Commission for
Communications Regulation

Consultation Paper

Review of Eircom's Cost of Capital

Document No:	**07/88**
Date:	**1 November 2007**

All responses to this consultation should be clearly marked:-
"Reference: Submission re ComReg 07/88" as indicated above, and sent by post, facsimile, e-mail or on-line at www.comreg.ie (current consultations), to arrive on or before 5.30pm on Thursday 13 December 2007, to:

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Please note ComReg will publish all respondents' submissions with the Response to this Consultation, subject to the provisions of ComReg's guidelines on the treatment of confidential information – ComReg 05/24.

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1 Executive Summary

This consultation document details ComReg's approach to estimating Eircom's weighted average cost of capital ("WACC"). The cost of capital is a key input when calculating the allowed returns for Eircom's regulated fixed-line activities. This document begins with a discussion of the key objectives for this WACC review. This is followed with an overview of the proposed methodology for calculating a WACC. The subsequent sections explain ComReg's position on the individual parameters in the calculation of a WACC in order to identify an appropriate range for the cost of capital for Eircom's regulated fixed-line activities from the underlying analysis.

ComReg retained Oxera Consulting Limited to provide estimates of components of the WACC including specific issues such as taxation and gearing. Oxera have carried out estimations of Eircom's WACC using both notional and actual gearing levels. ComReg has considered alternative methodologies for the WACC calculation and has explored the issue of whether or not to apply a specific WACC to different parts of Eircom's fixed-line markets and services, thereby reflecting possible risk differentials across those different businesses/activities, or to apply a single WACC across all businesses/activities.

ComReg's key preliminary views are as follows:

- The WACC methodology and Capital Asset Pricing Model ("CAPM") should continue to be used to derive an overall nominal pre-tax cost of capital for Eircom's fixed-line business;
- The average WACC for Eircom's fixed-line business should be set within a range of 7.77% to 11.08% and that a WACC approximately in the mid-point of this range would constitute an adequate return on investment for Eircom;
- To promote efficient investment incentives via an approach to capital structure and tax allowances based on a notional level of gearing combined with the statutory corporation tax rate of 12.5%. Other possible (incentive compatible) mechanisms are also explored, including a "trigger" for any extra CAPEX Eircom commits to or verifiable systematic risk differences; and
- While further consideration of the possibility of a disaggregated WACC may be of benefit, ComReg is of the preliminary view that the proposed single WACC is a reasonable measure of Eircom's investment/business risk profile at this time.

It should be noted that these are preliminary views, and should further evidence accrue, may be subject to change in any final decision on the allowed returns for Eircom's regulated fixed-line activities.

The remainder of this document is structured as follows:

- Section 2: Introduction;
- Section 3: Proposed Approach to Calculation of WACC;
- Section 4: Policy Considerations: Investment and Capital Structure;

- Section 5: Overall WACC Calculation;
- Section 6: Submitting Comments;
- Appendix A: Consultation questions;
- Appendix B: WACC – Cross-country analysis; and
- Appendix C: Oxera’s Report of Eircom’s cost of capital.

Views are sought on the proposals set out below. The closing date for submissions is 5.30pm on Thursday 13 December, 2007.

2 Introduction

Background

2.1 ComReg considers it appropriate to update the WACC estimate applicable to Eircom's fixed-line regulated business at this time. In 2003, following a detailed review of the relevant parameters, ComReg determined that a pre-tax nominal WACC of 11.5% would allow Eircom an adequate rate of return for regulatory purposes.[1] Since then, various aspects of the Irish economy and financial markets, as well as the structure of the telecoms industry more generally, and of Eircom in particular, have changed, with possible implications for Eircom's cost of capital. In any case, given the time elapsed, it seems entirely appropriate that a new review should be implemented. Some of the following factors may have a bearing on Eircom's financial and business risk profile over the period of this WACC review:

- Changes in the ownership and financial structure of Eircom over recent years; and
- Future capital expenditures such as the deployment of IP-based Next Generation Networks ("NGNs") and increasing penetration of alternative platforms for providing telecom services.

2.2 In addition, ComReg is mindful of the following factors:

- There is evidence that the cost of capital for fixed regulated telecoms businesses is changing in several jurisdictions;[2]
- A number of market reviews are currently underway by ComReg to which the WACC constitutes a key building block in assessing future price controls; and,
- In accordance with its obligations, ComReg must have due regard to investment incentives.

2.3 In light of the foregoing, ComReg has explored a number of issues in detail with Oxera Consulting Limited regarding the calculation of Eircom's cost of capital for its fixed-line business. The associated implications on Eircom's incentives and ability to invest deriving from a preliminary WACC estimate(s) have also been examined. Oxera have produced a report[3] with their findings which is published alongside this consultation document (see Appendix C – *Oxera's Analysis of Eircom's Cost of Capital Prepared for ComReg*). Where appropriate, the remainder of this consultation document refers to the more detailed analysis contained within Oxera's report.

[1] ComReg (2003), Review of Price Cap on certain telecommunications services, Decision Notice D3/03, February. http://www.comreg.ie/_fileupload/publications/ComReg0314.pdf.

[2] Appendix B contains a cross-country comparison of WACC based on data obtained from *Cullen International*.

[3] Appendix C – Oxera's Analysis of Eircom's Cost of Capital Prepared for ComReg. ComReg Document no. 07/88a.

Key Objectives of the Current WACC Review

2.4 The correct determination of the cost of capital is a crucial element in the regulatory process. It is central to any price-setting process (determining a large part of the prices a regulated utility is allowed to charge by setting the allowed return on capital employed), and has an important impact on the regulated firm's investment incentives. It also has important implications for the tariffs other operators must pay for access, the overall competitive process, and ultimately end prices for consumers.[4] Consequently, ComReg is approaching the setting of a new WACC with considerable care and detailed analysis.

2.5 ComReg has taken into account a number of key considerations when calculating a preliminary estimate of the reasonable rate of return. These include:

- The need to ensure that existing and future levels of competition in wholesale and retail markets is not negatively impacted by the WACC as it affects access prices; and
- The need to protect end-consumers from potential excessive charging.

2.6 When ComReg sets price controls for services supplied in markets where firms have Significant Market Power ("SMP"), ComReg must decide what would constitute an adequate rate of return on capital employed in the production of the regulated services. The WACC is central to ComReg's setting of charge controls and price caps for retail and wholesale services, as well as calculating the return on capital employed in the regulated accounts. For instance, the existing WACC of 11.5% is a key input in the calculation of the Retail Price Cap ("RPC") for Eircom's retail narrowband access services and the wholesale access price for Eircom's local loop.[5] A number of pricing decisions are due for review in the coming year, amongst others, the price of the local loop and interconnection charges, including the imposition of a wholesale price cap.[6] If it is considered, following these market review processes, that determinations of SMP should be made in particular markets and charge controls or price caps are appropriate, then the WACC will form a key input into determining the appropriate pricing mechanisms.

2.7 Further to the above, a key objective in setting an appropriate rate of return is to ensure that the regulated firm achieves a return sufficient to recover the opportunity cost of the capital invested in the production of the regulated services so as to provide appropriate investment incentives.[7] ComReg is mindful of the

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[4] IRG – Regulatory Accounting (2007), Principles of Implementation and Best Practice for WACC calculation, February, http://erg.eu.int/doc/publications/erg_07_05_pib_s_on_wacc.pdf, (hereinafter "IRG Best Practice Report").

[5] It should be noted that the WACC used for the purposes of setting the current retail price cap on Eircom's narrowband access services was 11.5%, i.e. the cost of capital determined by ComReg for the fixed business of Eircom in 2003. In the case of the local loop the cost of capital was also taken to be 11.5% to set the wholesale charge.

