market 2 (FACO) and Market 5 (WBA) should address the same competition concerns addressed by the NRT. This MST is potentially analogous to the NRT, which is similar to an MST anchored in the retail FVA market. Thus the starting point of our analysis is the current NRT.

Structure and components of the current NRT

The NRT functions like an MST and, as explained in section 1, requires that the retail revenues of a bundle (and portfolio in LEAs)[34] cover the sum of the wholesale costs of inputs to the bundle (and portfolio in LEAs)[35] and relevant retail costs net of any efficiency that arises from bundling. Table 3.1 presents the different revenue and cost components of the NRT.

Table 3.1 Revenue and cost components of the current NRT

	Revenue	Cost
Access, calls and broadband	(R1) Monthly bundle price	*(W) Wholesale costs*: 1. Access input costs 2. Price of calls—origination, transit and termination (i.e. the network cost for a whole call on the eircom network)
	(R2) Monthly out-of-bundle calls revenues	*Retail costs for:* (C1) Retail line rental derived from the SB-WLR regulated retail-minus price control (C2a) Calls—either audited total call costs including common costs outside LEAs or (C2b) LRIC in LEAs (i.e. total costs less common costs less fixed indirect costs) (C3) Broadband derived from the WBA regulated retail-minus price control
	(R3) Monthly out-of-bundle other revenues	(C4) Mailbox costs if applicable
And if bundle includes unregulated services		
Unregulated services (services which do not rely on retail fixed narrowband access)	Incremental revenues, if any, over average customer lifetime (which potentially vary for different unregulated products)	(C5) LRIC of relevant service or AAC in exceptional circumstances (i.e. if no significant impact on competition) and applicable avoidable retail costs

Source: Oxera, based on Section 5.5, ComReg D 04/13, 'Price Regulation of Bundled Offers: Further specification of certain price control obligations in Market 1 and Market 4', 8 February 2013.

The proposed MST in wholesale markets will consider the same revenue and cost components as the current NRT, and our preliminary assessment is that the calculation of the total monthly bundle revenue (R1+R2+R3 in Table 3.1 above)

[34] This is a weighted average of the monthly LEA bundle revenue where the weights are the volumes of each bundle sold.
[35] This is a weighted average of the monthly LEA bundle cost where the weights are the volumes of each bundle sold.

(and portfolio revenue) in the proposed MST should be the same as the current NRT. This is because there are no methodological decisions underpinning the calculation of the various revenue components. This is not the case for the cost components.

While the same cost components as the current NRT should be included in the proposed MST, various methodological decisions underpinning the calculation of these cost components should be reviewed. These include:

- how differences in competitive conditions in LEAs and outside LEAs are reflected in the MST (section 3.1);
- the operator cost base to estimate retail costs (section 3.2);
- the cost standard applied to estimate retail costs (section 3.3);
- the level of aggregation to apply to the MST—products (bundle by bundle) and/or portfolio basis (section 3.4);
- the treatment of unregulated services in the MST and the cost standard to use for such services (section 3.5);
- the relevant wholesale inputs to calculate wholesale costs (section 3.6);
- the timing of the test (section 3.7);
- other possible options for revisions (section 3.8).

We note that since the NRT was introduced, ComReg has conducted several consultations that have proposed and implemented various modifications to the NRT.[36] For example, in its 2013 Decision, ComReg proposed that 'a revised more flexible NRT would be applied for bundles sold/offered in certain prospectively competitive exchanges.'[37] Table 3.2 below provides an overview of the main modifications to the methodological choices made to the NRT in this 2013 Decision.

[36] For example, ComReg 11/72, 'Review of the appropriate price controls in the markets of Retail Fixed Narrowband Access, Wholesale Physical Network Infrastructure Access and Wholesale Broadband Access: Further specification of certain price control obligations in the markets of Retail Fixed Narrowband Access and Wholesale Physical Network Infrastructure Access', 10 October 2011; ComReg 10/01, 'Consultation and draft direction: further specification of the obligation not to unreasonably bundle pursuant to D07/61', 6 January 2010.

[37] Para 3.7, ComReg D 04/13, 'Price Regulation of Bundled Offers: Further specification of certain price control obligations in Market 1 and Market 4, 8 February 2013.

Table 3.2 Main NRT modifications introduced in the 2013 bundles decision (D04/13)

