Oxera

Review of eircom's response to ComReg's consultation on the 'Assessment of Eircom's Universal Service Fund Application for 2009-2010'

Prepared for
Commission for Communications Regulation

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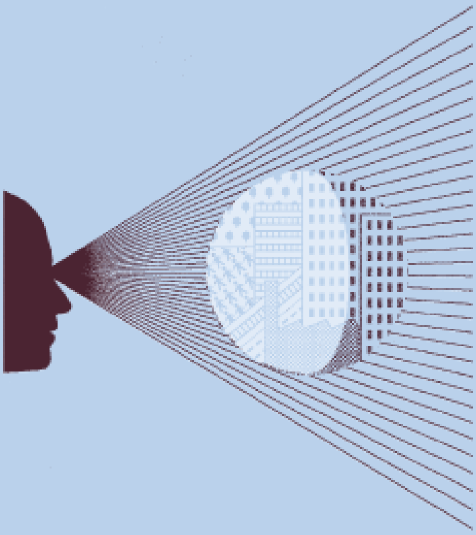


Contents

List of tables

List of figures

1 Introduction

In May 2013 the Commission for Communications Regulation (ComReg) issued its Draft Decision on whether the net cost of eircom's universal service obligation (USO) for 2009/10 represented an unfair burden.[1] Drawing on analysis by Oxera, ComReg proposed that the net cost identified by eircom did not meet the tests outlined in ComReg's previous Decision 04/11,[2] including the need to demonstrate that the net cost had a 'significant effect on profitability'. ComReg therefore concluded that the USO net cost did not represent an unfair burden.

eircom's response outlined a number of concerns with ComReg's framework for defining an unfair burden, including issues relating to ComReg's previous decisions in D04/11.[3] The response also queried Oxera's application of that framework, commenting specifically on how particular aspects of the framework should be applied to 2009/10.

To assist in its response, ComReg asked Oxera to review eircom's comments, and in particular to concentrate on:

– the appropriate **scope of the business** to be taken into consideration in coming to a view on the profitability attributable to the USO;

– the appropriate **materiality threshold** to be considered in assessing whether any net cost should be assumed to be an unfair burden;

– the appropriate weighted average cost of capital (**WACC**) against which to test whether eircom suffered a material shortfall in profitability.

This report should be read alongside Oxera's original report.[4] It provides an assessment of the specific points made by eircom on the application of the framework, rather than representing a change to the proposed framework. Oxera has reviewed eircom's response on the above three factors. While eircom puts forward a number of arguments, Oxera has not changed its independent assessment of the appropriate methodology to apply in assessing an unfair burden.

For the avoidance of doubt, the narrow scope of this report does not assume that Oxera has changed its assessment on the wider framework that could be applied more generally to any future applications for funding the net cost; nor does it imply any particular agreement or otherwise with the other points raised by eircom.

[1] ComReg (2013), 'Consultation and Draft Determination on the Assessment of Eircom's Universal Service Fund Application for 2009-2010', Consultation and Draft Determination 13/45, May 10th.

[2] ComReg (2011), 'Report on Consultation and Decision on the costing of universal service obligations: Principles and Methodologies', Decision Number 04/11, May 31st.

[3] eircom (2013), 'Response to ComReg Consultation Paper: Consultation and Draft Determination on the Assessment of eircom's Universal Service Fund Application for 2009-2010', July 5th.

[4] Oxera (2013), 'Does the USO represent an unfair burden for Eircom', Reference number 13/45c, May 10th.

2 Business definition

2.1 Introduction

ComReg, taking into account Oxera's advice, and in accordance with D04/11, assessed whether the net cost of the USO represents an unfair burden for eircom on the basis of the profitability earned by eircom's fixed-line business.[5] In its response, eircom argued that such an assessment should be made on the basis of the USO business alone.[6]

This report assesses eircom's response, first by setting out the legal background, and then considering the economic principles that should be used to identify the appropriate business definition. Finally, the report presents an impact assessment of the implementation of such principles.

2.2 Legal background

The general guidelines to assess whether a net cost represents an unfair burden are set out in ComReg D04/11:

> The impact of a USO can, in principle, undermine the profitability of a USP [universal service provider] or endanger its financial viability. It is relevant and necessary, therefore, to take into account *whether or not a positive net cost significantly affects a USP's profitability and/or ability to earn a fair rate of return on its capital employed* in the prevailing market circumstances. This analysis would take account of a USP's ability to bear a positive net cost (i.e. a USP's ability to fund a USO today through cross-subsidy revenues)[7] [Emphasis added.]

The capital employed by the USP would be that used to run the USO business, which is defined in the USO Directive as:[8]

- 'connection at a fixed location to a public communications network';
- 'provision of a publicly available telephone service over the network connection';
- 'directory enquiry services and directories';
- 'public pay telephones or other public voice telephony access points'.

The USO Directive also states that connections at a fixed location need to be capable of supporting voice, facsimile and data communications at data rates that are sufficient to permit functional Internet access. Therefore, the capital employed by the USP should cover the assets related to the fixed communications network that allow the provision of voice, facsimile and data communications, as well as those related to the provision of directory enquiry services and public pay telephones services (USO assets).

[5] ComReg (2013), 'Consultation and Draft Determination on the Assessment of Eircom's Universal Service Fund Application for 2009-2010', Consultation and Draft Determination 13/45, May 10th.

[6] eircom (2013), 'Response to ComReg Consultation Paper: Consultation and Draft Determination on the Assessment of eircom's Universal Service Fund Application for 2009-2010', July 5th.

[7] ComReg (2011), 'Decision on the Costing of Universal Service Obligations: Principles and Methodologies', Decision 11/42, May 31st, para 5.27.

[8] European Parliament and Council (2002), 'Directive 2002/22/EC Of The European Parliament And Of The Council on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive)', March 7th;and European Parliament and Council (2009), 'Directive 2009/136/EC of the European Parliament and of The Council amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws', November 25th.

The analysis below considers the argument made by eircom; namely, that Oxera should have recommended that a more narrowly defined USO business (as described in Oxera's report) would be a better reference point than the wider integrated fixed-line business for assessing whether the net cost of the USO represents an unfair burden for eircom.