[6] ComReg (2007), Market Analysis – Interconnection Market Review Wholesale Call Origination & Transit Services (Response to Consultation) Document No. 07/51, July; and ComReg (2007), Market Analysis – Interconnection Market Review Wholesale Call Origination & Transit Services (Decision Notice and Decision Instrument) Document No. 07/80, October.

[7] This means that the regulated rate of return should be set at a level that is consistent with the level that investors would receive for investing in alternative assets with the same level of riskiness as Eircom's assets.

need to promote a favourable climate for efficient and timely investment and to stimulate innovation in telecommunications infrastructure and services in Ireland.[8] Setting a rate of return that is too low could make future investment unattractive to investors. Similarly, setting it too high would allow the regulated company to earn excessive returns at the expense of its wholesale and retail customers while also potentially distorting pricing signals to investors.[9] It is important that regulated returns reflect the systematic risk that companies face in making investments and that the relevant WACC encourages future efficient investment in telecommunications infrastructure in Ireland. It is therefore important that the review not only considers current market conditions but also any potential developments, and financeability of future investments, over the period of the review.

2.8 ComReg is exploring a number of possible incentive based measures that may be used, if appropriate, to promote efficient investment incentives over the period of this WACC review. One of these measures is the possibility of setting different levels of WACC for different activities or assets operated by Eircom. ComReg has traditionally assessed the cost of capital at a company-wide level. However, companies commonly make investment decisions at a project or activity level (for instance local access, core, wholesale or retail activities) reflecting possible variations in systematic risk between different activities. ComReg notes that assets with different risk profiles may have different required rates of return, even when owned by the same company. Nevertheless, this approach should only be adopted if it can be done in a robust way which is in turn conditional on the availability of detailed business and financial information for the individual business projects/activities. The issue of applying a split WACC is discussed in more detail in section 4 below yet it is proposed that for the purpose of this review a single WACC would be applied to Eircom's overall fixed regulated business. The proposed single WACC is considered a reasonable measure of Eircom's investment and business risk profile at this time. However, in the event that there was a major change in market and corporate conditions, for example, vertical separation of Eircom's retail and wholesale activities, ComReg may consider a review of the WACC in such circumstances.

2.9 ComReg also explores a number of other possible mechanisms for the purposes of promoting investment incentives and public interest considerations going forward. One such mechanism involves ComReg's approach to gearing and taxation in the estimation of Eircom's WACC (see paragraphs 3.16 – 3.31). Allowing Eircom to continue to benefit from tax benefits should help to incentivise it to innovate and invest over the timeframe of this review. At the same time, ComReg also recognises the merits of sharing any tax benefits between consumers and the regulated company.

2.10 Another possible incentive-based mechanism which ComReg wishes to invite comments on in this consultation is the possibility of future potential adjustments to the average WACC in situations where, for example, projects involving

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[8] According to Article 13 (1) of the Access Directive (2002/19/EC), National Regulatory Authorities ("NRAs") may impose price controls on operators with SMP, including obligations of cost orientation and cost accounting. NRAs shall take into account the investment made by the operator and allow a reasonable rate of return on adequate capital employed, taking into account the risks involved.

[9] IRG Best Practice Report (2007), see supra note 4.

particularly risky or lumpy capital expenditures are committed to over the review period. The possibility of such adjustments being made to the aggregate WACC would, of course, need to be assessed on a case-by-case basis. This is discussed further in paragraphs 4.21 to 4.22 below.

3 Proposed Approach to Calculation of WACC

Introduction

3.1 This section sets out the overall approach that ComReg proposes to adopt in assessing what might be an appropriate and a robust estimate of the cost of capital for Eircom's fixed-line regulated business and discusses proposals for the estimation of the relevant parameters. It highlights the main empirical and regulatory issues that ComReg expects to influence the estimation of the parameters that make up the WACC, and outlines how ComReg proposes to interpret the available evidence on each.

3.2 Appendix C, the Oxera report, sets out a range of evidence available to ComReg from which to draw provisional conclusions at this time. In conducting the cost of capital analysis, Oxera adopts a broad range of methodologies in estimating key determinants of the WACC, using extensive evidence from primary research, peer comparison and recent regulatory precedent. Oxera explores a variety of possible approaches for estimating key components of the WACC and their respective merits in the context of this review.

Methodology: Weighted Average Cost of Capital and the Capital Asset Pricing Model

3.3 ComReg proposes that the WACC methodology should continue to be used to calculate an appropriate cost of capital for Eircom's fixed-line business and that the Capital Asset Pricing Model ("CAPM") continues to be used to estimate the cost of equity. The WACC methodology is widely used for calculating the cost of capital for regulated companies and is understood by both the finance community and industry. Indeed, the vast majority of telecom regulators set the regulated cost of capital by estimating the WACC.[10]

3.4 The cost of capital is a weighted average of two components: the cost of equity (r_e); and the cost of debt (r_d), where the weightings are determined by the relative proportions of debt and equity held by the firm. Defined on a pre-tax basis, a firm's cost of capital is calculated according to the following formula:

$$WACC = (r_d \times g) + [r_e \times (1 - g)]/(1 - t)$$ [11]

3.5 The most common way of implementing WACC is by using CAPM to estimate the cost of equity. The use of CAPM is considered to be best international practice

[10] See Appendix B which contains a comparison of the WACC used by telecom regulators in different countries.

[11] Where:
g = gearing;
t = tax rate;
r_f = nominal Risk-Free Rate ("RFR");
dp = debt premium;
r_d = cost of debt = (r_f + dp);
r_e = cost of equity = (r_f + β * Equity Risk Premium); and
β = systematic risk of an asset relative to the market.

and has strong theoretical underpinnings.[12] The central tenet of the CAPM is that investors hold a broad portfolio of assets which removes, by diversification, the company-specific risk of each asset in the portfolio leaving only non-diversifiable or systematic risk. Investors are only remunerated for systematic risk as measured by the beta (β) value. This is calculated as follows:

$$\textit{Cost of Equity} \rightarrow E[r_e] = r_f + \beta * (E[r_m] - r_f)$$ [13]

3.6 Taking the above factors into account, ComReg proposes to continue to use the WACC methodology to calculate Eircom's cost of capital and the CAPM method as the basis for estimating the cost of equity.[14] ComReg notes that there was broad consensus between agents in the Irish telecoms markets in the previous cost of capital determination in 2003 that the above WACC and CAPM framework should be used as the basis for determining the return on capital for Eircom.[15] ComReg sees no persuasive evidence to depart from taking the same approach in this review of Eircom's cost of capital and proposes to maintain a consistent approach in terms of methodology.

Q. 1. Do respondents agree that the CAPM-based WACC methodology continues to be the most appropriate basis for estimating Eircom's cost of capital? Please explain your response.

Proposed WACC Range

3.7 Appling the above framework, Oxera has assisted ComReg in obtaining a range of cost of capital estimates appropriate to Eircom. Table 1 below presents a summary of the preliminary results from the overall cost of capital calculation together with specific parameter estimates at a notional level of gearing and the corresponding debt premium. At the notional level of gearing between 30% and 50%, the proposed nominal pre-tax WACC is estimated to lie in the range of 7.77% to 11.08%.

[12] See Graham and Harvey (2001), The theory and practice of corporate finance: evidence from the field, Journal of Financial Economics. This survey of 400 CFO's showed that three-quarters use CAPM.

[13] Where: $E[r_e]$ = expected return on equity;
r_f = Risk-Free Rate ("RFR");
β = systematic risk of an asset relative to the market.; and
$(E[r_m] - r_f)$ = Equity Risk Premium ("ERP").

[14] ComReg has examined the suitability of the CAPM based approach in WACC determination as compared to alternatives. For details see Appendix C, the Oxera Report, pages 12-14.