New test feature	Modification	Economic rationale for change
Definition of LEA	Less stringent NRT in more competitive areas (LEAs)	Ensure that the competitiveness of eircom retail is not undermined in LEAs
Level of aggregation	From a single-product (bundle-by-bundle) NRT to a combinatorial test—i.e. bundle-by-bundle and portfolio NRT in LEAs No change outside LEAs	Use a two-part NRT (with a lower cost standard for the bundle-by-bundle NRT) in LEAs to provide eircom retail with more flexibility in meeting competition
Cost standard for regulated products	LEAs: from ATC to LRIC for retail call costs in the bundle-by-bundle NRT ATC for all regulated products in the portfolio NRT Outside LEAs: no change	Cost standard changes to reflect higher level of competition in LEAs
Cost standard for unregulated products	From assuming cost equal to 'retail price' to LRIC (or AAC in exceptional circumstances) both in LEAs and outside LEAs	Cost standard changes to make them analogous to competition law as competition has evolved sufficiently in unregulated services or that eircom's position is not strong (for example, in the case of mobile services)
Wholesale inputs used to replicate bundles	From assumption that OAOs always use WLR and Bitstream to WNI (average wholesale network inputs) in LEAs Outside LEAs: no change (i.e. always WLR and Bitstream)	To recognise investment by OAOs in LLU and NGA leading to prospectively lower wholesale access and, consequently, lower retail prices

Source: Oxera, based on ComReg D04/13, 'Price Regulation of Bundled Offers: Further specification of certain price control obligations in Market 1 and Market 4', 8 February 2013.

At the heart of these methodological decisions and changes lies the need to balance the regulatory objective of promoting competition in the market with a desire to ensure that consumers benefit from the potential for price reductions, and to provide incumbent firms with sufficient flexibility and incentives to compete and invest.

We considered the changes and the economic justifications for the various methodological decisions underlying the adjustments to the NRT in our February 2013 report for ComReg.[38] This section builds on that analysis and discusses some further potential adjustment to the methodological decisions underpinning the implementation of key parameters for the proposed MST. These proposed adjustments are based on current and/or prospective market developments, which we discuss next.

Market developments in LEAs/outside LEAs and the bundles market

Market developments in LEAs and outside LEAs

As discussed in our February 2013 report on adjustments to the NRT,[39] and our subsequent September 2013 report[40] on the principles underlying the proposed

[38] ComReg 13/14a, 'Conceptual framework for the assessment of eircom's bundles Adjustments to the net revenue test', Oxera, February 2013.
[39] ComReg 13/14a, 'Conceptual framework for the assessment of eircom's bundles Adjustments to the net revenue test', Oxera, February 2013.

MSTs in the WBA market, competitive dynamics have evolved differently across different areas of Ireland.

Based on recent data presented in section 2.1, we note that this continues to be the case, and the competitive dynamics in LEAs and outside LEAs continue to evolve differently, with higher levels of competition inside LEAs.[41] This is reflected in differences in:

- the use of wholesale access inputs by OAOs in LEAs (Table 2.2) and outside LEAs (Table 2.3), with a higher proportion of line share or full LLU in LEAs;
- competition from alternative infrastructure providers. This is confined to LEAs, as discussed in section 2.1, and includes UPC's cable network and BT's LLU footprint (used by Vodafone and Sky). In addition eircom's NGA footprint is also largely congruent with the LEA. The presence of these different networks constrains eircom's wholesale and retail prices in the LEA. As ComReg notes:[42]

  > it is clear that cable and LLU based competition is exerting pressure on the Incumbent's retail and wholesale prices in the LEA.

  and further that:[43]

  > Eircom recently reduced the effective price of retail bundles that include RFTS and next generation broadband within larger exchange areas ('LEA(s)')...Eircom applied a discount on its SB-WLR product but only when it is bundled with WBA. This SB-WLR discount when bundled with WBA also provided a margin to allow Eircom to set a lower price for retail bundles that include RFTS and next generation broadband than may otherwise have been possible.

Bundles market

We note that the take-up of bundled voice subscriptions continues to increase (Figure 2.3) and that eircom's share of this market is [✂] (Figure 2.1 and Figure 2.2). As shown in Figure 2.2, as at Q4 2013, UPC and Vodafone had market shares [✂] on a national basis.[44]

In particular, in areas where UPC has a footprint, eircom faces increasing competition for customers who use UPC for both broadband and telephony (and potentially TV). This represents [✂] homes and approximately [✂] of the market.[45] eircom's ability to compete with UPC is also constrained with respect to those customers who are 'quality-sensitive'—i.e. likely to switch to a faster service if this is provided at the same price. This increased competition for bundles, especially in the LEAs which largely overlap the expected NGA roll-out area, is reflected in the effective price reduction (at the wholesale and retail level) in voice and NGA broadband bundles.

[40] ComReg 13/90a, 'Price control principles for current generation wholesale broadband products', Oxera, 19 September 2013.
[41] As discussed earlier in section 2.1, while the principles used by ComReg to classify an exchange area as being an LEA (or outside LEA) are developed in its Bundles Decision, the boundary between LEAs and outside LEAs can change depending on market developments such as the impact of Sky's entry into retail broadband on LLU use; further expansion of BT's LLU footprint; the plan of the national electricity supplier (ESB) to enter the retail broadband market in the LEA by leveraging its own access network; and the future take-up of eircom's virtual unbundled access service.
[42] Para 2.12, ComReg 13/90, 'Wholesale Broadband Access: Price control obligation in relation to current generation Bitstream', 19 September 2013.
[43] Para 5.231, ComReg 14/26, 'Market Review Wholesale Fixed Voice Call Origination and Transit Markets', 4 April 2014.
[44] As noted previously, these OAO market shares (other than UPC) are dependent on continued access to wholesale inputs supplied by eircom.
[45] Source: ComReg.

