An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation

Review of Weighted Average Cost of Capital (WACC)

- **Mobile Telecommunications**
- **Fixed Line Telecommunications**
- **Broadcasting (Market A and Market B)**

Consultation

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

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1 Introduction

1.1 This consultation document details the Commission for Communications Regulation's ("ComReg") approach to estimating the Weighted Average Cost of Capital ("WACC") in three sectors namely:

- Mobile telecommunications;
- Fixed line telecommunications; and
- Broadcasting.

1.2 In these sectors there are markets where undertakings have been designated as having significant market power ("SMP"). Where remedies of price control are imposed the relevant WACC may be required for cost calculations. The following are where the relevant WACC is currently used in pricing decisions:

- Mobile Service Providers ("MSP") deemed to have SMP in relation to wholesale voice call termination on individual mobile networks in Ireland [1]. The MSPs are discussed in more detail in Chapter 5. The WACC is estimated for a hypothetical efficient MSP.
- Fixed Service Providers ("FSP") deemed to have SMP[2]. The FSPs are discussed in more detail in Chapter 6. The fixed line WACC is estimated for a hypothetical efficient FSP.
- Broadcasters deemed to have SMP in broadcasting transmission services[3], namely RTÉ Transmission Network Limited ("2rn") and RTÉ. The broadcasting WACCs are estimated for a hypothetical efficient broadcaster and are discussed in more detail in Chapter 7.

[1] ComReg identified six separate markets relating to the market identified by the European Commission for voice call termination on individual mobile networks as outlined in Section 4.2 of the *"Market Review: Voice Call Termination on Individual Mobile Networks, Response to Consultation and Decision"*, ComReg Document 19/47, Decision Number D10/19.

[2] Including but not limited to the following markets; Wholesale Call Origination on the Public Telephone Network Provided at a Fixed Location (ComReg Decision D05/15); Wholesale high-quality access provided at a fixed location (ComReg Decision D06/08); Wholesale Call Termination on Individual Public Telephone Networks Provided at a Fixed Location (ComReg Decision D10/19); Retail Access to the Public Telephone Network at a Fixed Location (ComReg Decision D12/14); Wholesale Local Access provided at a Fixed Location (ComReg Decision D10/18); Wholesale Central Access provided at a Fixed Location for Mass-Market Products (ComReg Decision D10/18).

[3] The market for wholesale access to national terrestrial broadcast transmission services in which RTÉ Transmission Networks Limited ("2rn") is designated as having SMP ("Market A") and the market for wholesale access to DTT Multiplexing services in which RTÉ is designated as having SMP ("Market B"), *"Market Review, Broadcasting Transmission Services in Ireland, Response to consultation and Decision Notice"*, Reference ComReg 13/71, Decision D11/13" ("ComReg 13/71").

1.3 Cost-oriented prices use the WACC to estimate costs of wholesale inputs that would occur in a competitive market. The WACCs in this consultation are an estimation of the rate of return expected by investors in the three sectors named in paragraph 1.1.

1.4 Capital can be provided through equity investment and also debt (e.g. bonds). Typically both forms are used. ComReg estimates WACCs where the weightings are based on the costs and amounts of equity and debt capital.

1.5 The cost of equity investment is estimated using several inputs (parameters) as is the cost of debt.

1.6 This document estimates values for parameters that ComReg considers to be generic or common to all sectors and then those it considers to be sector specific. Within these chapters ComReg explains its position on the individual parameters used in the calculation of the WACC and on the basis of this analysis identify an appropriate range for each WACC. ComReg then proposes a specific WACC for each of the regulated markets.

1.7 ComReg has conducted extensive analysis with the assistance of Europe Economic Research Limited ("Europe Economics")[4]. On the basis of this analysis, ComReg's preliminary views are that:

- The WACC using the Capital Asset Pricing Model ("CAPM") formula is the most appropriate means to estimate the WACC in the mobile, fixed line and broadcasting sectors.

- Each of the respective WACC estimations should be on a nominal pre-tax basis.

- Broadcasters in Market A and Market B should have the same WACC, as there appears to be no practical means of distinguishing between RTÉ and 2rn in this context.