[15] ComReg (2003), Review of Price Cap on certain telecommunications services, Decision Notice D3/03, February, see supra note 1.

Table 1: Proposed Cost of Capital Range at Notional Gearing

	Low	Midpoint	High
Cost of debt			
Nominal risk-free rate (%)	4.5	4.75	5.0
Debt premium (bps)	120	155	190
Nominal cost of debt (%)	5.7	6.3	6.9
Cost of equity			
Nominal risk-free rate (%)	4.5	4.75	5.0
Asset beta	0.45	0.57	0.7
Notional gearing (%)	30	40	50
Equity beta	0.64	1.02	1.39
Debt beta	0	0	0
Equity risk premium (%)	4.8	5.4	6.0
Statutory tax rate (%)	12.5	12.5	12.5
Post-tax cost of equity (%)	7.57	10.47	13.36
Proposed Nominal Pre-Tax WACC (at Notional Gearing)	**7.77%**	**9.43%**	**11.08%**

Source: Oxera report, section 10.

3.8 Table 2 presents an alternative scenario using actual gearing and the associated debt premium. At the actual level of gearing the nominal pre-tax WACC is estimated to lie in the range of 7.68% to 10.49%, which is slightly lower than the range when notional gearing is assumed.

Table 2: Proposed Cost of Capital Range at Actual Gearing

	Low	Midpoint	High
Cost of debt			
Nominal risk-free rate (%)	4.50	4.75	5.00
Debt premium (bps)	257	281	304
Nominal cost of debt (%)	7.07	7.56	8.04
Cost of equity			
Nominal risk-free rate (%)	4.50	4.75	5.00
Asset beta	0.45	0.58	0.70
Actual gearing (%)	60	76	91
Equity beta	0.63	2.47	4.30
Debt beta	0.33	0.33	0.34
Equity risk premium (%)	4.80	5.40	6.00
Statutory tax rate (%)	12.5	12.5	12.5
Post-tax cost of equity (%)	7.53	19.17	30.82
Proposed Nominal Pre-Tax WACC (at Actual Gearing)	**7.68%**	**9.08%**	**10.49%**

Source: Oxera report, section 10.

Estimation of the Different Parameters Used to Calculate WACC

3.9 For the purposes of transparency, the following sections set out ComReg's assumptions and preliminary proposals in relation to the key determinants of WACC, clearly outlining proposed changes in the WACC approach, if any.

Proposed estimation of beta

3.10 ComReg recognises that directly estimating Eircom's equity beta is complicated by two factors. First, Eircom is no longer a listed company and the period of its stock market listing was relatively short. Second, with Eircom's purchase of Meteor in 2005 it now has both fixed and mobile operations.

3.11 Oxera's approach to estimating Eircom's fixed line beta is set out at Appendix C, section 5. In reaching a proposal on a suitable range for Eircom's asset beta, Oxera considered:

- A combination of direct statistical estimates based on market data;
- Betas of 'pure-play' comparator companies selected using cluster analysis;[16]
- A decomposition of telecoms companies' betas extracting the effect of mobile operations on the companies' asset betas to obtain implied fixed-line asset betas; and
- Relevant regulatory precedent, including ComReg's past determination.

3.12 In addition, other specific business factors, such as capital intensity, as well as the business characteristics of Eircom's various divisions have been explored by Oxera to provide an insight into the level of systematic risk faced by Eircom.

3.13 Oxera has used the above methodologies to calculate Eircom's fixed line asset beta, giving a range of 0.45 to 0.7 with a mid-point estimate of 0.57.

3.14 Tables 5.10 and 5.11 of the Oxera report present a summary of beta estimates from the various approaches outlined above.[17] Oxera recognises the importance of regulatory precedent and thus proposes to incorporate the beta estimates obtained in ComReg's previous cost of capital review in 2003 into the range for Eircom's asset beta used in this WACC review. Oxera considers that caution, however, should be applied when considering the 2003 estimates as additional evidence in the context of the current review given the length of time that has passed since the previous review. The proposal to include the 2003 beta estimate as additional evidence in the current review results in a slightly higher range for Eircom's asset beta which implies that Eircom would be remunerated for a higher degree of systematic risk than that implied by market evidence, and would reflect a more conservative estimate of Eircom's beta consistent with ComReg's objective of promoting investment and stability.

[16] This refers to a statistical technique that employs a number of user-specified criteria to select countries whose telecoms markets have similar characteristics to those in Ireland. For full details of this approach see Appendix C, the Oxera report, section 5 and pages 48 to 52.

[17] Section 5, pages 22-23.

3.15 The approach adopted by Oxera in estimating Eircom's beta is based on several different methodologies and consistently shows that more recent estimates of Eircom's beta are below the asset beta level determined at the last WACC review. The application of the various methodologies produces a range for the asset beta that is rigorous and evidence-based. The value of this comprehensive approach is that each methodology acts as a separate data point in the analysis while also providing a cross-check on the other results.

Q. 2. Do respondents agree with the proposed approach to estimating Eircom's fixed line beta? Please explain your response.

Proposed approach to gearing and debt premium

3.16 ComReg has previously set Eircom's cost of capital using an assumed or 'notional' gearing.[18] A notional approach is broadly in line with what might be characteristic of a reasonably financed company carrying out the same operation as Eircom using relevant benchmark data. A review of regulatory precedent in Ireland and the UK shows that the use of notional gearing is broadly recognised. Precedence also suggests that the use of actual or predicted levels of gearing over notional assumptions is often used at lower levels of debt. Given changes to Eircom's financial structure in the period since the last WACC review and the significant increase in Eircom's leverage over recent years, ComReg has considered Eircom's cost of capital using the best estimates of the actual gearing levels and the associated debt premia, in addition to notional gearing.[19] As noted above, Table 1 and 2 present preliminary estimates of Eircom's WACC under these two different gearing assumptions.

3.17 To estimate a notional level of gearing and associated debt premium for Eircom, Oxera considered the actual gearing levels of comparator companies together with regulatory precedent on gearing assumptions used in relation to telecoms and other utilities in Ireland and the UK. The information on comparators and regulatory precedents implies that a notional gearing estimate could lie within the range 30-50%.

3.18 Oxera also estimated an actual level of gearing and associated debt premium for Eircom by looking at the actual gearing and debt costs of Eircom and the wider evidence and various assumptions regarding Eircom's enterprise value and financing structure. This assessment yields an average estimate of 76% for Eircom's actual gearing.[20]

[18] In the 2003 review, a gearing level of 25% was considered appropriate at that time and was estimated based on the gearing levels of comparator companies and the relevant operating and tax environment.

[19] A detailed description of Oxera's approach to estimating notional gearing, best estimates of actual gearing and their approach to estimating an appropriate value for the debt premium is contained in Annex C, section 6.

[20] This estimate is the average of three different assumptions regarding Eircom's enterprise value which yielded a range of actual gearing levels from 67% to 91%, with an average of 76%.

3.19 Using the calculated values from the actual gearing approach and the associated debt premium (see Table 2 above), the overall WACC range calculated would be slightly lower than under a notional gearing approach (see Table 1). By assuming an actual level of gearing, this decreases the range for the WACC to between 7.68% and 10.49%, with a marginally lower mid point of 9.08%. Were ComReg to adopt an actual gearing assumption in this WACC review, this approach may require the inclusion of a positive debt beta. At higher levels of gearing, the effect of leverage on the cost of equity might be overestimated in the absence of the incorporation of a positive debt beta, which reflects a portion of debt premium associated with systematic risk. The inclusion of a positive debt beta under actual gearing reduces the size of the equity beta, and therefore the cost of equity is lower than under a notional gearing approach with a zero debt beta assumption.