Furthermore, we note that increasing proportions of customers subscribe to triple-play (fixed voice, broadband and TV/mobile) bundles compared with double-play (fixed voice and broadband) bundles. Subscriber data shows that fixed voice and broadband bundles as a proportion of total bundles [✂] from [✂] in Q1 2010 to [✂] in Q4 2013, whereas the corresponding proportion of fixed voice, broadband and TV bundles [✂] from [✂] in Q1 2010 to [✂] in Q4 2013.[46] At the same time, there [✂] take-up of fixed voice bundles which do not include broadband but include TV or mobile services.

In the sections below we consider how these recent market developments may be reflected in the methodological decisions underpinning the implementation of key parameters in the proposed MST compared with the NRT.

3.1 MST in LEAs and outside LEAs

3.1.1 Current NRT position

The NRT allows for differing remedies within the current boundaries of the LEAs and outside LEAs, with a more flexible NRT in LEAs (Table 3.2).

3.1.2 Standard for proposed MST

As discussed above, market data supports the view that competition continues to evolve differently in LEAs and outside LEAs. Thus, ComReg's regulatory distinction that differing levels of competition between LEAs and outside LEAs should be reflected in different NRT remedies in the two different areas remains appropriate, and the proposed MST should allow for differing remedies in LEAs and outside LEAs. Like the NRT, the MST in LEAs should be relaxed relative to the MST outside LEAs, to reflect greater levels of competition in the LEAs. In the following sub-sections we discuss how the various parameters in the MST may be relaxed in LEAs compared with outside LEAs, given recent market developments.

3.2 Downstream cost benchmark applied to retail costs

This refers to the type of operator cost base to use to calculate the retail costs to include in the MST—i.e. the retail costs associated with line rental, calls and broadband (C1, C2 and C3 in Table 3.1). The operator cost base can be one of the following types:

- EEO (equally efficient operator): this is based on incumbent retail costs—i.e. in the present case, it would mean that retail costs for the relevant products are calculated based on eircom's costs. The assumption is that potential entrants (OAOs) enjoy the same scale and scope economies in the provision of retail services as eircom;
- SEO (similarly efficient operator): this is based on incumbent (eircom) retail costs adjusted for the fact that OAOs may not enjoy the same scale and scope economies in the provision of retail services as eircom. This may be because OAOs serve fewer customers and/or supply fewer services, and hence their unit retail costs may be somewhat higher than eircom;
- REO (reasonably efficient operator): in this benchmark the retail costs of the typical entrant are used. In practice, this is often similar to the SEO standard with the assumption that the entrant does not enjoy the same scale and

[46] Source: ComReg.

scope economies as the incumbent, and hence will have somewhat higher unit retail costs.

The choice of the cost benchmark in the MST will depend on the state of competition in the market (for example, competition from infrastructure-based providers), and the competition dynamics in the bundles market. We consider these factors below after reviewing the position adopted in the current NRT.

3.2.1 Benchmark used in the current NRT

The current NRT applies the EEO standard for calls and voice access, and an SEO standard for current generation broadband access in both LEAs and outside LEAs.[47] For NGA the test applies a blended SEO and EEO standard.

3.2.2 Standard for proposed MST

The choice of a cost benchmark depends on the level of competition in the market. From an ex ante perspective, an SEO/REO approach may be better suited to promote competition and entry, as it results in an MST that requires the SMP operator to leave more space between its retail and wholesale prices. However, as competition in the market develops, there will be less of a case to keep an approach of market entry assistance, and hence switching to an EEO is appropriate.

Calls

We note that the level of retail competition in the voice access market continues to increase, and this is reflected in the decrease in eircom's market share in both the stand-alone voice market and bundles voice market. Thus an EEO standard for voice access remains appropriate, and this is the approach that we recommend for the proposed MST in wholesale markets.

Broadband

With regard to the cost benchmark used to estimate retail costs associated with broadband services, we recommend that the MST has a mix of an EEO and SEO in LEAs (for both current and next generation broadband) and SEO outside LEAs.

This will make the proposed MST consistent with the approach taken by ComReg in the wholesale (current and next generation) bitstream access market, where, reflecting the presence of large OAOs in the LEA, ComReg considers that a smaller margin may be appropriate and proposes that the retail MST in that market be based on a mixture of SEO and EEO, with the EEO benchmark applied to marketing/advertising costs, billing costs, and product management costs, as these OAO costs: [48]

> are most susceptible to such scale/scope advantages especially in the context of bundled offers (with fixed voice, mobile voice, broadband, IPTV, etc.) which are more often sold in the LEA

The proposed change in the cost benchmark in LEAs is also justified by current and prospective developments in the bundles market discussed above. As

[47] We note that with ComReg D 11/14 coming into effect, the NRT uses a blend of SEO and EEO for current generation broadband (ComReg D 11/14, 'Wholesale Broadband Access: Price control obligation in relation to current generation Bitstream' published on 09 July 2014).