1.8 The preliminary WACC for each sector is as follows:

Table 1 Preliminary WACCs

Sector	Preliminary WACCs
Mobile Telecommunications	6.53%
Fixed Line Telecommunications	6.42%
Broadcasting (Market A)	6.27%
Broadcasting (Market B)	6.27%

[4] The report prepared by Europe Economics entitled *"Cost of capital for Mobile Termination Rates Fixed-Line, and Broadcasting Price Controls"* May 2019 ("Europe Economics' Technical Report") is included as Annex 8 to this document.

1.9 As well as consulting on the estimated WACCs for the three sectors ComReg is consulting on several issues that it considers have become particularly relevant since the last review. These include:

- Should the effective tax rate or statutory tax rate be used[5];
- Whether or not the continued use of "aiming-up" is appropriate[6];
- Implementation of new WACCs[7];
- Frequency of WACC reviews[8]; and
- Should there be differentiated WACCs within the fixed line telecommunications sector[9].

1.10 This document is structured as follows:

- **Chapter 2** – Executive Summary: This chapter summarises ComReg's rationale and overall objectives and the main points of the consultation.
- **Chapter 3** – Proposed Approach to estimation of WACC.
- **Chapter 4** – Generic WACC Parameters: This chapter discusses the parameters that are applicable to each of the four WACC estimations.
- **Chapter 5** – Mobile Telecommunications: This chapter discusses the parameters that are required to estimate a WACC specific to Mobile Telecommunications.
- **Chapter 6** – Fixed Line Telecommunications: This chapter discusses the parameters that are required to estimate the WACC that is applicable to Fixed Line Telecommunications.
- **Chapter 7** – Broadcasting (Market A and Market B): This chapter discusses the parameters that are required to estimate the WACC applicable to Broadcasting – Market A and Market B.
- **Chapter 8** – Other issues regarding the WACC: This chapter discusses the issues outlined at section 1.9 above.
- **Chapter 9** – Submitting comments: This chapter sets out the timelines for responding to the consultation and how confidential information will be dealt with.
- **Annex 1** – Draft decision instrument: Mobile Telecommunications.

[5] See paragraph 4.30
[6] See paragraph 8.6
[7] See paragraph 8.13
[8] See paragraph 8.4
[9] See paragraph 8.34

- **Annex 2** – Draft decision instrument: Fixed Line Telecommunications.
- **Annex 3** – Draft decision instrument: Broadcasting (Market A).
- **Annex 4** – Draft decision instrument: Broadcasting (Market B).
- **Annex 5** – Legal Basis.
- **Annex 6** - Proposed methodology to estimate industry specific parameters.
- **Annex 7** – Comparison of WACC parameters (2014 & 2019)
- **Annex 8** – Europe Economics Technical Report.

2 Executive Summary

2.1 ComReg is the regulator for the electronic communications sector in Ireland. The European Commission has recommended a number of markets as being susceptible to *ex ante* regulation[10]. These markets have been reviewed by ComReg and remedies have been imposed in such instances where undertakings are designated with SMP.

2.2 This consultation initiates a process to determine the appropriate WACCs to be included in price controls in the mobile telecommunications, fixed line telecommunications and broadcasting sectors.

2.3 Following the designation of SMP on undertakings in their respective markets in the aforementioned sectors, ComReg imposed remedies of price control via cost orientation on the SMP undertakings. The WACC is a component of a "cost oriented" price control. Simply put, the WACC is an opportunity cost that reflects the return that investors expect to achieve in financial markets at the same level of risk as in the undertaking seeking funding. It reflects the returns investors expect rather than compensating them for historical investment decisions.

2.4 The correct determination of the WACC is an important element in the regulatory process:

- It is central to any price-setting process (as it is an input in determining the prices a regulated undertaking is allowed to charge), and has an important impact on the regulated undertaking's investment incentives; and

- It has important implications for the tariffs other operators must pay for access, the overall competitive process, and ultimately end prices for consumers.

2.5 Consequently ComReg is approaching the setting of the WACC with care and following detailed analysis.

2.6 ComReg considers it appropriate to undertake these reviews of the WACC at this time for the following reasons:

  - It has been five years since the last review[11];

[10] European Commission Recommendation of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 295, 11.10.2014, p.79);

[11] Cost of Capital: Mobile Telecommunications – Fixed Line Telecommunications – Broadcasting (Market A and Market B) – Response to Consultation and Decision, ComReg Document 14/136, ComReg Decision D15/14 (the "2014 Decision").