3.20 As noted above, the notional level of gearing is a widely applied approach by regulators and has a number of merits. It allows flexibility to the company to adopt the most efficient capital structure and reduces the degree of regulatory intervention in the financing of the business. It also reflects the inherent uncertainty regarding the future evolution of the capital structure of the business.

3.21 ComReg notes that a notional gearing estimate within the range 30-50%, with a midpoint estimate of 40%, nevertheless falls some way below the very high gearing levels which Eircom has adopted. However, a switch to the use of an actual gearing approach may at this time:

- Lack flexibility with respect to future decisions regarding Eircom's capital structure;
- Represent a potentially significant change from the much lower gearing level assumed by ComReg in the 2003 WACC review; and
- Have important financial consequences for Eircom and how it is remunerated for tax going forward.

3.22 Gearing levels for relevant comparator firms provides ComReg with a good indicator of the gearing benchmark for Eircom. A review of the capital structure decisions of comparators would indicate that Eircom's gearing generally is above the average actual level of gearing of its peers. The average actual gearing of the comparator companies is 33%. ComReg notes that other sectoral regulators have more recently been setting cost of capital estimates in line with notional levels of gearing that they consider to be consistent with maintaining an investment grade credit rating.

3.23 In addition, adopting a higher notional level of gearing combined with the statutory tax rate would imply a lower implicit tax allowance for Eircom. As discussed below, it is important to consider the interaction of the proposed gearing approach with the proposed approach to taxation. Using a notional gearing level that is closer to Eircom's actual gearing level than in the previous WACC review implicitly transfers some, but not all, of the potential tax shield benefits to consumers. This may help address possible concerns regarding the sharing of these benefits between Eircom and its customers. While it is important to take account of changes that have taken place in Eircom's capital structure since the last review, and the potential implications of these changes for consumers, ComReg is also mindful of the need to promote a favourable investment climate such that future efficient investment/innovation in telecoms infrastructure is encouraged in Ireland. This issue is discussed in more detail in section 4 below.

3.24 For these reasons, ComReg's preliminary view is that for the purposes of this WACC review a notional gearing approach in the range of 30-50% may strike the right balance between passing on the benefits of the cheaper debt finance to users, and protecting users from undue financial risk. The potential impact on the cost of capital of applying a higher notional leverage than that currently being used is discussed in the following section on proposed approach to taxation. It should be noted, however, that there are, as discussed above, some reasons to use actual gearing rather than notional, and Eircom's actual leverage is significantly higher than the notional level. As the overall WACC estimates show, this would result in a slightly lower WACC for Eircom, and thus the use of notional gearing may be more favourable to Eircom. ComReg is interested in views as to which of these approaches should ultimately be chosen.

Q. 3. Do respondents agree with ComReg's proposal to use a notional gearing approach? If not, would you propose an actual gearing approach, and why? If notional gearing is used, what level of notional gearing in the range 30% to 50% would be most appropriate in the setting of a WACC? Please explain your response.

Proposed approach to taxation

3.25 Eircom's allowed rate of return may be based on either the statutory tax rate or an estimate of the effective tax rate and there are sound arguments for the use of either in the setting of a WACC. The choice of statutory rate or an effective rate is considered in the following paragraphs.

3.26 As noted above, the treatment of taxation is an important issue in this WACC review, primarily in terms of how it interacts with the proposed approach to gearing levels. A company which has high levels of gearing creates the potential for large debt tax shields[21] to arise. Therefore, in estimating the WACC, the choice of an appropriate tax regime is particularly important to ensure an appropriate distribution of these tax benefits between the company and its customers. Given Eircom's highly leveraged position, ComReg must therefore consider whether some, or all, of any tax benefits should be "clawed back" from Eircom, thereby potentially benefiting consumers. ComReg notes that regulators are increasingly recognising arguments for sharing potential debt tax shield benefits between consumers and the regulated company. Using an effective tax rate brings tax allowances closer to the actual taxes paid by the company, i.e., it may redistribute some of the potential tax benefits of debt arising from a highly geared capital

[21] A tax shield is the reduction in income taxes that results from taking an allowable deduction from taxable income. As interest on debt is a tax-deductible expense, taking on debt can act as a tax shield.

structure back to consumers. A number of UK regulators have adopted effective tax rates for this very reason.

3.27 An alternative approach to applying the effective tax rate as a means to "claw back" the tax benefits to Eircom is to apply the statutory tax rate and assume a notional level of gearing. Doing so implicitly claws back some, but not all, of the tax benefits of leverage, as long as the notional level of gearing is broadly in line with the actual level of gearing. In the event that an assumed notional level of gearing is lower than actual gearing, applying a statutory tax rate would enable Eircom to keep the benefits of any debt tax shields above the assumed notional level of gearing and would therefore be favourable to Eircom. The implied tax allowance in the cost of capital therefore might be larger than actual taxes paid. As discussed earlier, Eircom's actual gearing is notably higher than the assumed gearing of 25% used in the previous WACC review and the proposed notional gearing of 30-50% for the purposes of this review, therefore adopting the statutory tax rate might continue to create tax benefits for Eircom from continuing with its current debt rich capital structure.

3.28 Whilst recognising the theoretical advantages of applying an effective tax rate, ComReg considers that changes in the treatment of taxation at this time may have an impact on investors who have already sunk investments to finance existing assets in the expectation of a particular tax treatment. The movement from a statutory to an effective tax rate may have consequences for Eircom's financial position and for the tax benefits it receives. As such, there is a possibility that a change in the approach to taxation could adversely impact on Eircom's finances, particularly if it implied a significant downward adjustment to the cost of capital.

3.29 Applying a statutory tax rate may be preferable on the basis that it is less burdensome given the likely complexities in estimating effective tax rates for Eircom and the practical difficulties in predicting how these would likely evolve over the review period. In addition, the statutory tax rate is already low in Ireland relative to other Member States, for example, the UK, so the value consequences of a switch to an effective tax rate might be smaller. ComReg is mindful of the need to preserve regulatory consistency, financial stability and to promote efficient incentives to invest going forward. The treatment of tax may have implications for incentives to invest in new capital as discussed in more detail in section 4 below.

3.30 By proposing to use a notional gearing level in the range of 30% to 50% in combination with the current statutory corporation tax rate of 12.5%, ComReg would effectively be allowing consumers to share in some, but not all, of the debt tax benefits of higher leverage. ComReg notes the benefit accruing to Eircom from a greater interest tax shield at the actual level of gearing that is higher than the proposed notional level adopted for the purposes of an overall WACC calculation. However, as indicated above in the discussions on an appropriate gearing level, ComReg is proposing what it considers to be a reasonable gearing assumption, consistent with ComReg's objectives of promoting financial stability and financing investment, whilst preserving a degree of regulatory consistency given its broad similarities to the previous regulatory approach.[22]

[22] In the 2003 WACC review ComReg applied a pre-tax cost of capital to calculate a pre-tax allowable return and used the statutory tax rate.

3.31 On balance, ComReg is of the preliminary view that the current statutory tax rate of 12.5% should continue to be used in the calculation of a pre-tax cost of capital as it is a well-grounded and appropriate measure in this case. Although the effective tax rate has not been determined, in the event that it was less than the statutory tax rate, it is unlikely to be significantly less than the statutory rate given Ireland's relatively low statutory tax rate. Thus, the overall estimates of WACC may not be greatly affected by the choice of a statutory tax rate or an effective rate at this time. If, however, there are developments in the regulatory environment that necessitate a separate review of taxation, ComReg may at some future date further consider the impact of the potential application of an effective tax rate in any WACC determinations. In any case, as stated above, there are some reasons even now to apply an effective tax rate, and ComReg would be interested in respondents' views on this issue.