[48] Para 7.25-26, ComReg 13/90, 'Wholesale Broadband Access: Price control obligation in relation to current generation Bitstream',19 September 2013.

consumers increasingly prefer triple-play (fixed voice, broadband and TV/mobile) to double-play bundles (fixed voice and broadband), and fixed voice bundles which do not include broadband (but include TV or mobile services) proliferate, OAOs such as Sky (traditionally a supplier of TV services) and Vodafone (traditionally a mobile service provider) are likely to be in a stronger market position to supply these bundles. Moreover, these OAOs can exploit economies of scope in supplying these other services (i.e. their unit costs of providing triple-play bundles are likely to be lower as they exhibit cost advantages from providing other related products).

Table 3.3 summarises the downstream cost benchmarks for the proposed MST. The only change compared with the current NRT is for CGA broadband in LEAs—from SEO to a mix of SEO and EEO.

We note that as competition develops, the LEAs and OAOs grow in scale, a move to full EEO for broadband in the LEAs may be appropriate in the future.

Table 3.3 Proposed MST downstream cost benchmarks

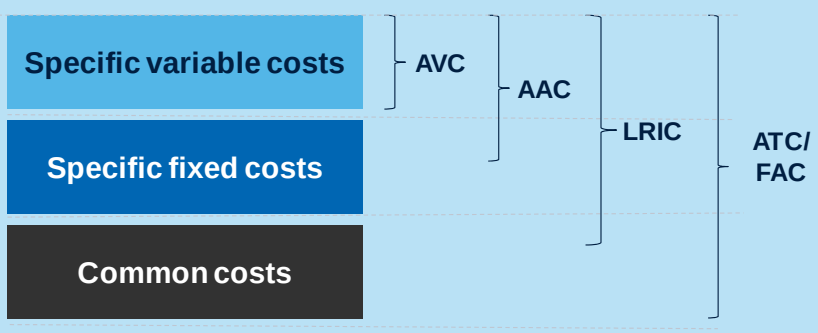
Service	Current NRT	Proposed MST
Calls in LEAs and outside LEAs	EEO	EEO
Broadband (CGA) in LEAs	SEO	Mix of EEO and SEO
Broadband (CGA) outside LEAs	SEO	SEO
Broadband (NGA)	Mix of EEO and SEO	Mix of EEO and SEO

Source: Oxera.
Note:With ComReg D 11/14 coming into effect, the NRT uses a blend of SEO and EEO for current generation broadband (ComReg D 11/14, 'Wholesale Broadband Access: Price control obligation in relation to current generation Bitstream' published on 09 July 2014).

3.3 Cost standard for retail activities

The various cost standards that could be used for retail activities are explained in Figure 3.1.

Figure 3.1 Cost standards



Source: Oxera.

- Average variable costs (AVCs)—these are costs that vary with output. They usually refer to small, short-term, discrete output changes.
- Average avoidable costs (AACs)—these are costs that can be avoided if production of an increment of a product ceases, usually in the short run. AACs may include a proportion of fixed costs if the increment is large.
- 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. calls) ceases. They include all fixed costs of the increment, and will include all costs avoided in the long run were the increment no longer to be produced.
- Average total costs (ATC)—these are similar to fully allocated costs (FAC). They would cover LRIC plus a proportion of common costs allocated to the product in question.

Source: 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'.

In effect, these cost standards differ to the extent that fixed and common retail costs (such as the cost associated with billing systems/call centres, marketing/advertising and product management) which are shared among different services supplied by an operator are allocated to, and considered as part of, the retail costs of a specific service such as calls.

So, for example, *if the average avoidable cost standard is used* then only billing and cash collection costs specific to the relevant service and the direct variable customer cost and product development and product management costs will be included. The costs of the billing system and costs incurred in setting up a call centre to deal with customer queries will not be included. Similarly, only the IT development costs to support the specific bundle under consideration will be taken into account. Figure 6 in ComReg 10/01, which further specifies the NRT obligation, provides some other examples of retail costs included under the AAC standard. [49]

[49] See Figure 6, ComReg 10/01, 'Consultation and draft direction: further specification of the obligation not to unreasonably bundle pursuant to D07/61', 6 January 2010.

3.3.1 Standard used in the current NRT

The choice of the cost standard will affect the results of the MST to some extent. The higher the proportion of retail fixed and common costs included, the higher the minimum margin between the retail and wholesale prices needs to be, and hence the more stringent the test becomes for the SMP operator. The current NRT applies two cost standards for measuring the downstream (retail) costs of calls:

- LEAs: LRIC for calls in the bundle-by-bundle test, and ATC for all regulated products in the portfolio NRT;
- outside LEAs: ATC for calls;
- for line rental and broadband services currently, the implied regulated retail-minus margin is used to estimate the relevant retail costs. This is based on an ATC cost standard.