- The price control for Markets 3a and 3b has recently been completed and the inclusion of a revised WACC is mentioned in the related decision[12];

- The European Commission has issued a consultation on estimating the WACC[13];

- Apart from the market review for Markets 3a and 3b, other reviews are currently in progress or are planned and the WACC could constitute a key building block in any future associated price controls; and

- Reviews of regulated tariffs and returns across markets are continuously being undertaken by ComReg and many of these require the inclusion of the WACC.

2.7 It is envisaged that the WACCs estimated as a result of this consultation will be used as follows:

- As an input to calculate the rate charged for mobile termination rates[14];

- As a key input into price controls for Eircom and certain other fixed line operators[15]; and

- As a key input into price controls for 2rn and RTÉ in Markets A and B.

2.8 ComReg also uses the WACC in determining whether any net cost of universal service is an unfair burden on Eircom. The WACC is used as an input into ComReg's evaluation of Eircom's profitability and therefore any revisions to the WACC would impact on future universal service funding assessments.

Key Objectives of the WACC Reviews

2.9 Section 12 of the Communications Regulation Act 2002[16], as amended, (the "Act") provides that the objectives of ComReg in exercising its functions in relation to the provision of electronic communications networks, electronic communications services and associated facilities are:

- *"to promote competition"*;

- *"to contribute to the development of the internal market"*; and

- *"to promote the interests of users within the Community"*.

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[12] ComReg Document No. 18/95 : "Pricing of Wholesale Broadband Services"

[13] https://ec.europa.eu/digital-single-market/en/news/targeted-consultation-guidance-cost-capital-eu-electronic-communications-regulators

[14] See "*Market Review: Fixed Voice Call Termination and Mobile Voice Call Termination, Response to Consultation and Decision, ComReg Document 19/47, ComReg Decision D10/19.*

[15] See paragraph 6.1.

[16] Communications Regulation Act 2002 (No. 20 of 2002) (as amended) (the "Act").

2.10 Section 16(2)(d) of the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011[17] (the "Framework Regulations") provides that, in pursuit of its objectives under section 12 of the Communications Regulation Act, ComReg shall "*apply objective, transparent, non-discriminatory and proportionate regulatory principles by, amongst other things…promoting efficient investment and innovation in new and enhanced infrastructures…".*

2.11 Regulation 13(2) of the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011[18] (the "Access Regulations") provides that *"To encourage investments by the operator, including in next generation networks, the Regulator shall, when considering the imposition of obligations under paragraph (1), take into account the investment made by the operator which the Regulator considers relevant and allow the operator a reasonable rate of return on adequate capital employed, taking into account any risks involved specific to a particular new investment network project."*

2.12 In this context it is important that the following goals are achieved with regard to the estimation of the WACC:

- Avoiding excessive prices being charged by SMP operators, thereby protecting consumers;
- Promoting efficient network investment by SMP operators and other operators; and
- Ensuring that existing and future levels of competition in wholesale and retail markets is not negatively impacted by the WACC in the form of excessive wholesale prices.

2.13 ComReg is mindful of the need to promote a favourable climate for efficient and timely investment and to promote innovation in telecommunications and broadcasting infrastructure and services in Ireland. Setting a WACC 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.

[17] European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011), as may be amended from time to time or replaced with equivalent effect.
[18] European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011.

2.14 It is important that regulated returns reflect the risks that companies face in making investments and that the relevant WACC encourages future efficient investment in telecommunications and broadcasting infrastructure in Ireland. It is therefore important that the current WACC review not only considers current market conditions but also any potential developments over the period of the review. However, it is important to note that ComReg does not have an obligation to ensure financeability. Thus financeability concerns should not be a factor when ComReg is selecting the most appropriate approach to gearing for the estimation of the WACC.

3 Proposed Approach to estimation of WACC

3.1 ComReg is of the preliminary view that it is appropriate to estimate the WACCs in the mobile, fixed line and broadcasting sectors using the WACC-CAPM methodology.