Q. 4. Do respondents agree with the proposed treatment of tax within the WACC calculation? Do respondents agree with the proposal to use a notional gearing approach in combination with the current statutory corporate tax rate of 12.5%? If not, would you favour an effective tax rate, and, if so, why? Please explain your response.

Q. 5. In respect of tax, is there additional analysis that in your opinion should be carried out? If yes, please indicate precisely what this is.

Proposed approach to other WACC parameters

3.32 In the estimation of the other parameters that constitute the WACC (namely, the Risk Free Rate ("RFR"), the Equity Risk Premium (ERP"), and the debt premium), Oxera looks to a wide variety of methodologies relying on various historical data and forward-looking estimates. It also considers relevant benchmarks including previous regulatory determinations where appropriate. Recognising that there is a degree of uncertainty in estimating these parameters on a forward-looking basis, Oxera proposes to adopt an approach to the estimation of these parameters that is robust and evidence-based while also relatively cautious.

3.33 In view of Oxera's comprehensive, but relatively conservative, approach which takes account of both current market conditions and potential developments over the forthcoming review period, ComReg suggests the proposed approach to the estimation of the RFR, the ERP and the debt premium, is broadly consistent with ComReg's regulatory objectives of providing an adequate return on capital sufficient to encourage future efficient investment in telecommunications infrastructure in Ireland.

Q. 6. Do respondents agree that the proposed approach to the calculation of the components of the aggregate WACC is reasonable? Please explain your response.

4 Policy Considerations: Investment and Capital Structure

Introduction

4.1 There are a number of key policy considerations that must be taken into account when estimating an appropriate WACC for the forthcoming regulatory period. These policy considerations involve the need to create appropriate incentives for future investment in telecoms infrastructure in Ireland and the appropriate approach to capital structure incentives and financing. The regulated cost of capital can impact on future cash flows for the regulated business, and hence the ability to finance the business, and also on the incentives for future investment.

4.2 ComReg recognises that setting a WACC that is too low has the potential to create financeability issues for Eircom, while setting too high a WACC may lead to inappropriate investments and will result in higher prices for consumers. ComReg is of the preliminary view that a WACC within the proposed range is appropriate and that a WACC approximately in the mid-point of this range would constitute an adequate return on investment for Eircom. Nevertheless, ComReg is exploring, via a number of possible methods, whether or not there is a need to further incentivise infrastructure investment over the period of this review which may involve a modification to the WACC.

Incentivising Infrastructure Investment

4.3 Section 12 of the Communications Act 2002 requires ComReg to promote competition by encouraging efficient investment in infrastructure and promoting innovation. In a recent paper issued by ComReg on Next Generation Networks ("NGNs"),[23] ComReg noted the potential for NGNs to reduce costs and deliver a range of new and innovative services bringing benefits to both consumers and industry alike. In that regard, Eircom has announced plans to migrate to a Next Generation IP core network and to deploy fibre in its access network in selected urban areas.[24] However, the full extent of such investments is not yet clear, and indeed actual committed NGN investment may be limited at this stage.[25]

4.4 ComReg recognises that potential investors are likely to require some degree of confidence that they will be able to earn an appropriate return commensurate to the degree of risk faced at the time of their investments. ComReg believes it may be useful to provide appropriate incentives for such investments by reflecting the

[23] ComReg (2007), Regulatory Aspects of Next Generation Networks, Document No. 07/40, July, http://www.comreg.ie/_fileupload/publications/ComReg0740_23994292.pdf.

[24] See Eircom press release (15.11.06) and NGN presentation (08.03.07), Working to put Ireland at the Forefront of the Broadband Revolution, http://www.comreg.ie/_fileupload/publications/PDanon.pdf

[25] According to the OECD's Communications Outlook 2007, see page 107, in terms of NGN investment, BT will put USD 5.66 billion (GBP 3 billion) into capital expenditures in 2006, mainly towards the construction of the new network. NTT and Verizon have announced large capital outlays for the future. Verizon announced that it would spend USD 18 billion in net capital between 2004 and 2010 to deploy fibre. The company predicts that the new fibre network will save approximately USD 1 billion annually in operating expenses by 2010 owing to fibre's operating efficiencies. In addition, investment should become more attractive to operators as costs fall. The amount of capital expenditure outlay Verizon needed to pass a home in August 2006 was USD 873 and the cost is falling. NTT in Japan is expected to invest USD 8.5 billion from 2004 to 2010 for its fixed communications operations.

associated investment risks, if any, in a regulated access price that may be set going forward. However, any such incentives should only be used if they can successfully stimulate significant amounts of efficient investment.

4.5 To provide adequate incentives for Eircom to undertake substantial investment in infrastructure, ComReg could adopt a variety of approaches aimed at mitigating risk and enhancing returns to Eircom where there is demonstrable evidence that it bears such systematic investment risk. ComReg is exploring through the WACC review possible ways that may be used to incentivise efficient investment in infrastructure going forward, if deemed necessary, including, the possible application of a split WACC, CAPEX triggers and through taxation policy, each of which are discussed in turn below.

a) *Split WACC*[26]

4.6 A disaggregated WACC can be used as a means of incentivising efficient investment and this is an important issue that is being considered as part of this review. Currently a single WACC is applied to all of Eircom's fixed-line business and it is not differentiated according to activity (for instance, local access, interconnection, retail activities, etc). This section presents a discussion of the potential for differential rates of return for either particular types of investment by Eircom or particular business divisions and to what extent ComReg should seek to estimate separate costs of capital for different parts of Eircom's regulated business.

4.7 A disaggregated WACC can be applied to different types of investments and/or across business activities to reflect possible variations in project or business risk. A split WACC can have, in principle, advantages over an aggregated company cost of capital in evaluating the net present value of introducing new product lines or making new investments. It has the potential to improve incentives for investment by providing closer alignment of incentives with the underlying business risks and potentially rewarding those business divisions/projects facing a higher risk than the company as a whole. A disaggregated WACC might also lower the overall risk of the regulated business by allowing efficient funding of future capital investment. This in turn could enhance efficiency and value to consumers.[27]

4.8 There are, however, practical difficulties associated with applying differentiated costs of capital to different parts of the business and/or different types of investment. Regulators may not have sufficient information about the firm's risk characteristics to be able to estimate the underlying risks with a sufficient degree of confidence. Furthermore, difficulties arise in determining which risks are attributable to systematic or market risks and which are company-specific risks. A

[26] A preliminary assessment was carried out by Oxera on the potential for ComReg to apply a split WACC in a cost of capital determination which for reasons of commercial sensitivity is not published. The consultation document draws on this preliminary analysis in a discussion on the possibility of ComReg setting a split WACC.

[27] For example, Ofcom in 2005 differentiated BT's WACC between the copper access network and the rest of BT. Ofcom's advisors at that time also explored the possibilities of differentiating BT's WACC between the wholesale copper access network, wholesale core network, retail (predominantly calls, access, mobile and other added value services), information and communication technology, and other businesses.

split WACC should only be adopted if there is confidence that the available data allows for robust and accurate estimates to be obtained. It should be noted that while it is necessary to have detailed information/data to be able to apply a disaggregated WACC, the existence of such information/data does not imply that a disaggregated WACC is always appropriate in any given circumstance. The application of a split WACC must be undertaken with caution to ensure that it does not introduce skewed incentives or encourage inefficient allocation of capital due, for example, to measurement errors or asset stranding.

4.9 Oxera has taken the following criteria into account when considering the merits of differentiating the WACC:

- Clear definition of business divisions/projects;
- Significant size of the asset base of each division /relevant projects under consideration;
- The cost and revenue drivers for each division/project can be clearly delineated and verified;
- The risks faced by each business division/project can be identified, where these risks are of a sufficient magnitude; and
- The risk differentials between business divisions/projects can be measured and supported by qualitative and quantitative evidence.