3.3.2 Standard for proposed MST

The same competition dynamics in the voice and bundles market discussed in section 3.2 in the context of the downstream cost benchmark are relevant in choosing an appropriate cost standard to estimate retail costs for the various services.

As noted earlier, the level of competition in the voice access market continues to increase, and this is reflected in the decreasing eircom market share in both the stand-alone voice market and the bundles market. It is this increase in competition that underpins ComReg's decision to change the cost standard used for calls inside the LEA from ATC to LRIC for calls in the bundle-by-bundle test in its 2013 bundles decision (Table 3.2).

Calls

We recommend the same standards for calls in the proposed MST—LRIC of national calls in LEAs for the bundle-by-bundle MST, ATC of national calls for the portfolio MST in LEAs, and ATC of national calls for the bundle-by-bundle MST outside LEAs.

A move to AAC instead of LRIC of national calls in LEAs for a bundle-by-bundle MST is not justified because eircom, despite its recent fall in market share, continues to be by far the largest operator in terms of its national market share—as at Q4 2013, eircom had 51% of all fixed voice subscriptions (either stand-alone or as part of a bundle), followed by UPC (19%) and Vodafone (16%).[50] This means that eircom continues to enjoy higher economies of scale, and a move to AAC may not allow for sufficient margin for OAOs to replicate the relevant bundles. Thus, the AAC standard is not suited for an ex ante MST, as it might lead to sub-optimal entry in the retail fixed voice market, a market where eircom continues to hold SMP nationally.

Outside LEAs, the competitive dynamics remain the same, with limited competition from alternative infrastructure providers, and no (or very limited) use of line share and full LLU by OAOs, as discussed in section 2.1. Thus an ATC standard for the bundle-by-bundle MST remains appropriate, like the NRT.

[50] ComReg 14/19, Quarterly Key Data Report: Data as at Q4 2013, 14 March 2014.

Finally, the ATC standard also remains appropriate for a portfolio MST. This is because, as explained by ComReg in its bundles decision:[51]

> ...if the LRIC cost standard was applied across all bundles the test could result, on an aggregate basis, that the portfolio of bundles would not make an adequate contribution towards common costs, potentially rendering the bundles unprofitable. Consequently, ComReg considers it appropriate that at the portfolio level that the aggregate of all bundles must cover their ATC, which incorporates a share of common costs in addition to the relevant fixed and variable costs. The provision that Eircom must recover its ATC at the portfolio level in the LEA and in the bundle-by-bundle assessment outside the LEA, ensures that nationally (i.e., inside and outside the LEA) Eircom is not unreasonably bundling RFNA with other services.

Broadband

With regard to the cost standard used to estimate retail costs associated with broadband services (sold in bundles with fixed voice), we recommend a LRIC cost standard in LEAs for the bundle-by-bundle test, which is the same standard as used for calls. This reflects current and prospective developments in the bundles market—i.e. the increase in triple-play (fixed voice, broadband and TV/mobile) bundles and the proliferation of fixed voice bundles which do not include broadband (but include TV or mobile services) where OAOs like Sky and Vodafone may have a stronger market position.[52]

We note that the proposed LRIC cost standard for the bundle-by-bundle MST in LEAs should apply to all the relevant retail cost categories, which include[53] sales costs, marketing/advertising, product management & development, help desk, billing, modems, order handling, and corporate overheads.

We also propose that the increment to use to estimate LRIC is the broadband product included in the retail bundle offer, and not the individual bundle itself. For example, the retail broadband LRIC of a bundle up to 12MB would include all retail costs that are specific to the provision of *all* broadband services up to 12MB included in different bundles. We note that the retail costs specific to the provision of all broadband services up to 12MB will not include common and fixed indirect retail costs of general broadband provision, which will be incurred to provide other broadband services in any case.

Also, following the same reasoning as for calls above, a move to AAC for the bundle-by-bundle test for broadband (sold in bundles with fixed voice) is premature at this time. ComReg has reached a similar conclusion when considering the retail broadband market (not sold in bundles with fixed voice) in the wholesale current generation bitstream price control consultation, where it says:[54]

> We consider that to apply an AAC cost rule in an ex-ante context could lead to sub-optimal entry conditions with little entry occurring. This would be to the detriment of competition and, in turn, consumers. In addition, the avoidable costs is the relevant measure when assessing whether there is concerns around future exclusion or exit of current efficient competitors from the retail broadband market.'

[51] P. 23, ComReg D 04/13, 'Price Regulation of Bundled Offers: Further specification of certain price control obligations in Market 1 and Market 4',8 February 2013.
[52] These developments are also the reason for the change from an SEO to a mix of EEO and SEO cost benchmark in LEAs discussed in the previous section.
[53] Para 7.12, ComReg 13/90, 'Wholesale Broadband Access: Price control obligation in relation to current generation Bitstream,19 September 2013.
[54] Para 7.33, ComReg 13/90, 'Wholesale Broadband Access: Price control obligation in relation to current generation Bitstream,19 September 2013.