3.2 CAPM means the Capital Asset Pricing Model, an economic model which is used to calculate the cost to companies of the equity (or share capital) element of their capital base. It is described in more detail below.

3.3 ComReg notes that WACC-CAPM is the standard approach in estimating the WACC across regulated industries in Ireland, and for electronic communications services in many countries.

- ComReg has employed it in past decisions;
- It is the most common approach adopted by members of BEREC[19]; and
- The European Commission has consulted on its use in its recent consultation document.

3.4 ComReg is of the preliminary view that the WACC should be calculated on a nominal pre-tax basis using the CAPM approach for the cost of equity element. The formula is as follows:

$$WACC_{pre-tax} = g * r_{debt} + (1 - g) * \left(\frac{r_{equity}}{(1 - t)}\right)$$

Where:

- *g = gearing, which is defined as net debt ÷ (net debt + equity). In its calculations ComReg uses notional gearing informed by market evidence on gearing in each sector.*
- *r_{debt} = cost of debt. The cost of debt is equal to the sum of two components, the 'risk free rate' plus any debt premium applied to the debt incurred i.e. (r_f + debt premium).*
- *r_{equity} = According to the capital asset pricing model or CAPM, the cost of equity of a stock is obtained by adding the risk free rate to the product of the equity beta and the equity risk premium i.e. (r_f + ß * ERP).*

[19] The Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EU) 2018/1971 of the European Parliament and of the Council of 11 December 2018 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Agency for Support for BEREC (BEREC Office), amending Regulation (EU) 2015/2120 and repealing Regulation (EC) No. 1211/2009.

- *r_f = nominal risk-free rate which is the rate at which investors can borrow and lend funds with zero risk.*

- *Equity risk premium or ERP. This is the additional return over the risk free rate expected by investors for investing in the entire equity market.*

- *ß = equity beta. This is a measure of a stock's exposure to systematic risks. The equity beta indicates the sensitivity of the returns on the stock that is being examined to the entire equity market.*

- *t = corporation tax rate[20].*

3.5 The availability of reliable data is paramount in setting the WACC. ComReg is mindful that any estimate of the WACC is based on a best estimate, even with the availability of good quality data. As the WACC is effectively formulated based on historical data (with consideration given to likely future trends), ComReg acknowledges that there is a risk that the actual outturn of the various WACC components may be different to what is currently expected. ComReg has attempted to minimise this risk insofar as it is possible by basing its approach on international precedent and availing of reliable comparable data.

3.6 Recent regulatory developments in the United Kingdom by members of the UK Regulators Network ("UKRN") have examined two alternative approaches to estimating certain parameters within the CAPM[21]:

Equilibrium concept

3.7 The equilibrium concept is the approach that ComReg has historically adopted. This approach considers that certain parameters have an equilibrium value, which may change over time but which may not be directly visible in current data. The version of this approach used by Europe Economics estimates separately values for the risk-free rate and equity risk premium.

3.8 ComReg has in the past used rates on government bonds in its estimation of the risk-free rate. However with quantitative easing in the aftermath of the financial crisis rates on government bonds are at historic lows.

3.9 ComReg is of the opinion that to base the risk-free rate on current yields on government bonds would lead to an artificially low estimated risk-free rate for forward-looking WACC estimates.

3.10 The Central Bank of Ireland[22] noted:

[20] The corporation tax rate is discussed further at paragraph 4.23.
[21] These are further explained in Appendix 4 to the Europe Economics Technical Report.
[22] QB2 – April 2019 – The Irish Government Bond Market and Quantitative Easing

"[…] we estimate that the announcement effect related to the programme reduced Irish sovereign bond yields significantly and contributed to a flattening of the yield curve. This result is consistent with findings elsewhere. We find that the largest and most significant downward impact on yields occurred over the initial announcements of the programme, but also, somewhat surprisingly, over the final announcements during the tapering phase. […]".

3.11 With the assistance of Europe Economics, ComReg has reviewed regulators' estimations of the risk-free rate for the period 2005-2007 i.e. before the financial crisis. These rates have been adjusted using the EC forecast for Eurozone growth to 2020. This is supported by Europe Economics' econometric model which focuses for the relationship between the real RFR and real growth in an economy[23]. From those calculations the top of the range of results was selected due to the positive outlook for Ireland's economy.