2.3 The economic principles

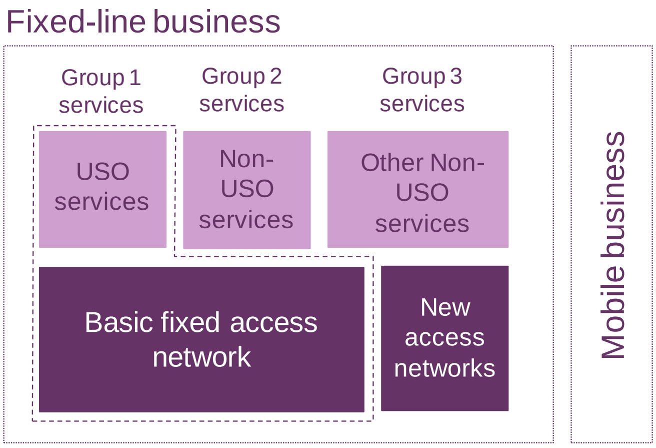
Economies of scope and cost-sharing

The USP, acting as a commercial operator, can potentially use the USO assets to deliver services additional to the USO services, such as wholesale and broadband services. The provision of additional services may allow the USP to generate further economies of scope, and hence increase the profitability of its capital employed. Such behaviour would be expected from a commercial operator such as eircom.

The sharing of the USO assets by both USO and non-USO services makes the services not separable when trying to assess the profitability of the USP's capital employed. This will depend on the economics of providing the non-USO services, and specifically whether the provision of the USO allows eircom to achieve returns above its cost of capital on such services. In that context, if the non-USO services were to be excluded from the analysis, the profitability of the USP's USO assets—and hence its 'ability to earn a fair rate of return on its capital employed'—could be under- or over-estimated.

In assessing the most relevant scope for the profitability of the USP, a criterion that could therefore incorporate this cost-sharing feature is whether the service provided uses the USO assets. This is illustrated in Figure 2.1.

Figure 2.1 Conceptual diagram of the USP's business



Source: Oxera.

The fixed-line business includes a range of services, specifically:

– **services directly within the scope of the USO business (as defined within Oxera's previous report)**, being either retail USO services or services carried over the access network that delivers USO services, such as wholesale interconnection services and wholesale access services (Group 1 services);

– **additional services not directly within scope but where provision relies on using the USO network**, being specifically retail and wholesale non-USO services that are carried over the USO network, such as retail broadband and Internet access services (Group 2 services);

– **services within eircom's integrated fixed-line business, but which use the USO network indirectly**, including leased-line services and services provided over networks other than the PSTN network, such as an NGA network (Group 3 services).

The ability to cover the costs of the USO network should take into account the economics of these services, and the extent to which they affect eircom's ability to earn a fair return on the USO services.

Intensity and nature of competition

The rate of return that the USP earns on its USO assets may also be affected by both the level and the nature of competition. Alternative operators can deliver services to end-users by using either the USP's USO network or their own network, although the impact of competition on the USP's profitability would be lower in the former case than in the latter. This is because, in the former, the USP would continue to serve the customer indirectly through the provision of wholesale services to the alternative operator. This can be taken into account in the analysis by including in the USO business definition wholesale services related to the USO services.

Another consideration here is technical change in the telecoms sector. As new technologies emerge, the USP may find different ways of providing the same USO services over different technologies. For example, managed voice over IP (VoIP) services may be considered a direct substitute of traditional voice services. To the extent that such new services are provided over the USO network, or rely significantly on the use of the USO network for their provision, they should be included in the business definition.

Related to the above is the current migration to next generation access (NGA) technologies. This process involves the roll-out of high-speed fibre connections that support the provision of more advanced services, including video or IPTV services. NGA networks will allow the provision of similar services to those provided over the USO network, such as public telephone services and Internet access services. However, this development is not relevant for eircom's 2009/10 application, as eircom did not announce its plans to roll out an NGA network until 2011.[9]

2.4 Implementing the economic principles

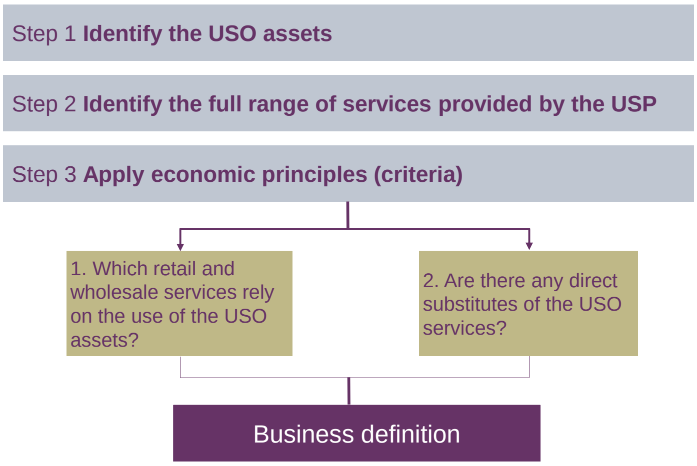
Taking the above economic principles into account, the key questions for identifying the appropriate business definition are:

– which retail and wholesale services rely on the use of the USO assets?
– are there any direct substitutes of the USO services?

The first of these is likely to be most relevant, given the importance of the asset base in defining a USO service, as discussed above. However, where services are combined, and the combined service also relies on USO assets, it might be appropriate for both to be taken into consideration. Figure 2.2 summarises the steps involved in identifying the scope of the services within the business definition.

[9] ComReg (2013), 'Next Generation Access (NGA): Remedies for Next Generation Access Markets', Response to Consultation and Final Decision, D03/13, January 31st, para 1.2.

Figure 2.2 Steps for determining the business definition



Source: Oxera.

Table 2.1 illustrates how the above approach could be applied to eircom's case. Oxera identified that the majority of services within the fixed-line business appear to meet the criteria for being within the scope of business for the purpose of assessing the unfair burden. The table highlights some services that do use the USO network but are arguably less reliant on USO assets, specifically (ie, Group 3 services as illustrated in Figure 2.1):

– retail/wholesale leased lines;
– retail supplementary and remaining services;
– wholesale unregulated services;
– NGA access and services.

In the case of leased-lines services, eircom's 2010 RFS defines these as:

> Business of connection, rental, maintenance, and provisioning of national and international leased lines, including Partial Private Circuits, which provide for transparent transmission capacity between network termination points and which do not include connection to the PSTN network. This business also includes Retail and Wholesale Ethernet connection and rental revenue and costs.[10]

Table 2.1 considers this assessment in more detail. In practice, there appears to be an argument that, as per Oxera's initial assessment, the entire fixed-line business should be taken into consideration. This would reflect the fact that all the services provided by eircom either use the USO network directly or interconnect with it sufficiently that they are not separable from the USO services. Nevertheless, there are certain services that partly meet the set criteria, as their link with the USO network is less clear-cut. There might be a stronger argument for these services to be treated separately for the purposes of any unfair burden assessment.