As for calls above, we recommend an ATC cost standard for the MST at the portfolio level in the LEAs and for the bundle-by-bundle test outside LEAs. This ensures that, as for calls above, eircom recovers its retail costs of supplying broadband services nationally. We discuss the degree of product aggregation in LEAs and outside LEAs further in section 3.4 below.

Table 3.4 summarises the retail cost standards for the proposed MST. The only change compared with the current NRT is for retail broadband costs, which is derived from the regulated WBA retail margin squeeze test price control in the current NRT, and always based on an ATC cost standard.

Table 3.4 Proposed cost standard for retail activities

Service	Current NRT	Proposed MST
Calls in LEAs	LRIC in bundle by bundle and ATC in portfolio	LRIC in bundle by bundle and ATC in portfolio
Broadband in LEAs	Derived from regulated WBA retail margin squeeze test price control based on ATC	LRIC in bundle by bundle and ATC in portfolio
Calls outside LEAs	ATC for bundle by bundle	ATC for bundle by bundle
Broadband outside LEAs	Derived from regulated WBA retail margin squeeze test price control based on ATC	ATC for bundle by bundle

Source: Oxera.

3.4 Degree of product aggregation

The proposed MST is applied at different levels of product aggregation—i.e. on a bundle-by-bundle and/or a portfolio basis in LEAs and outside LEAs with respect to the operator's cost base (section 3.2) and cost standard (section 3.3). This is similar to the two-stage test in the current NRT.

3.4.1 Product aggregation in the current NRT

The current NRT applies a combinatorial test, in the sense that it applies the test at different levels of product aggregation:

- LEAs: two-stage test, one at the product bundle-by-bundle level and the other at the portfolio level;
- outside LEAs: one-stage test at a bundle-by-bundle level.

3.4.2 Standard for proposed MST

Deciding on the degree of product aggregation again requires the objective of promoting entry into the retail access and broadband markets to be balanced with that of providing eircom with sufficient incentives and pricing flexibility to compete and invest. Hence, when making this decision, the considerations are similar to those for relaxing the test on other fronts (the cost benchmarks and standards discussed above). An aggregated approach provides more pricing flexibility to the SMP operator, as it allows it to offset the losses in some bundles with the profits in others.

Given the current competitive dynamics in the fixed voice bundles market, we recommend the same two-stage test in the LEAs and one-stage test outside LEAs for the proposed MST as the current NRT. This is based on the fact that even though the take-up of double-play bundles is decreasing and the take-up of triple-play bundles is increasing, double-play bundles are still the most popular bundles in the Irish market. A move to a one-stage portfolio test (for all double-

and triple-play bundles) in the LEAs at the present time is thus likely to allow eircom to use double-play bundles to cross-subsidise triple-play bundles (or vice versa). As a result, other operators who do not offer the same range of service bundles may be disadvantaged and find it difficult to compete in the double- and/or triple-play market.

To elaborate, we recommend that all current generation double-play bundles consisting of the same kind of services should recover their relevant costs based on the appropriate cost standards, and similarly all triple-play bundles consisting of the same kind of services should recover their own costs. The same should apply to next generation double- and triple-play bundles. We note that current and next generation bundles require different wholesale network inputs (WNIs), and thus it is appropriate that separate portfolios are defined for current and next generation services (section 3.6).

There may be a case for moving to a one-stage portfolio test in the LEAs for retail bundles as competition evolves. This may be the case, for example, as triple-play (fixed voice, broadband and TV/mobile) bundles become more popular and competition in the retail fixed voice market increases—say, an OAO launches a VOB platform solution in the LEAs. These developments would mean that other operators such as Sky (traditionally a supplier of TV services) and Vodafone (traditionally a mobile service provider) will be in a strong market position to supply different fixed voice bundles. A case could then be made to reflect this increased competition in LEAs by moving to an aggregate one-stage test inside LEAs—i.e. removing the bundle-by-bundle test and relying on a one-stage portfolio-level test based on ATC for all regulated products, with no change in the test outside LEAs.

Table 3.5 summarises the product aggregation in the proposed MST. We recommend no change to the degree of product aggregation in the MST compared with the current NRT.

Table 3.5 Product aggregation in the proposed MST

	Current NRT	Proposed MST
LEAs	Two-stage test at product bundle-by-bundle and portfolio level	Two-stage test at product bundle-by-bundle and portfolio level
Outside LEAs	One-stage test at product bundle-by-bundle level	One-stage test at product bundle-by-bundle level

Source: Oxera.

3.5 Bundles consisting of unregulated services

The MST will also need to consider the costs of any unregulated services bundled with voice services. We note that the cost standard discussed below in this context is used to estimate the total costs of supplying the unregulated service, not just the retail costs as in the case of regulated products included in the bundle and discussed above. The wholesale costs of regulated products included in the bundle are taken into account separately, as show in Table 3.1.