3.12 For the equity risk premium ("ERP") Dimson Marsh and Staunton's ("DMS") most recent analysis was taken.

3.13 Both were then combined to estimate a cost of equity.

Observed asset approach

3.14 The observed asset approach has become more prevalent in the UK regulatory decision making in recent years[24]. In the version of this approach adopted by UK regulators, rather than taking individual parameters for the risk-free rate and equity risk premium it examines the Total Market Return ("TMR") that investors would expect. In doing so it looks at current data and projects forward for a given time period the return an investor might expect.

3.15 ComReg considers that the resulting WACCs for equilibrium concept and observed asset approach are such that the overall difference for Ireland in estimation between the two are marginal. ComReg therefore is of the preliminary view that equilibrium concept should continue to be used.

3.16 A more detailed explanation of these concepts is included in Chapter 4 on "Generic Parameters" and also in the associated Europe Economics Technical Report[25].

[23] See Section 3.1.3 of Europe Economics Technical Report & also http://www.europe-economics.com/publications/sustainable_growth_rate_working_paper.pdf

[24] https://www.ukrn.org.uk/wp-content/uploads/2018/11/2018-UKRN-Annual-WACC-Summary-Update-v2.pdf

[25] See Section 2.2 of Europe Economics Technical Report.

Q. 1	Do you agree or disagree with the continued use of equilibrium concept for the estimation of the WACC? Please clearly indicate the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views.

3.17 In estimating the four sector-specific WACCs, certain parameters are generic across each of the sectors[26]. These parameters include:

- the risk-free rate;
- the ERP; and
- the tax rate.

3.18 The same values for these generic parameters are therefore used in estimating the WACCs for Mobile Telecommunications, Fixed Line Telecommunications and Broadcasting (Market A and Market B). ComReg has therefore grouped these generic parameters into one chapter in this consultation (chapter 4).

3.19 There are other parameters that are specific to calculating the respective WACCs due to inherent sector specific characteristics. For example, the preliminary point estimate chosen for gearing when calculating the WACC for fixed line telecommunications is different to that of mobile and broadcasting. The characteristics of these sectors are considered in separate chapters, with the point estimates for the sector specific parameters determined accordingly. The sector specific chapters are as follows:

- Mobile Telecommunications – chapter 5
- Fixed Line Telecommunications – chapter 6
- Broadcasting (Market A and Market B) – chapter 7

3.20 For comparative purposes and to ensure consistency in its own analysis, ComReg considered data from other regulated sectors in Ireland, data from other European countries and, where considered necessary, data from countries outside of Europe.

3.21 In carrying out a comparative analysis of calculation of the WACC across Europe, ComReg and Europe Economics examined a report published by BEREC comparing the methodologies in calculating WACCs across Member States[27].

[26] Strictly speaking, four WACCs are estimated, but as the two broadcasting WACCs are based on the same methodology, the result is that three WACCs are effectively estimated in this consultation.
[27] https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/8310-berec-report-regulatory-accounting-in-practice-2018

3.22 ComReg is of the preliminary view that the respective estimations of WACC should be based on the parameter ranges presented below and point estimates for the period of the price controls[28]. ComReg notes that the preliminary WACCs are based on a hypothetical efficient operator in each of the respective sectors.

[28] Based on the estimations as contained in the Europe Economics Technical Report.

Table 2 Ranges for WACC parameters

WACC parameter	Mobile Telecommunications	Fixed Line Telecommunications	Broadcasting (Markets A & B)
Cost of Debt			
Nominal risk-free rate	2.82% to 4.04%	2.82% to 4.04%	2.82% to 4.04%
Debt premium	1.45% to 1.50%	1.45% to 1.65%	1.40% to 1.80%
Cost of equity			
Nominal risk-free rate	2.82% to 4.04%	2.82% to 4.04%	2.82% to 4.04%
Asset beta	0.42 to 0.44	0.38 to 0.41	0.30 to 0.50
Gearing	35%	40%	25%
Equity beta	0.65 to 0.68	0.63 to 0.68	0.40 to 0.67
Equity Risk Premium	4.30% to 4.75%	4.30% to 4.75%	4.30% to 4.75%
Corporation tax rate	12.5%	12.5%	12.5%

3.23 In calculating the respective WACCs ComReg proceeds to choose a point estimate from each of the parameter ranges above. It is important to note that the midpoint of these ranges may not be an appropriate choice as it may not be representative of a hypothetical efficient operator in each of these sectors. The rationale behind each of the preliminary point estimates chosen is explained in detail in chapters 4 to 7.