Therefore, if any services within the fixed-line business were to be removed from the USO business definition, they would be the ones where the link with the USO network is less obvious. An impact assessment of whether to include these services is presented in section 2.5 below.

[10] eircom (2010), 'Historical Cost Separated Accounts For the Year Ended 30th June 2010', Financial Statements, p. 80.

Table 2.1 Applying the principles to eircom's case

Services	USO service?	Relies on USO assets?	Direct substitute of USO services?	To be included in the business definition?[1]
Retail				
PTSN/ISDN access	Yes	Yes	n/a	✓
PTSN/ISDN calls	Yes	Yes	n/a	✓
Broadband services	No	Yes	Yes (with managed VoIP service)	✓
Dial-up Internet services	No	Yes	No	✓
Leased lines	No	Partly	No	Partly
NGA access and services	No	Partly	Yes	Partly (but not applicable in 2009/10)
Public payphones	Yes	Yes	n/a	✓
Directory enquiries	Yes	Yes	n/a	✓
Supplemental & remaining	n/a	Partly	n/a	Partly
Mobile services	No	No	No	No
Wholesale				
Unbundled access	No	Yes	n/a	✓
Line rental	No	Yes	n/a	✓
ADSL	No	Yes	n/a	✓
Interconnection	No	Yes	n/a	✓
Leased lines	No	Partly	n/a	Partly
Residual unregulated	n/a	Partly	n/a	Partly

Note: [1] Including a particular service in the business definition is assumed to require a positive answer to either of the questions in columns 3 and 4.
Source: Oxera analysis.

Implementation issues arising from eircom's RFS

To calculate the rate of return earned by the USP over the relevant service, Oxera has drawn on eircom's RFS, although there are some differences between the classification of services in the RFS and the split of services within Table 2.1. For example, eircom's 2010 RFS does not provide a direct separation of the relevant services (see Table 2.2). Information on wholesale services is provided on an aggregate basis, thereby not allowing the separation of leased-line services from other wholesale services identified as coming within the business definition. The 2012 RFS, on the other hand, allows the different wholesale services to be separated, but has some limitations in identifying the different retail services. In this case, NGA and leased-line services are aggregated with other retail services in the 'Retail Other' service category. For the purpose of this report, Oxera has largely used data from the 2012 RFS, with additional disaggregation based on the 2010 RFS for illustrative purposes.

Table 2.2 Implementing the proposed approach using eircom's RFS

		Implementation issues	
Services	**Identified as coming within the business definition?**	**Separate account in 2010 RFS?**	**Separate account in 2012 RFS?**
Retail			
PTSN/ISDN access	✓	No, included in PSTN/ISDN/DSL/VPN access	Yes
PTSN/ISDN calls	✓	Yes	No, included in Retail Other
Broadband services	✓	No, included in PSTN/ISDN/DSL/VPN access	No, included in Retail Other
Dial-up Internet services	✓	Yes	No, included in Retail Other
Leased lines	Partly	Yes	No, included in Retail Other
NGA access and services	Partly	n/a	No, included in Retail Other
Public payphones	✓	Yes	No, included in Retail Other
Directory enquiries	✓	Yes	No, included in Retail Other
Supplemental & remaining	Partly	n/a	No, included in Retail Other
Mobile services	×	Yes	Yes
Wholesale			
Unbundled access	✓	No, included in Local Access	Yes
Line rental	✓	No, included in Local Access	Yes
ADSL bitstream	✓	No, included in Local Access	Yes
Interconnection	✓	No, included in Core Network	Yes
Leased lines	Partly	No, included in Core Network	Yes
Residual unregulated	Partly	No, included in Core Network	Yes

Source: Oxera, based on eircom RFS.

2.5 Impact assessment

The final step of the analysis was to develop an impact assessment of the inclusion (or not) of the services identified as partly meeting the specified criteria. This was done as follows:

– **Step 1**: assess the profitability by market of the profitability of eircom within the fixed-line business but outside the core USO business;

– **Step 2**: determine the impact of including the relevant services within the scope of the business for the purposes of measuring eircom's profitability;

– **Step 3**: on the basis of steps 1 and 2, outline credible options for measuring eircom's profitability in respect of the provision of the universal service.

Ideally the above analysis would need to be undertaken using 2009/10 data. However, as explained in section 2.4, eircom's 2010 RFS does not provide the necessary breakdown to conduct such analysis, so data from 2011/12 was used instead to illustrate how the approach would be implemented.

Table 2.3 below illustrates the calculation for 2011/12, largely based on the data within the 2012 RFS, but with some estimation of further breakdown below the level of the RFS where this is required to separate the different types of business. This analysis is all based on data within eircom's published regulatory financial statements. To come to the analysis for some of the markets which were not separated within the 2011/12 accounts, we allocated 2011/12 data using the same splits that were observed within the regulatory accounts for 2009/10.[11]

The conclusion is that, of the €690m of revenue recorded within the fixed-line business but outside the USO business, we estimate that:

– 37% related to calls over the USO network (PSTN/ISDN). Although this part of the market is open to competition on an equivalent basis, the provision of the service relies significantly on the use of the USO network, and hence should be included within the USO business;

– 22% related to retail and wholesale leased lines. These services partly use the USO network, but are part of the integrated fixed-line network;

– 18% related to retail Internet services. These services again act in a competitive market, but also use USO assets to provide the services and, through broadband access with managed VoIP services, could be a close substitute for traditional fixed-line services;

– 11% related to wholesale unregulated services, which comprise international traffic. Although competitive services, their use relies on USO assets;

– 2% related to directory enquiries and public payphones, which are considered USO services;

– 11% related to other services and activities that are not further disaggregated, but combine minor core services and other-non core services, such as premium lines.

Table 2.3. illustrates the analysis of revenues and profitability for different business areas on this basis:

Table 2.3 Cumulative revenues and profitability across eircom's fixed-line business in 2011/12

	Cumulative turnover (€m)	Cumulative operating profit (€m)	Cumulative mean capital employed (€m)	Cumulative ROCE
Services directly within the scope of the 'USO business' (as defined in Oxera's report, excluding leased lines)				
Retail PSTN & ISDN access	301	(2)	16	–11%
Wholesale unbundled access	305	(3)	23	–12%
Wholesale line rental	649	111	870	13%
Wholesale broadband access	742	145	1,044	14%
Interconnection regulated	919	166	1,203	14%

[11] This will therefore represent an approximation and further analysis could be performed through examination of eircom's non-public 2011/12 data. The aim of the analysis within this document was to illustrate the potential impact of choosing different scopes of business, and we consider that this approximation provides a reasonable illustration. A further analysis requiring use of more data beyond that within the RFS could be performed, were ComReg to conclude that this would impact the decision in respect of whether the net cost represents an unfair burden.