3.5.1 Treatment of unregulated services in the current NRT

The NRT uses LRIC as the cost standard for unregulated products (including applicable avoidable retail costs), and AAC in exceptional circumstances on a case-by-case basis when the bundling of the unregulated service will not have a significant impact on competition.

In addition, there must be no cross-subsidisation between regulated and unregulated services.

3.5.2 Treatment of unregulated services in the proposed MST

We recommend that, like the current NRT, the proposed MST should include the total service LRIC of the unregulated service on a stand-alone basis (including applicable avoidable retail costs) in calculating the total costs of a bundle. This is consistent with the competitive dynamics in the market discussed above and also allows for the fact that eircom will face competition in the provision of these unregulated services from other operators. This means that its ability to leverage market power 'diagonally' or indirectly will be constrained.

For example, eircom could include TV at a discount in a voice and broadband bundle—two markets in which it is dominant at the wholesale level—hoping to extend its market power to triple-play bundles and/or the stand-alone TV market. However, its ability to do so will depend on the demand for standalone TV or for double- or triple- play offers from UPC including TV. If there is sufficient demand for TV services supplied by UPC then eircom may not be able to leverage its market power into the TV market and that market will be prospectively competitive. A LRIC cost standard mimics the outcomes of a competitive market and will provide the correct market incentives in this context.

In exceptional circumstances, like the current NRT, the proposed MST may include the total service AAC of the unregulated service on a stand-alone basis instead of its LRIC in calculating the total costs of a bundle (we note that in practice these are likely to be similar). These are cases where the inclusion of the unregulated service will not have a significant impact on competition. In such cases a cost standard closer to one used in competition law is more appropriate as there is no need to encourage entry in these markets.

We note that the proposed MST requires that the cost of the bundle including the total service LRIC (or AAC in exceptional circumstances) of the unregulated service on a stand-alone basis should be covered by the retail revenues of the bundle including the unregulated service. This implicitly allows eircom to use additional retail margins on double-play bundles (based on regulated wholesale inputs) to offer discounts on the unregulated retail service such as TV (for which the wholesale input is not regulated). This may enhance consumer welfare by providing a greater variety of bundles and/or lower prices for these bundles.

Thus, as long as the bundle passes the MST, the additional retail price charged to include the unregulated service in the bundle does not need to recover its own LRIC. To require it to do so would provide entry assistance for OAOs to supply bundles including unregulated services. As noted earlier, given that OAOs like Sky and Vodafone will be in a stronger market position to supply these unregulated services; such entry assistance is not required. Instead the retail price of the triple-play bundle must cover the total *costs* of the bundle, including the total service LRIC of the unregulated service.

Table 3.6 summarises the treatment of unregulated services in the proposed MST.

Table 3.6 Treatment of unregulated services in the proposed MST

	Current NRT	Proposed MST
Cost standard	Product LRIC (or AAC in exceptional circumstances) including applicable avoidable retail costs	Product LRIC (or AAC in exceptional circumstances) including applicable avoidable retail costs
Cross-subsidisation	No cross-subsidisation between regulated and unregulated services	Allow additional retail margins on double play bundles (based on regulated wholesale inputs) to offer discounts on unregulated retail service (for which the wholesale input is not regulated)

Source: Oxera.

3.6 Relevant wholesale input

As discussed in section 2.1, different wholesale inputs can be used to provide bundles including fixed voice services. The different costs of these wholesale access inputs for OAOs (and eircom) should be reflected in the MST as OAOs (and eircom) might use different combinations of wholesale inputs to supply bundles including fixed voice. For example, fixed voice and broadband bundles may be supplied using LLU/VUA or SB-WLR and current/next generation bitstream. A practical way to reflect this differential use of wholesale inputs by OAOs (and eircom) and differences between wholesale inputs for current and next generation networks is to use the cost of an 'average' or 'typical' mix of wholesale inputs for copper and fibre access in the MST. This is the approach taken in the current NRT and we recommend using the same overall approach in the MST.

3.6.1 Wholesale inputs used in the current NRT

At present, the NRT uses different combinations of WNIs in LEAs and outside LEAs:

- WLR + Bitstream outside LEAs;
- blended WNI in LEAs (one for NGA and another for non-NGA-based products), with different weights applied to WLR/bitstream and LLU/line share/VUA inputs.

The combinations of wholesale inputs used in the NRT reflect current competitive conditions in different geographic areas as defined by LEAs and outside LEAs.

3.6.2 Wholesale inputs used in the MST

As such we recommend the same approach to construct WNIs as in the current NRT, taking into account that changes in competitive conditions (i.e. changes in the use of WNIs by OAOs) should be reflected in the weights of the different wholesale inputs in the WNI.

As discussed in section 2.1, the competitive dynamics outside LEAs have not changed and are unlikely to change. A WLR and Bitstream-based WNI thus continues to be appropriate.

In the LEAs, the competitive dynamics and the use of wholesale inputs by OAOs continue to evolve and the composition of the WNI in LEAs should reflect this. For example, once OAOs start using VOB (over copper or fibre), the WNI should

reflect the relative weighting of these inputs (based on actual usage) and a margin for VOB should be included.