Table 3 Point Estimates for WACC parameters

WACC parameter	Mobile Telecommunications	Fixed Line Telecommunications	Broadcasting (Markets A & B)
Cost of Debt			
Nominal risk-free rate	3.43%	3.43%	3.43%
Debt premium	1.50%	1.50%	1.50%
Cost of equity			
Nominal risk-free rate	3.43%	3.43%	3.43%
Asset beta	0.43	0.40	0.40
Gearing	35%	40%	25%
Equity beta	0.66	0.67	0.53
Equity Risk Premium	4.60%	4.60%	4.60%
Corporation tax rate	12.50%	12.50%	12.50%

3.24 The preliminary nominal pre-tax WACC estimations, based on a hypothetical efficient operator in each sector without aiming up, are as follows:

- 6.53% for the Mobile Telecommunications;
- 6.42% for Fixed Line Telecommunications;
- 6.27% for Broadcasting (Market A); and
- 6.27% for Broadcasting (Market B).

3.25 These point estimates and the ranges that they fall within are described in subsequent chapters of this document and are also detailed in Europe Economics' Technical Report at Annex 8. These estimates are before aiming-up which is discussed in greater detail at section 8.6.

4 Generic WACC parameters

4.1 In this chapter ComReg sets out the preliminary proposals for the values of parameters that are considered to be common across each of the sector specific WACC estimations. These generic parameters are as follows:

- The risk-free rate;
- The ERP; and
- Taxation.

4.2 The preliminary proposals for the values of each generic parameter are discussed under the separate headings below.

The risk-free rate

4.3 The risk-free rate measures the expected return on an investment free of default and systematic risk (i.e. where the realised return on the investment will be equal to the expected return). ComReg notes that although a risk-free asset does not exist in practice, in economies with minimal sovereign default risk the risk-free rate is typically estimated with reference to the yield to maturity on government issued bonds (typically government bonds with a triple A rating). These yields are assumed to be the closest proxy to the return on a theoretical risk-free rate.

4.4 However, as noted in paragraph 3.10, ComReg is of the opinion that using government bonds as the basis for the estimation of the risk-free rate could lead to an artificially low forward-looking risk-free rate.

4.5 ComReg considers that the estimate of the real risk-free rate to be used in WACC calculations needs to take account of expected future economic conditions, both in the Eurozone and in Ireland.

4.6 In addition due to the global financial crisis that started in 2008 current Eurozone bond rates may not be fully representative of the risk-free rate over the period that the proposed WACCs will be used.

4.7 Europe Economics has devised a methodology for estimating a forward looking real risk-free rate that takes account of the issues raised in paragraphs 4.4 to 4.6[29].

4.8 Europe Economics first examined risk-free rates in regulators' decisions prior to the global financial crisis that started in 2007-2008. These were in the range 2% to 2.5%[30]. At that time Eurozone growth was around 2 per cent.

[29] See Section 3.1 of Europe Economics Technical Report.
[30] See table 3.1 of Europe Economics Technical Report.

4.9 Europe Economics previously developed an econometric model of the relationship between economic growth and real interest rates. The model suggests that the two variables are correlated with a coefficient of approx. 0.7.

4.10 The European Commission Autumn 2018 economic forecasts were used for estimates of economic growth for the Eurozone and for Ireland by Europe Economics. Economic growth for the Eurozone for the period 2018 to 2020 was forecast to be around 1.5%, which contrasts with 2% per annum for the period before the global financial crisis.

4.11 Europe Economics used its derived relationship between growth and real risk-free interest rates to adjust the expected real risk-free rate for the Eurozone which resulted in a range of 1.7% to 2.2%. However due to the forecast higher growth rates forecast for Ireland the point estimate of the real risk-free rate was judged to be 2.1%.