	Cumulative turnover (€m)	Cumulative operating profit (€m)	Cumulative mean capital employed (€m)	Cumulative ROCE
Total services within the scope of USO business				***14%***
Additional services where provision relies on using the USO network				
PSTN calls	1,173*	248*	1,353*	18%*
Broadband access	1,289*	262*	1,299*	20%*
Dial-up Internet	1,298*	262*	1,304*	20%*
Directory enquiries, public payphones[1]	1,311*	264*	1,305*	20%*
Total fixed-line business within USO business scope and using USO network				***20%***
Services within eircom's integrated fixed-line business which partly make use of the USO network				
Wholesale residual unregulated	1,390*	268*	1,332*	20%*
Wholesale leased lines	1,465*	293*	1,503*	19%*
Retail Leased Lines	1,532*	318*	1,495*	21%*
Supplemental & Remaining	1,609	338	1,515	22%
Total fixed-line business				***22%***

Note: All data highlighted with asterisks represents illustrative estimations of the returns on the definition of the business including relevant retail services. The turnover and return for the retail services was estimated on the basis of their share of total revenue/return in 2009/10 as reported in eircom's 2010 RFS. For example, retail leased lines were assumed to be 12% of "Retail Other" revenue of £536 million, with the 12% being based on 2009/10 data. [1] The large ROCE for directory enquiries and public payphone services is mainly due to a reduction in the capital employed in the public payphone services.
Source: Oxera, based on eircom's 2012 regulatory financial statements.

The above illustration shows that eircom has earned significant revenues and profits from parts of the retail business which, although not directly within the USO business, relied on the USO business and formed part of an integrated fixed-line business. Based on the analysis in table 2.3. above, within the 2011/12 example given in Oxera's previous report, margins would have been:

– 14% under the definition of the USO business (as defined in Oxera's previous report, excluding leased lines);

– 18% including PSTN/ISDN calls;

– 20% across the fixed-line business but excluding services identified as partly meeting the set criteria;

– 22% across the fixed-line business.

In summary, Oxera has further assessed the criteria that would apply to determine the USO business definition. Some services within eircom's fixed-line business were identified in this report as meeting partly the set criteria. Therefore, if any services were to be excluded from the business definition, they would be these services.

Oxera tested whether a narrower business definition, which excludes the services that partly met the set criteria, would have a material effect on the estimated profitability for eircom's fixed-line business. We found that the ROCE would reduce from 22% to 20%; hence, the conclusions remain unchanged in respect of eircom's current application.

This analysis is based on data from 2011/12, as this is consistent with the data presented in Oxera's previous report. However, the impact of the alternative approach on the relevant definition of profitability is negligible, and does not affect the decision as to whether the net cost represented an unfair burden in 2009/10.

On balance, Oxera continues to consider that the integrated fixed-line business would be the most relevant definition of the business, as highlighted in our previous report. However, certain services that are less strongly interdependent with the USO network could be reviewed to ascertain whether they remain appropriate for inclusion within the relevant scope of business, particularly as the market develops. In 2009/10, even if all such services had been excluded, the impact on the profitability of the relevant business would have been small, and should not affect any decision on whether the net cost of the USO represented an unfair burden.

3 Materiality

3.1 Introduction

ComReg's Decisions 38–42 in D04/11 set out the principles and methodologies for assessing whether the USO represents a net cost that places an unfair burden on the USP. Decision 40 requires that, in addition to finding an impact on the USP's profitability, such an impact should be material.[12]

Given the absence of a generally agreed definition of materiality, Oxera's report considered precedent from other regulators and organisations.[13] It noted that there are few relevant precedents from regulators that have used the concept of materiality in the context of the net cost of the USO, although it has been used in other contexts; for example, in Ofwat's regulatory accounting guidelines and in determining re-openers in the water sector; by Postcomm/Ofcom in regulatory reporting guidelines for postal services; by Ofgem in the context of reopeners in the energy sector; and a number of accounting precedents.

Based on these precedents, Oxera concluded that 5–10% of profitability or 0.5–1% of revenues could be considered a reasonable benchmark for determining materiality in terms of the impact on the USP's profitability.

eircom's response suggested that ComReg, based on Oxera's advice, had set materiality thresholds at an unreasonably high level, although it notes that 'it is not obviously clear how one can assess whether the effect of a net cost is significant or not.'[14] eircom claims that Oxera uses unrelated and therefore potentially irrelevant precedents, and suggests two alternatives that it considers more appropriate. Oxera addresses each of these points in turn.

3.2 Examples identified by Oxera

Oxera regards the examples highlighted in its report as relevant comparators for any determination by ComReg for the purposes of the materiality test.

With regard to the Royal Mail example, while the specific reference was to Royal Mail's compliance document, eircom's claim that the 1% materiality threshold for regulatory reporting for postal services was a Royal Mail decision is inaccurate. This was consulted and decided on by Postcomm/Ofcom as part of an extensive consultation process, which is why Ofcom published the Royal Mail compliance document.[15]

3.3 The additional examples included in eircom's document

Oxera considers that the additional precedents suggested by eircom as being more appropriate do not necessarily provide a like-for-like comparison to the test applied by ComReg—ie, 'a significant impact on profitability.' The two eircom examples are considered below.

[12] As previously noted by Oxera, D04/11 uses the terms both 'material' and 'significant'. We consider these terms to be interchangeable for the purposes of interpreting and applying this test.

[13] Oxera (2013), 'Does the universal service obligation represent an unfair burden for eircom?', prepared for the Commission for Communications Regulation, February 1st.

[14] eircom (2013), 'Response to ComReg Consultation Paper: Consultation and Draft Determination on the Assessment of eircom's Universal Service Fund Application for 2009-2010', July 5th, p. 21.

[15] See, for example, Postcomm's (2010) initial decision 'Laying the foundations for a sustainable postal service: Annex 2, Cost transparency and accounting separation, Decision document', November.