To summarise, we recommend no change to the methodological approach to defining WNIs in the MST compared with the current NRT.

3.7 Timing of the margin squeeze test

There are two questions to consider in this context. The first relates to the use of a historical or a forward-looking approach, and whether a multi-period discounted cash-flow or a period-by-period profitability analysis is used. The second relates to the timing of the MST—i.e. whether the test should be applied on an ex ante or ex post basis, or both, and the related notification period required.

3.7.1 Approach adopted in the current NRT

The current NRT follows a forward-looking approach, applied on both an ex ante and ex post basis.

For example, the NRT applies known reductions in call termination costs, and for line rental and broadband access services, the current NRT applies the downstream costs estimated in the retail-minus model, which is a forward-looking discounted cash-flow model. This forward-looking approach can be checked retrospectively, if, for example, the product outturn is different from forecasts.

3.7.2 Approach proposed for the MST

We are not aware of any relevant developments in the market that would suggest a change to the existing approach, and thus we recommend the same approach to the timing of the proposed MST—i.e. it should be on a forward-looking basis, and there should be a five-day pre-notification period, as in the case of the current NRT.

However, we note that, depending on the practical implementation of the test and the pre-notification experience under the NRT, other schemes may also be appropriate, such as allowing eircom to self-certify and launch.

3.8 Other possible options for revision

In addition to the circumstances discussed above, there are a number of other scenarios that may require revision to the NRT and which are relevant to the proposed MST. These are discussed in Section 5.4.6 of ComReg's 2013 bundles decision,[55] and we recommend that these are treated in the same way in the proposed MST. These include the following:

- when the bundle is in response to a competitor's bundle: no change to the NRT or proposed MST;
- when a bundle is found unreasonable post-launch: no change to the NRT or proposed MST;
- past margins: these cannot be banked/carried forward in the NRT. The same is proposed for the MST;

[55] ComReg D04/13, 'Price Regulation of Bundled Offers: Further specification of certain price control obligations in Market 1 and Market 4', 8 February 2013.

- promotions and promotional discounts: these costs are included in the NRT and the bundle is considered reasonable if the cost of the promotional discount is covered over the average customer lifetime. The same is proposed for the MST;

- discretionary promotions /opt-ins: the costs of discretionary promotions/ opt-ins are included in the NRT based on the proportionate costs of these promotions—depending on the expected take-up of bundles including the promotion. The same is proposed for the MST.

3.9 Conclusion

Taking account of current market developments in LEAs/outside LEAs and the bundles market, and the methodological decisions underpinning the calculation of cost components such as:

- differences in competitive conditions in LEAs and outside LEAs (section 3.1);

- the operator cost base to estimate retail costs (section 3.2);

- the cost standard applied to estimate retail costs (section 3.3);

- the level of aggregation to apply the MST—products (bundle by bundle) and/or portfolio basis (section 3.4);

- the treatment of unregulated services in the MST and the cost standard to use for such services (section 3.5);

- the relevant wholesale inputs to calculate wholesale costs (section 3.6)

On balance, we recommend that the proposed MST include changes to the downstream cost benchmark for CGA broadband in LEAs, the downstream cost standard for broadband, and that the proposed MST allow additional retail margins on double-play bundles (based on regulated wholesale inputs) to offer discounts on unregulated retail services.

Downstream cost benchmark for CGA broadband in LEAs—we recommend that the proposed MST use a mix of EEO and SEO cost benchmarks for the broadband in LEAs. The current NRT uses an SEO standard.

Downstream cost standard for broadband—we recommend that the proposed MST use the LRIC in the bundle-by-bundle test in the LEAs and ATC in the portfolio test in LEAs and the bundle-by-bundle test outside LEAs. The current NRT uses ATC in all cases.

Bundles consisting of unregulated retail services (i.e. services for which the wholesale input is not regulated—we recommend that, like the current NRT, the proposed MST should include the total service LRIC (or AAC in exceptional circumstances) of the unregulated service on a stand-alone basis (including applicable avoidable retail costs) in calculating the total costs of a bundle, but that eircom should be able to use additional retail margins on double-play bundles (based on regulated wholesale inputs) to offer discounts on the unregulated retail service.

At the heart of these methodological decisions and changes lies the need to balance the regulatory objective of promoting competition in the market with a desire to ensure that consumers benefit from the potential for price reductions,

and to provide incumbent firms with sufficient flexibility and incentives to compete and invest.

Tel: +44 (0) 1865 253 000
Email: enquiries@oxera.com

www.oxera.com

Oxford
Park Central
40/41 Park End Street
Oxford
OX1 1JD
United Kingdom

Berlin
Pariser Platz 4a
10117 Berlin
Germany

Brussels
Stephanie Square Centre
Avenue Louise 65
Box 11
1050 Brussels
Belgium

London
200 Aldersgate
14th Floor
London
EC1A 4HD
United Kingdom/1