Disaggregated WACC by business divisions

4.10 Oxera have explored the possible application of different cost of capital to different parts of Eircom's fixed line businesses. In that regard, Oxera considered the business division categories used in Eircom's regulatory accounts i.e., local access network, core network and fixed-line retail. Similar business divisions have also been considered by other telecom regulators when assessing the possibility of implementing a differentiated WACC.[28] Oxera has undertaken a preliminary *qualitative* and *quantitative* assessment of the risk differentials of these three different fixed-line business divisions in Eircom.

4.11 The preliminary *qualitative* analysis suggests that the local access network might face less demand, volume and revenue risks than the core network or retail for several reasons. For example, demand for access services is typically more stable and less volume-sensitive than for call services which form a greater proportion of the revenues of the core and retail business segments. In addition, the uniqueness of the local access network, the presence of economies of scale and scope and the current state of market development suggest there are more limited competitive pressures in the access network compared to the core or retail business divisions which may also be consistent with lower demand/volume/revenue risks. The initial *qualitative* evidence appears to suggest that of the three business divisions retail may be subject to the greatest risks, and that, on balance, the access division may be subject to the lowest risks, and therefore, should the WACC be split, have the lowest cost of capital.

[28] See supra note 26.

4.12 The results of the preliminary *quantitative* analysis were however relatively mixed. The results do not unequivocally support the hypothesis that the local access network faces lower risks than the core network or retail. Although local access appears to exhibit lower variability of revenues and more stable demand, consistent with the findings of the *qualitative* analysis discussed above, it is also characterised by higher operational leverage than either the core network or retail which may have implications for its ability to adapt to demand shocks. In addition, the local access network appears to be characterised by higher CAPEX intensity relative to the core network or retail business divisions. Accordingly, the overall impact of these factors on the profit volatility of the local access network does not present a clear picture.

4.13 Despite Oxera's initial assessment of potential risk differences across Eircom's business divisions being relatively data intensive, the initial picture on the degree of risk differentials between the business divisions appears relatively mixed at this time. The preliminary *quantitative* analysis does not provide conclusive directional evidence on the magnitude of the underlying risks. While there may be justification on a *qualitative* basis for a disaggregated WACC by business division, such an observable split would not appear to be robustly quantifiable using the data available at this time. If this issue were to be explored further potentially substantial data requirements and considerable additional analysis and time would be required.

4.14 As noted above, a disaggregated WACC approach, whether on the basis of business division or investment type (as discussed below), should only be adopted if there is clear evidence of risk differentials and confidence that robust and accurate estimates of the precise extent of those risk differences can be obtained. In relation to the issue of whether or not to apply a different cost of capital to different parts of Eircom's fixed line business (such as, the business division categories presented above), ComReg is of the preliminary view that the estimated average WACC for Eircom's overall fixed-line business within a range of 7.77% to 11.08% would represent a reasonable measure of its cost of capital at this time. In the event however that a fundamental change in market circumstances were to occur, such as structural separation, it may become necessary to explore the issue of a disaggregated WACC in further detail. ComReg invites respondents' views on whether further analysis of a disaggregated WACC by business division is appropriate at this time.

Disaggregated WACC by new and old assets

4.15 As part of this WACC review, ComReg is also exploring whether new investments such as NGNs could possibly be incentivised over the period of this review by applying a higher rate of return for new infrastructure than existing infrastructure. This approach could have the potential to improve incentives for new investment by providing more accurate remuneration for embedded risks and thereby providing efficient investment signals.

4.16 In general, a split WACC on the basis of infrastructure type is typically considered where there is a considerable increase in CAPEX planned which gives rise to significantly different investment risks for the company over the review period. While the old assets produce a stable stream of revenues and might be considered less risky, the new CAPEX might be lumpy or pose particular risks to the company. As such, a particularly large or lumpy capital investment programme might require a higher rate of return to compensate the company for higher associated levels of systematic risks, if any.[29]

4.17 Oxera has examined past and projected levels of CAPEX intensity on the basis of data supplied by Eircom to ComReg. The implied level of investment risks associated with Eircom's new investments over the forthcoming review period is not likely to materially differ from those faced by Eircom's existing investments. Oxera's analysis suggests that there appears to be insufficient basis for the application of a separate WACC to differing types of investment at this time. While in principle it is possible to differentiate the WACC between Eircom's new and old assets (e.g., between existing investments and future NGN investments), the risk differentials, if any, are likely to be limited in magnitude. ComReg therefore is of the preliminary view that it may be premature to apply a disaggregated cost of capital at this time which could potentially provide for higher allowed returns for Eircom's future capital investment projects over the period of this review.

4.18 ComReg recognises that, while current projections do not suggest that Eircom's new investments should be treated differently to Eircom's existing investments at this time, there may be other business risks associated with their implementation.[30] ComReg notes potential risks to Eircom's existing and/or new investments posed by the increasing penetration of alternative platforms/technologies (including mobile, cable and wireless technologies) providing competing telecom services over the period of this review**.**

- In terms of mobile services, ComReg has previously recognised an increased tendency towards 'mobile only' households and potential developments in terms of converged fixed mobile services. However, while recognising an inherent uncertainty regarding the potential penetration of converged offerings going forward, on the basis of the information at this time it does not appear likely that fixed and mobile services will represent sufficiently strong substitutes over the timeframe of this review.[31]
- In terms of potential competition from other access technologies over this review, e.g., from cable and/or wireless technologies, such competition appears to be focused primarily on broadband, and, to a lesser extent, on access for telephony services at this time.[32] Notwithstanding, ComReg recognises that as broadband penetration increases, the competitive relevance of these alternative technologies may increase, although it is not clear to what extent this will happen over the timeframe of this review.

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[29] In the UK, the CAA applied a premium to BAA's overall cost of capital to reflect a very significant increase in capital expenditure associated with the construction of Terminal 5 at Heathrow airport. In the decade from 2002/03 to 2010/11, investment in Terminal 5 was expected to total £3.7 billion, nearly half of BAA's total CAPEX over the same period of £8 billion. Thus the construction of Terminal 5 was recognised as an exceptional expenditure. Source: Competition Commission (2002), Competition Commission report on BAA London airports' November, http://www.caa.co.uk/default.aspx?catid=5&pagetype=90&pageid=1322, p. 170.

[30] For example, the services provided over these networks may be subject to a less stable or predictable demand than services provided over existing infrastructure.

[31] ComReg (2007), Market Analysis: Retail Narrowband Access Markets (Response to Consultation 06/39 and Consultation on Draft Decision), Document No 07-26, May, pp. 17-25.

[32] ibid p. 45, fn. 132 and p. 53.

4.19 That said, the uncertainties regarding the precise nature, composition, size, timing of NGN/NGA[33] investments as well as the types or impact of any new services supplied prospectively over such infrastructure, makes it difficult to assess the precise level or degree of systematic risk, if any, associated with NGNs on a forward looking basis. As noted above, actual committed NGN investment may be limited at this stage. It should, in any case, be noted that potential competition risks referred to above (in 4.18) are not necessarily systematic risks, and therefore it is not evident that they should result in a higher WACC.

Q. 7. Do respondents agree that a single WACC estimate, which takes into account the risk profile of Eircom's entire fixed-line business, is appropriate? Please explain your response.

Q. 8. Do respondents believe that further assessment of a disaggregated WACC by business division and/ or investment type is warranted? If yes, please explain precisely what that is.