France (ARCEP)

Oxera considers that the ARCEP precedent cited by eircom is not a relevant example in applying the materiality test, for two key reasons. First, 'the USO net costs determined by ART/ARCEP since 1998 have always been acknowledged as an unfair burden for France Télécom.'[16] It does not appear that there has been the same level of detailed analysis by the regulator as that undertaken by ComReg in determining that the net cost is an unfair burden. For instance, in reaching its decision in 2005, ARCEP did not provide any justification in terms of France Telecom's market and profit positions.[17]

More importantly, eircom claims that ARCEP set a threshold of €4m for the USO costs in France. ARCEP notes that the €4m materiality threshold is used to assess whether the costs of implementing the sharing mechanism, fund management, regulatory audits and other such costs are significant. Therefore, this materiality threshold actually refers to the administrative costs of setting up the sharing mechanism and whether the net cost is material in that sense (ie, ComReg's Decision 39). ARCEP does not use this threshold in the context of determining whether the impact on the USP's profit is material. Specifically, ARCEP has always concluded that the impact of the net cost is material, and does not follow a directly comparable test of assessing the impact as a share of profitability and/or revenue. Indeed, Anacom, the Portuguese communications regulator, has described the use of the materiality threshold by ARCEP:

> The Regulator has always considered CLSU [net cost] to constitute an unfair burden. It assesses whether CLSU are considered an unfair burden on the basis of a set of elements, namely: i) the weight of CLSU v.s. financial risks entered in the accounts and annual report of the France Télécom Group; and ii) *the comparison of the value of CLSU and the implementation and management costs of the financing mechanism*.[18] [emphasis added]

Portugal (Anacom)

The example from the Portuguese regulator was cited in Oxera's original report (footnote 31). However, we do not consider this to be a directly relevant precedent for ComReg in assessing eircom's application. While Anacom applies a materiality test, the concept of materiality appears to be used in a different way to how ComReg used it in its D04/11 decision.

Anacom determined that two tests need to be passed in order for the net cost to be considered as an unfair burden: i) the USP's market share must be lower than 80%; and ii) the net cost must be €2.5m or more. Therefore, simply having a net cost of above €2.5m does not necessarily indicate that the net cost will be determined to be an unfair burden.[19]

Anacom does not provide much explanation about how it chose this materiality threshold. However, like the French example that Anacom refers to, the €2.5m is a threshold to compare the net costs of the USO with the administrative costs of setting up a fund, rather than to determine whether the net cost has a material impact on the USP's profitability. Indeed, Anacom notes a number of factors that should be taken into account in determining a minimum value of the net cost that justifies financing. These include the fact that the USP itself will contribute to the funding in proportion to its market share, and the implementation costs of a fund.[20]

Therefore, neither of these examples is particularly relevant in determining whether the impact on the USP's profit is material, which is the test set by ComReg within D04/11.

[16] WIK-Consult (2008), 'Methodology for calculating the net cost of PTC's universal service obligation (USO) and the definition of an "excessive burden"', July 16th, p. 38.

[17] Ibid.

[18] Anacom (2011), 'Decision on the definition of unfair burden', July 15th, p. 21.

[19] Ibid.

[20] Ibid.

Instead, these examples appear largely to consider whether the net cost is material compared with the costs of setting up a sharing mechanism. While the precedents in Oxera's report may not be derived from the telecoms sector, they look at the concept of materiality in a more comparable way to how it is considered by ComReg in Decision 42—ie, a material impact on profitability.

3.4 Definition of materiality

Overall, Oxera considers that a material impact on profitability can be taken as an effect that would be material to an investor, and would therefore potentially affect investment decisions. This could be considered in financial and non-financial terms—it could influence the assessment of providers of financial capital to the organisation and/or affect the organisation's strategy or business model. As such, the references from accounting guidelines are directly relevant as they are intended to ensure that accounts provide a true and fair reflection of a company's profitability for investors. Similarly, examples from other sectors which define materiality in the context of re-openers are relevant, as this involves an assessment of whether the impact on the company' revenue, costs and/or profit is significant.

The French and Portuguese comparators cited by eircom would imply that 0.03% and 0.09%, each as a share of revenue, are relevant materiality thresholds, and eircom uses this to argue for a lower threshold. Based on the definition of materiality above, in order for eircom's examples to be relevant, one would have to believe that an investor would change its decisions based on a 0.03% or 0.09% impact on revenue. This is below the comparable level considered by accounting guidelines, and Oxera's understanding is that these impacts would be generally below the level that would be considered significant by investors.

In summary, ComReg's D04/11 is clear that a significant impact on profitability is required, and Oxera's analysis suggests that the precedents presented by eircom do not represent a significant impact on profitability.

4 WACC

4.1 Introduction

In its response to ComReg's consultation paper on the assessment of eircom's universal service fund application for 2009/10, eircom argues that the use of a WACC of 10.21%—which ComReg determined in 2008[21]—to assess whether it faced an unfair burden was not appropriate since this WACC does not reflect market conditions in the period 2009/10. The question is therefore whether eircom's WACC has changed significantly between the 2008 determination and the 2009/10 period.

In particular, the risk-free rate and the asset beta should be adjusted according to eircom's response. eircom also provides estimates for these two parameters for the periods 2009/10, 2010/11 and 2011/12.

eircom states that its analysis 'is not intended to be taken as a rigorous recalculation of the WACC but rather as an indication of the possible cost of capital that Irish telecommunications companies could have faced in 2009/10, in 2010/11 and 2011/12'.[22] However, Oxera's analysis suggests that there are shortcomings to the estimates provided for the risk-free rate and the asset beta, which mean that they may not be reliable indicators of the actual values of the parameters for the periods under consideration. The two parameters are addressed in turn below.

4.2 Risk-free rate

In its illustration, eircom shows that since ComReg's 2008 cost of capital decision,[23] the risk-free rate increased from 4.75% (the midpoint of the estimated range of 4.5–5.0%) in 2008, to 6% in 2009/10, 8% in 2010/11 and to 8.2% in 2011/12.[24] The risk-free rate estimates for the periods after 2008 are based on yield data on ten-year Irish government bonds taken from Capital IQ. eircom states only that the risk-free rates are based on Capital IQ data and take into account the yield levels seen throughout the respective years. As such, it is not clear how the estimates are calculated (eg, whether they are spot rates or averages).

In its 2008 decision, ComReg used the spot rate of ten-year Irish government yields as the lower bound of its range of 4.5–5% for the nominal risk-free rate. ComReg's decision was, however, made before the eurozone crisis hit Irish government yields (see Figure 4.1). Therefore, for the purpose of that decision, using Irish government yields as a proxy for the risk-free rate was appropriate.

In the capital asset pricing model (CAPM), the nominal risk-free rate measures the expected return on an investment free of default and systematic risk—ie, where the realised return on the investment will be equal to the expected return. In economies where there are minimal concerns about the sustainability of the government's fiscal position, the risk-free rate is typically estimated with reference to the yield to maturity on government-issued bonds. These bonds are assumed to be notionally free of default and systematic risk.

[21] ComReg (2008), 'Eircom's Cost of Capital', May.

[22] eircom (2013), 'Response to ComReg Consultation Paper: Consultation and Draft Determination on the Assessment of eircom's Universal Service Fund Application for 2009-2010', July, p. 20.

[23] ComReg (2008), 'Eircom's Cost of Capital', May.

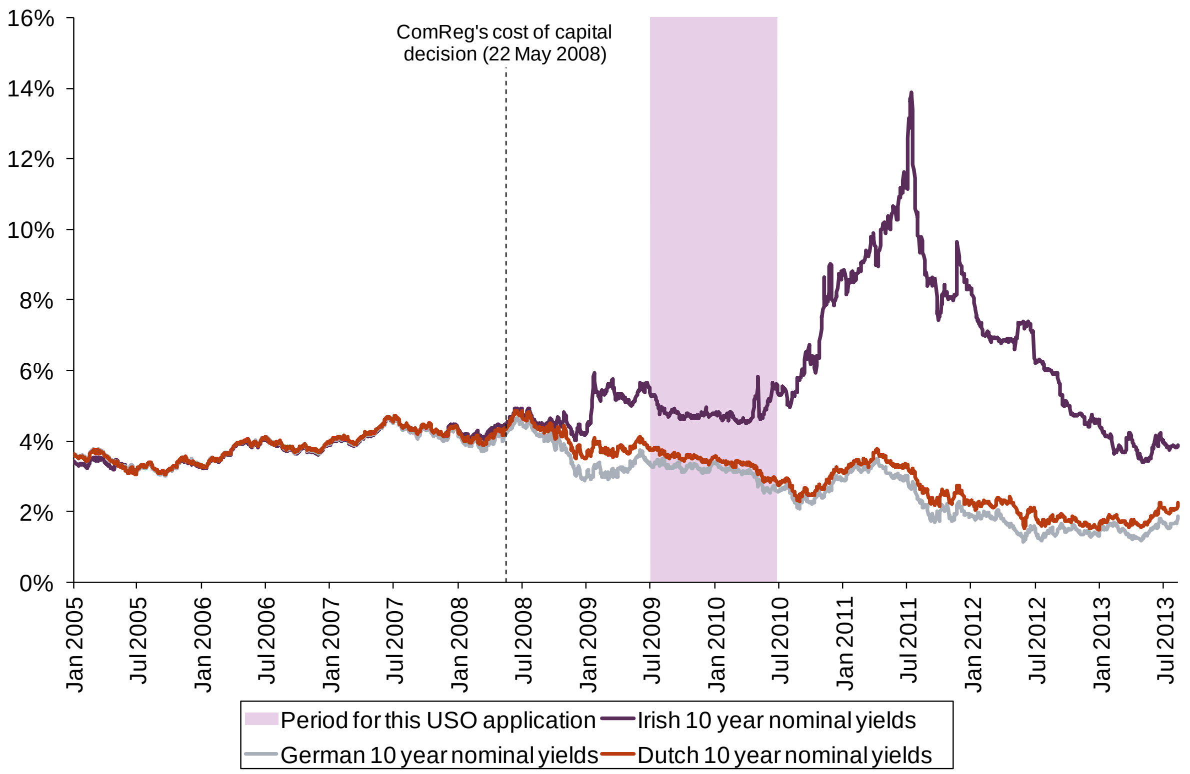
[24] eircom (2013), 'Response to ComReg Consultation Paper: Consultation and Draft Determination on the Assessment of eircom's Universal Service Fund Application for 2009-2010', July, p. 20.

Since the financial crisis, capital markets have experienced greater volatility, which, combined with large movements of capital and varying inflation expectations, affects the yields on government bonds. These developments have been accompanied by higher government expenditure on the special assistance programmes to financial institutions and growing concerns about the long-term strength of the European economies. Together, these developments present a significant challenge when seeking to determine the risk-free rate.

While Irish government yields have been under pressure since the end of 2008, around the time of the November 2010 bailout of the Irish government, yields on Irish debt increased by around 2% within a month, following a number of downgrades to the state's credit rating. Although yields have recently fallen, at the time the analysis was undertaken yields on Irish government debt remained higher than before the start of the financial crisis. This suggests that yields on Irish government bonds cannot be used as estimates for the risk-free rate since they do not represent a 'risk-free' investment. Instead, yields on government bonds issued by eurozone governments with the strongest fiscal positions—in particular, Germany and the Netherlands—can be used to proxy the risk-free rate. There is a concern that yields on German government debt may be distorted by the financial crisis, due to a flight to quality. As a result of this concern, it is prudent not to rely solely on German government yields, but also to consider the yields of another eurozone state that is considered 'risk-free' and might be less affected by flight-to-quality effects. One candidate fitting this description is the Netherlands.

Figure 4.1 compares the nominal yields on a ten-year Irish benchmark bond index with its counterparts from Germany and the Netherlands. It shows that Irish and German/Dutch yields were almost identical before the financial crisis in 2008 and diverge from mid-2008.

Figure 4.1 Comparison of Irish and German ten-year nominal bond yields



Note: Cut-off date is August 8th 2013.
Source: Oxera analysis, based on data from Datastream.

Table 4.1 compares the spot yields of Irish, German and Dutch government bonds at the start of each period. Figure 4.1 and Table 4.1 show that the risk-free rate has decreased since 2008/09.

Table 4.1 Spot yields of Irish, German and Dutch ten-year government yields (%)

	July 2nd 2007	July 1st 2008	July 1st 2009	July 1st 2010	July 1st 2011
Ireland	4.5	4.9	5.5	5.6	11.2
Germany	4.5	4.6	3.4	2.6	3.0
Netherlands	4.5	4.8	2.7	2.8	3.3
Average of German and Dutch spot yields	**4.5**	**4.7**	**3.6**	**2.7**	**3.2**

Note: The table shows the spot yields of Irish, German and Dutch ten-year government bonds and the average of German and Dutch spot yields at the start date of the periods 2007/08, 2009/10, 2010/11 and 2011/12.
Source: Oxera analysis based on data from Datastream.

In its 2007 report for ComReg, Oxera used spot yields as a lower bound for the risk-free rate estimate.[25] To take into account regulatory precedent, and in order to include headroom for the possibility of mean reversion, the upper bound of the estimated range was deemed to be 50bp above the spot rate.