4.20 As ComReg is not proposing to apply a disaggregated WACC either by business division or by investment type for the purposes of this review, ComReg considers a number of other possible incentive mechanisms that may have the potential to further remunerate, if deemed necessary, Eircom's investors for their existing investments and help facilitate and promote the timely deployment of new investments, such as NGA/NGN, going forward, which are discussed below.

b) *CAPEX Trigger Mechanisms*

4.21 Another possible incentive-based mechanism which ComReg is exploring and wishes to invite comments on in this consultation is the possibility of implementing CAPEX triggers whereby adjustments to the WACC could be applied if Eircom achieves certain defined targets in terms of NGA/NGN roll-out over the regulatory period.[34]

4.22 This could be achieved through applications by Eircom to ComReg for potential adjustments to the overall WACC if particularly risky or capital-intensive projects were to emerge over the review period. Such applications would clearly need to be assessed on a case-by-case basis to estimate the degree of systematic risks faced by Eircom, if any, in each particular case. In addition, ComReg is likely to require satisfactory project commitment and verifiable risk differences prior to any potential adjustment to the WACC and would be likely to reserve the right to claw back the benefits of any potential adjustments should the project fail to go ahead within the specified timeframe. CAPEX triggers may have the potential to

[33] Next Generation Access.

[34] The UK Civil Aviation Authority (CAA) applied a premium to BAA's overall cost of capital to reflect a very significant increase in capital expenditure associated with the construction of Terminal 5 at Heathrow airport.

promote efficient investment signals going forward by allowing for efficient funding of future capital investments, consistent with the degree of risks posed in each case.

c) Taxation

4.23 As referred to in section 3 above, ComReg's approach to gearing and taxation in the estimation of Eircom's WACC can be used as a means of incentivising investment. Adopting an approach to taxation in the WACC which allows Eircom to continue to benefit from tax benefits should help to incentivise Eircom to innovate and invest in NGA/NGN infrastructure over the timeframe of this review. ComReg's preliminary proposal is to promote efficient investment incentives via the proposed approach to capital structure and tax allowances based on a notional level of gearing (in the range of 30-50%) combined with the statutory corporation tax rate of 12.5%.

Conclusion on Incentivising Investment

4.24 ComReg is of the preliminary view that the proposed WACC range of 7.77% to 11.08% is a reasonable range that sufficiently reflects the inherent uncertainties regarding the future development of competing technologies. It is also considered that the proposed approach in this review to gearing and taxation has the potential to incentivise Eircom to innovate and invest in telecoms infrastructure on a forward-looking basis. ComReg will, however, continue to monitor the competitive situation and the extent to which it is likely to impact on the systematic risk profile of the company over this review. In addition, ComReg is exploring the possibility of implementing an incentive-based mechanism(s) whereby any particularly risky or capital-intensive projects, which may be unanticipated at this time but may emerge over the timeframe of this review, could be assessed on an individual basis to determine if a modification of the average WACC for Eircom's overall fixed-line business might be appropriate for those particular projects/investments going forward.

Q. 9. Do respondents agree that the proposed WACC range (from 7.77% to 11.08%) would support incentives for long term investments in infrastructure assets and would provide an adequate allowance for bearing any associated systematic risks? Please explain your response.

Q. 10. If not, which of the approaches to incentivising investment over the period, particularly the use of CAPEX triggers and taxation policy, are appropriate, and why? Please explain your response.

Q. 11. Are there any other possible (incentive compatible) mechanisms that you believe could be applied to drive efficient investment? Please explain your response.

Eircom's Capital Structure

4.25 As noted in section 3, relatively significant changes in Eircom's capital structure since the previous WACC review raise some important policy considerations for ComReg in the current review. When a regulated company moves towards a highly geared corporate structure this raises important challenges for regulators, in particular relating to:

- The appropriate remuneration for tax;
- The regulated company's financial flexibility and ability to respond to potential shocks in the economy;
- Its ability to fund future investment; and
- The associated implications for consumers.

4.26 In the presence of highly geared financial structures, regulators must consider the extent to which their regulatory decisions affect a firm's ability to finance its activities and to fund future investments. At the same time, it is important that regulators' actions do not serve to subsidise or promote potentially inefficient financing decisions to the ultimate detriment of consumers.

4.27 In the 2003 WACC review, ComReg's approach to gearing and taxation involved a considerably lower level of gearing (than Eircom's actual gearing levels) combined with the statutory tax rate. As noted earlier, this approach has resulted in potentially significant tax benefits for Eircom in the intervening period. Thus, there may be a case for a change in the approach used in the current cost of capital review in terms of the distribution of these potentially significant tax benefits. For example, there may be merit to further exploring an approach based on actual gearing and/or an effective tax rate. Indeed a number of UK regulators are exploring these issues.

4.28 ComReg recognises that a significant change in the regulatory treatment of gearing and/or taxation may have important financial consequences for the company at this time. Therefore, as discussed in section 3, the approach being proposed by ComReg in this consultation document is to use a notional level of gearing in the range of 30-50% with the statutory corporation tax rate of 12.5%. This approach broadly consistent with the approach taken in the previous review, thereby providing a degree of regulatory consistency to Eircom's investors.

4.29 In addition to providing regulatory consistency, ComReg's proposed approach seeks to balance the promotion of efficient investment incentives with public interest considerations. Using a notional gearing level that is closer to Eircom's actual gearing level than was the case in the previous WACC review implicitly transfers some, but not all, of the potential tax shield benefits back to consumers.

4.30 The proposed approach is also compatible with ComReg's objective of providing incentives for future investments over the period of this review as it would allow Eircom to continue to retain potentially significant debt tax benefits.

4.31 In addition to Eircom's ability to fund future investments, ComReg must also consider Eircom's ability to finance its ongoing activities. In that respect, ComReg considers that the proposed approach to gearing and taxation will also promote financial stability over the period of this review given that it is broadly consistent with the approach taken in the previous review.

4.32 As noted in section 3 above, while the capital structure that Eircom chooses to adopt is arguably a matter for the company to decide, it is also important that the cost of capital adopted by ComReg does not provide incentives for Eircom to adopt a capital structure that might potentially expose it to the risk of financial distress. Regulated companies with highly geared capital structures raise potential concerns for regulators in terms of their flexibility to respond to possible shocks in the economy and the risk of financial distress. Furthermore, any such financial distress could potentially have significant negative consequences for consumers. With that in mind, ComReg's proposed approach to gearing and taxation seeks to mitigate this risk, to the extent that is possible within the scope of this WACC review, by moving to an approach that has the potential to share a greater proportion of tax benefits with consumers than under the previous WACC review.

4.33 ComReg notes, however, that the proposed approach may not completely eliminate the risk of Eircom adopting an excessively risky financing structure over this review. ComReg therefore invites views from respondents on whether the proposed approach to the WACC estimation sufficiently addresses this risk or whether other or additional measures should be considered to further address the possible risk of Eircom adopting an excessively risky financing structure over the period of this review.

Q. 12. Do respondents agree that ComReg's proposal for gearing and taxation over the period of this review is an appropriate treatment of financial risks and consistent with efficient capital structure incentives? Please explain your response.

5 Overall WACC Calculation

5.1 In undertaking this review of the WACC, there are a number of key objectives that ComReg has endeavoured to achieve. These are as follows:

- To ensure that an appropriate cost of capital is chosen;
- To promote a favourable climate for efficient and timely investment and stimulate innovation;
- To provide a degree of regulatory consistency**;**
- To promote financial stability; and
- General public interest considerations.

5.2 ComReg has endeavoured to maintain regulatory consistency in its policy decisions when reviewing the WACC. The methodology used is consistent with that used in the last WACC review and is considered robust.