Applying a similar upper bound to the average of German and Dutch spot yields gives the indicative risk-free rates for the periods 2009/10, 2010/11 and 2011/12 reported in Table 4.2. These indicative rates represent the midpoint between the spot yields and the upper bound defined as spot yields plus 50bp.

Table 4.2 Comparison of indicative risk-free rates (%)

	2009/2010	2010/2011	2011/2012
eircom	6	8	8.2
Oxera	3.9	2.9	3.4

Note: The table compares the indicative risk-free rates suggested by eircom with those calculated by Oxera based on the average of German and Dutch spot yields plus a headroom of 25bp.
Source: Oxera analysis based on data from Datastream and eircom (2013), 'Response to ComReg Consultation Paper: Consultation and Draft Determination on the Assessment of eircom's Universal Service Fund Application for 2009-2010', July 5th.

Since the start of the eurozone crisis, the economic environment in Ireland has changed considerably. Concerns about the sustainability of the government's fiscal position have affected the return required by investors for holding Irish government bonds. Since credit rating agencies have explicitly linked credit ratings of regulated utilities to that of the state, the deterioration in the creditworthiness of the Irish government could affect eircom's costs of debt. The cost of equity could also be expected to be affected by the eurozone crisis, as it could affect the volatility of returns and systematic risk.

There is no one widely accepted methodology that can be used to quantify these risks in the cost of capital. Given the nature of the current crisis, this is also not an issue that European regulators have had to deal with extensively in the past.

One way to deal with this is the approach adopted by the Commission for Energy Regulation (CER) in its 2012 estimation of the cost of capital of Bord Gáis.[26] The CER adjusted both the cost of equity and the cost of debt by adding a 'crisis premium' to the risk-free rate in order to take into account the risks associated with the eurozone crisis. The crisis premium is estimated using the spread of the yields of bonds issued by Irish regulated utilities (in this

[25] Oxera (2007), 'eircom's Cost of Capital', November.

[26] Commission for Energy Regulation (2012), 'Decision on October 2012 to September 2017 transmission revenue for Bord Gáis Networks', November.

case the utilities are the DAA and BGE) over the comparable iBoxx European corporate bond index with a comparable credit rating.

Based on this methodology, the crisis premium was around 1–1.5% (point estimate 1.2%) in July 2009, 1.4–1.8% in July 2010 and 2.6–3.4% in July 2011. Adding this to the nominal risk-free rate gives the indicative estimates for the nominal risk-free rate plus a crisis premium of 5.1% in July 2009, 4.5% in July 2010 and 6.4% in July 2011 (see Table 4.3).

Table 4.3 Sum of crisis premium and indicative nominal risk-free rates (%)

	July 2009	July 2010	July 2011
Indicative risk-free rate	3.9	2.9	3.4
Crisis premium	1.2	1.6	3.0
Sum	**5.1**	**4.5**	**6.4**

Source: Oxera analysis based on data from Datastream.

4.3 Asset beta

eircom argues that since ComReg's 2008 decision,[27] the asset beta increased from 0.57 in 2008 to 0.78 in 2009/10, 0.76 in 2010/11 and to 0.59 in 2011/12. eircom's asset beta estimates for the periods after 2008 are taken from the website of Professor Aswath Damodaran of New York University.[28]

While an estimation of a company's asset beta should ideally be 'tailor-made', by identifying a sample of directly comparable companies, and should take into account a wide range of evidence from different sources,[29] industry averages from a credible source can be useful to give a first indication of whether there might have been changes to an industry's business risk. In this sense, Professor Damodaran's website is a good starting point.

However, in its selection of asset beta estimates, eircom makes several assumptions which indicate that the particular estimates cannot be directly translated to the question of eircom's WACC in 2009/10.

1. The values of 0.78 and 0.76 for the periods 2009/10 and 2010/11, respectively, seem to be the asset beta estimates for the 'Telecommunication Services' industry using a sample of companies listed on stock exchanges in the USA. While this includes companies that are not headquartered in the USA, the sample is clearly biased towards US companies. Professor Damodaran does not offer historical estimates for Europe, but the latest average of the unlevered asset beta of the 'Telecommunications Services' industry from January 1st 2013 suggests that the asset beta average in Europe (0.44) is significantly lower than in the USA (0.91).

2. While the two values in the previous point are taken from Damodaran's US sample, the value 0.59 for the period 2011/12 seems to be taken from Damodaran's global sample.

3. Furthermore, eircom used the Telecommunications Services sector as a reference industry while it would be more appropriate to use the 'Telecommunications Utility' sector. The latter tends to include only the incumbent companies that mostly operate in the fixed-line markets and tend to own the fixed-line telecoms networks. The Telecommunications Services sector, on the other hand, largely comprises market

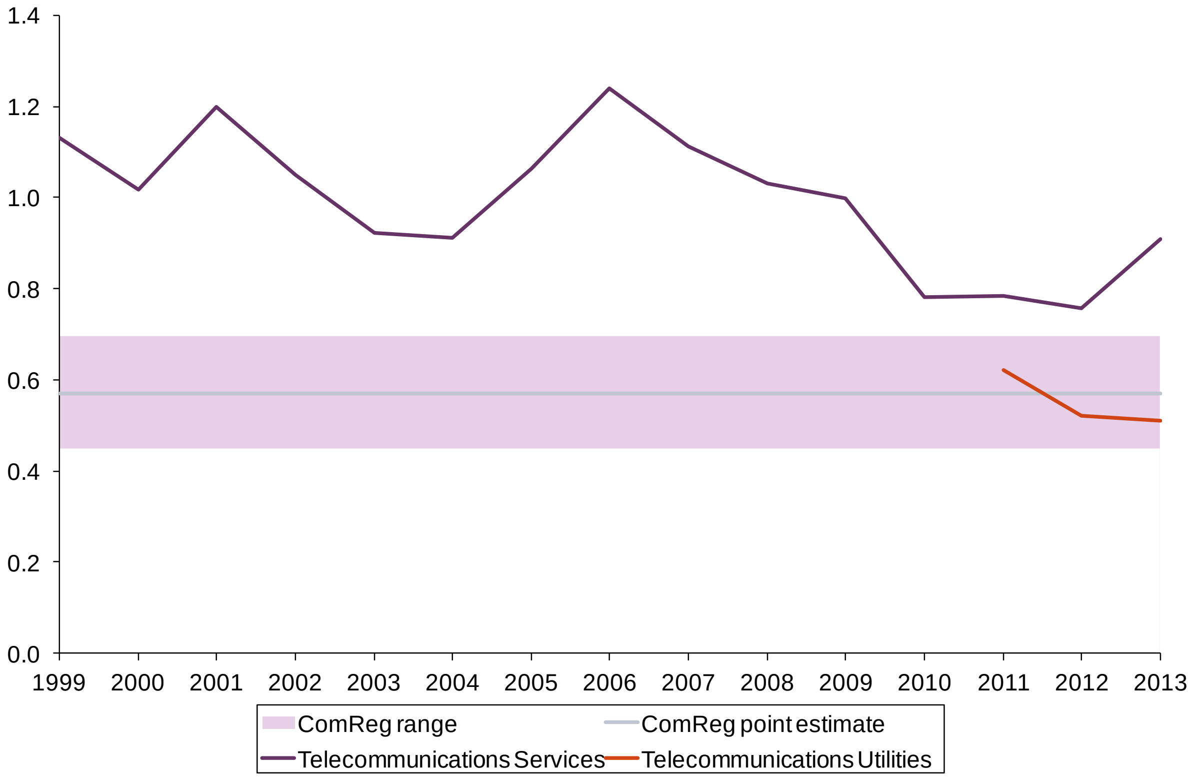
[27] ComReg (2008), 'Eircom's Cost of Capital', May.

[28] The data is currently publicly available at http://pages.stern.nyu.edu/~adamodar/

[29] In its 2007 report for ComReg, Oxera considered the following sources of evidence in order to arrive at its estimate for eircom's asset beta: direct statistical estimation, third-party estimates, peer comparison, implied fixed-line comparators and regulatory precedents.

entrants and mobile-only operators that are active the Americas, which tend to exhibit a higher business risk. For the US sample of the Telecommunications Utility sector, data seems to be available on Damodaran's website only from 2010, but this data shows that the asset beta of the utility sector is significantly lower than that of the services sector (compare the purple and red lines in Figure 4.2).

Figure 4.2 Comparison of Damodaran's asset beta estimates with those of ComReg



Source: Oxera analysis, based on data from http://pages.stern.nyu.edu/~adamodar/ and ComReg (2008), 'Eircom's Cost of Capital', May.

Figure 4.2 indicates that Damodaran's asset beta estimates for the US-listed Telecommunications Services sector, if relevant, suggest that the asset beta may have fallen since 2008. A decline can also be observed in Damodaran's asset beta estimates for the US-listed Telecommunications Utility sector, potentially due to the 'flight to quality' and relative attractiveness of investments in regulated utilities such as eircom.

Taking the evidence in this figure along with Damodaran's estimate of the asset beta of telecommunications *services* companies listed in Europe of 0.44, keeping the asset beta unchanged at 0.57 seems to be a reasonable (possibly even a rather optimistic) assumption.

Wider implications of market conditions

Using a chart of the Dow Jones Industrial Average index as an illustration, eircom argues that the 'volatility in the capital markets evidences an increased perception of risk among investors, leading to a need for greater returns on their investments, be it equity or debt.'[30] While this might be the case, it is not what the asset beta captures. The asset beta is a measure of *relative* riskiness. eircom's asset beta measures the company's business risk relative to that of the market, rather than the riskiness of the market itself.

[30] eircom (2013), 'Response to ComReg Consultation Paper: Consultation and Draft Determination on the Assessment of eircom's Universal Service Fund Application for 2009-2010', July, p. 20.

The point that during the eurozone crisis the business risk of Irish companies increased compared with that of companies from other countries is valid, and should be taken into account. However, this is not directly related to the asset beta, as the country risk would apply to all companies within the Irish market. Instead, Oxera's approach (consistent with that applied by CER during the crisis) is to account for the risk arising from the eurozone crisis through the inclusion of a 'crisis premium', as outlined in section 4.2 above.

4.4 Cost of capital

Based on the indicative analysis from sections 4.2 and 4.3, Table 4.4 shows the effects of adjusting the risk-free rate and the asset beta in the way outlined above. This is not intended to represent a full review of the WACC, but represents an indicative assessment of the scale of change over time.

Table 4.4 Comparison of indicative WACC

	ComReg's 2008 decision	Indicative estimate for 2009/10	Indicative estimate for 2010/11	Indicative estimate for 2011/12
Cost of debt				
Risk-free rate (nominal, %)	4.75	3.90	2.90	3.40
Crisis premium (%)	0.00	1.20	1.60	3.00
Headroom (%)	0.25	0.25	0.25	0.25
Debt premium (bp)	190	190	190	190
Pre-tax cost of debt (nominal, %)	6.90	7.25	6.65	8.55
Cost of equity				
Risk-free rate (nominal, %)	4.75	3.90	2.90	3.40
Crisis premium (%)	0.00	1.20	1.60	3.00
Asset beta	0.57	0.57	0.57	0.57
Notional gearing (%)	40	40	40	40
Equity beta	1.02	1.02	1.02	1.02
Equity risk premium (%)	6.0	6.0	6.0	6.0
Statutory tax rate (%)	12.5	12.5	12.5	12.5
Post-tax cost of equity (nominal, %)	10.87	11.22	10.62	12.52
Pre-tax WACC (nominal, %)	**10.21**	**10.59**	**9.94**	**12.01**

Source: Oxera analysis.

Overall, this analysis suggests that, while both the interest rate (the sum of the nominal risk-free rate and the crisis premium) and the post-tax cost of equity did increase, the effect was not as large as eircom suggests. The analysis indicates that, at 10.59%, the pre-tax WACC was only marginally higher in 2009/10 than in 2008 when ComReg published its cost of capital decision for eircom (10.21%).

4.5 Should the unfair burden test be based on actual WACC as opposed to assumed WACC within the cost of capital?

The analysis above provides a sensitivity analysis of what the appropriate WACC would have been on a comparable basis to ComReg's approach to achievable financing costs within 2009/10.

On balance, Oxera does not consider that the actual differential between eircom's cost of capital within 2009/10 and ComReg's assumption was likely to have been sufficient to imply that a different cost of capital should have been used within the unfair burden assessment.

eircom highlighted a scenario whereby the cost of capital could have been significantly higher in 2009/10—potentially up to 4% higher. In that context it is still not clear that the use of a different cost of capital would be appropriate. ComReg set a cost of capital of 10.21% to cover investment costs over the period, and as part of the settlement, eircom would be expected to manage its costs and the risks associated with actual costs being higher or lower than ComReg's allowance.

Nevertheless, should actual costs have been very different to ComReg's assumption, eircom could make the case that this affected its ability to finance any net cost, and therefore this could be part of any future assessment.

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