5.3 In terms of ComReg's objective to provide incentives for investment going forward, ComReg has examined whether a disaggregated WACC could be applied as a means of incentivising investment. While it is recognised that a differentiated WACC has the potential to improve incentives for investment by providing closer alignment of incentives with the underlying business risks, it is also considered that a disaggregated WACC approach should only be adopted if there is clear and compelling evidence of risk differentials either across business division or by investment type. The initial picture of risk differentials across business division appears relatively mixed and on balance applying a disaggregated WACC on this basis might not be sufficiently robust at this time. In addition, an analysis of Eircom's past and projected levels of CAPEX would not appear to suggest that a disaggregated WACC on the basis of new versus old investments is warranted at this time. Thus, while it is recognised that further analysis of a disaggregated WACC may be of benefit, it is proposed that for the purposes of a cost of capital determination the average or aggregate WACC range is a reasonable measure of Eircom's investment/business risk profile at this time.

5.4 The consultation document discusses other potential measures to incentivise investment, if deemed necessary. The proposed approach to gearing and taxation (i.e. a notional gearing approach in combination with the statutory tax rate of 12.5%) is considered to be compatible with the promotion of investment incentives because it would allow Eircom to continue to retain some tax benefits going forward. Also, using a notional gearing level that is closer to Eircom's actual gearing level than in the previous WACC review implicitly transfers some, but not all, of the potential tax shield benefits back to consumers. This may help address possible concerns regarding the distribution of tax benefits between Eircom and its customers and also concerns regarding the company's incentives with respect to its future capital structure. ComReg is also exploring whether a mechanism for specific CAPEX triggers to affect the WACC, and thus potentially stimulate efficient investment, could be put in place if appropriate.

5.5 Oxera's analysis suggests that a WACC for Eircom's fixed-line business should be set in the range of 7.77% to 11.08% over the forthcoming regulatory period. ComReg is seeking views on whether this range is appropriate. As to a specific value within the range that should be chosen, ComReg will fully take into account all responses to this consultation and all relevant factors before arriving at any final decision on the matter. However, it should be noted that an approach of selecting parameter values approximate to the mid-points of each of the ranges for the different variables may be considered an appropriate decision, and one which provides balance to an overall WACC determination. Selecting values approximate to the mid-points for each variable when combined with the general treatment of leverage and taxation is likely to produce an overall WACC estimate approximately in the middle of the overall range.

5.6 In light of the comprehensive analysis undertaken by Oxera in formulating the proposed WACC range and the policy considerations referred to above, ComReg is of the preliminary view that a WACC approximately in the mid-point of this range would constitute an adequate return on investment for Eircom. ComReg does note that, generally, there is a degree of conservatism built into the underlying WACC parameters. ComReg welcomes views on whether the proposed average fixed-line WACC in the range of 7.77% to 11.08% is considered reasonable and that a WACC approximately in the mid-point of this range would constitute an adequate return on investment for Eircom. Respondents are asked to comment on the above methodologies used to estimate this range and propose a specific value. Views are invited on what would be an appropriate specific value in the range that would encourage efficient investment in the network and does not run the risk of stifling investment going forward, while at the same time being commensurate to the level of systematic risk faced by Eircom and not resulting in excessive returns accruing to Eircom at the cost of wholesale customers and end-users.

Q. 13. Do respondents agree that Eircom's aggregate WACC for regulatory purposes should be set in the range 7.77% to 11.08%? If so, where in the range do respondents think is most appropriate, lower, mid or upper end of the range? Please explain your response.

5.7 Views are invited on the discussion set out above. ComReg would also welcome respondents views on any other options/issues that could be considered in addition to those outlined above.

Q. 14. Are there additional factors that in your opinion require analysis by ComReg? If yes, please indicate precisely what they are. In respect of the factors analysed, is there additional analysis that in your opinion should be carried out. If yes, please indicate precisely what this is?

6 Submitting Comments

6.1 The consultation period will run from 1 November 2007 to 13 December 2007 during which ComReg welcomes written comments on any of the issues raised in this paper. Responses can be sent either by email, fax or post to the contact details provided on the cover page of this document. Where possible, ComReg requests that respondents' reference their comments to the relevant question numbers contained in this document to facilitate the task of analysing responses.

6.2 Having analysed and considered the comments received, ComReg will publish a report on the consultation which will summarise the responses to the consultation and ComReg's final decision on the WACC.

6.3 In order to promote openness and transparency ComReg will publish all respondents' submissions to this consultation on its website. ComReg appreciates that many of the issues raised in this paper may require respondents to provide confidential information if their comments are to be meaningful. Therefore, respondents are requested to clearly identify confidential material and place confidential material in a separate annex to their response. Such information will be treated subject to the provisions of ComReg's guidelines on the treatment of confidential information.[35]

[35] ComReg (2005), Guidelines on the treatment of confidential information, Document 05/24, March.

Appendix A: Consultation Questions

Appendix B: WACC – Cross Country Analysis

Fixed WACC	Oct-02	Apr-04	Apr-05	Feb-06	Apr-07	Jun-07	General Trend
Austria	**9.34%**	**9.34%**	**10.37%**	**10.37%**	**10.48%**	**10.48%**	Increasing
Belgium	**12.77% to 13.67%**	**10.76%**	**12.76%**	**11.52%**	**11.44%** (8.3% post tax)	**11.44%**	Falling
Denmark	**12.00%**	**10.85%**	**10.85%**	**8.5%**	**8.6%**	**8.6%**	Falling
Finland	ROC evaluated on a case-by-case basis using WACC method.	ROC evaluated on a case-by-case basis using WACC method.	Not available.	Not available.	**7.95%-10.3%**	**7.95%-10.3%**	No change
France	**12%** (core network), **12.1%** (LLU)	**10.4%**	**10.4%**	**9.8%**	**9.8%**	**9.8%**	Falling
Germany	**10.6%** (8.75% *real*)	**9.2%** (8% *real*)	**9.2%** (8% *real*)	**8.35%** (7.15% *real)*	**8.35%** (7.15% *real)*	**9.47%** (8.07% *real)*	Falling, but increase in latest review.
Greece	**13.12%**	**13.12%**	**13.12%**	**13.12%**	**10.4%**	**10.4%**	Falling
Ireland	**12%**	**11.5%**	**11.5%**	**11.5%**	**11.5%**	**11.5%**	Falling
Italy	**13.5%**	**13.5%**	**13.5%**	**10.2%** (access network), **13.5%** (fixed network as a whole)	**10.2%**	**10.2%**	Falling
Luxembourg	No decision	No decision	No decision	No decision	No decision	No decision	-
Netherlands	**10%** (call termination), **13.4%** (originating charges)	**9.5%** (call termination), **11.6%** (origination [special access] and LLU)	**9.5%** (call termination), **11.6%** (origination [special access] and LLU)	**9.5%** (call termination), **11.6%** (origination [special access] and LLU)	**9.5%** (call termination), **11.6%** (origination [special access] and LLU)	**7.6%**	Falling
Norway	**13%**	**14%**	**13%**	**13.5%**	**13.1%**	**13.1%**	Falling
Portugal	**13.32%**	**13.32%**	**13.32%**	**13.32%**	**13.32%**	**13.32%**	No change
Spain	**12.34%**	**11.72%**	**10.85%**	**10.85%**	**10%**	**9.86%**	Falling

Sweden	**15%**	**15%**	**15%**	**10.5%**	**10.8%**	**10.8%**	Falling
Switzerland	**11.75%**	Research underway	Not available.	**7.6%** *real*	**7.6%** *real*	**7.6%** *real*	Falling
UK	**13.5%**	**13.5%**	**13%**	**10%** (BT's copper access network), **11.4%** (Rest of BT)	**10%** (BT's copper access network), **11.4%** (Rest of BT)	**10%** (BT's copper access network), **11.4%** (Rest of BT)	Falling

colour denotes change in WACC	**All nominal pre-tax unless otherwise stated**

Source: Cullen International Cross-Country Analysis

Appendix C: Oxera Report