The nominal versus real risk-free rate

4.12 ComReg notes that in the previous reviews of the WACC the nominal risk-free rate was used to derive a nominal WACC estimate in order to be consistent with non-indexed historical asset valuations in pricing models. While a WACC estimated using a real risk-free rate combined with indexed asset values can also be applied (real WACC), ComReg is of the preliminary view that the nominal risk-free rate should continue to be used in order to maintain the consistent approach to the WACC estimation.

4.13 Europe Economics' Technical Report[31] recommends that ComReg should estimate the real risk-free rate and inflation separately, before deriving the nominal risk-free rate. Since changes in the nominal risk-free rate can occur due to changes in the real risk-free rate or changes in inflation, Europe Economics considers the separate estimation of these parameters to be more appropriate. ComReg is of the preliminary view that the nominal risk-free rate should be estimated in this manner.

Inflation and the nominal risk-free rate

4.14 Europe Economics Technical Report[32] notes that the European Commission forecast inflation for Ireland is 1.2% for 2019 and 1.4% for 2020. The European Central Bank's inflation target is currently below 2%. ComReg is of the preliminary view that the annual inflation rate for Ireland will be within the range of 1.1% to 1.8% over the period of the price control, with a point estimate of 1.3%.

4.15 ComReg considers that for the purposes of the WACC the forecast inflation rate for Ireland should be used as the costs discounted by the WACC are costs arising in Ireland.

[31] See Section 3.1.1 of Europe Economics Technical Report.
[32] See Section 3.1.4 of Europe Economics Technical Report.

4.16 Taking the ranges and point estimates for the real risk-free rate and inflation, ComReg proposes a nominal risk-free rate range of 2.82% to 4.04% with a point estimate of 3.43%.

Equity Risk Premium

4.17 In the 2014 Decision, ComReg chose the ERP based on DMS. DMS estimated ERP over bonds (a proxy for the risk free rate) for various countries since 1900. Relying on a long-run historical data set can significantly reduce the variation in ERP which is observed over short periods of time. The use of the arithmetic mean[33] for estimating ERP has been the favoured method among regulators.

4.18 ComReg is of the preliminary view that the arithmetic mean approach continues to be adopted as part of this review.

4.19 In the CAPM framework, the ERP represents the mean level of extra return that investors require as a reward for investing in the equities rather than a risk free asset. The ERP cannot be directly observed but may be inferred from historical or forward-looking evidence.

4.20 Europe Economics' Technical Report relies on the ERP estimates provided by DMS. Based on its analysis Europe Economics' Technical Report estimates an ERP arithmetic mean for Ireland of 4.60%[34]. ComReg notes that this Ireland specific rate is similar to the estimated European wide ERP of 4.3%.

4.21 Europe Economics Technical Report also reviewed the ERP values applied in previous regulatory WACC estimations in Ireland, including those of other Irish regulators and suggests an ERP range of 4.3% to 4.75%.

4.22 ComReg analysed Europe Economics approach to estimating the ERP and concurs with its proposal of a 4.60% point estimate from the range.

Taxation

4.23 Treatment of tax in regulatory WACC models can strongly affect returns on historic investment as well as incentives for future investment.

[33] An alternative way is to estimate geometric mean. Geometric mean is the nth root of the product of historical ERP values.
[34] See section 3.2 of Europe Economics Technical Report.

4.24 The WACC can be estimated on a pre-tax or post-tax basis. Pre-tax WACC grosses up the cost of equity[35] by the selected tax rate. This is because payments to equity holders in the form of dividends are not tax deductible so the allowed return must allow for corporate tax payments. This is not the case for debt interest payments which can be offset against profits for the purposes of corporate tax calculations in Ireland and in most jurisdictions. The allowed profits are then intended to cover both the investor remuneration and statutory tax payments.

4.25 ComReg notes that there are two main approaches to selecting the tax rate:

- The statutory tax rate; and
- The effective tax rate.

4.26 The selection of the effective tax rate recognises the fact that the firm in question may be paying a different tax rate from the statutory tax rate. This situation can arise, for example, when a company has high levels of gearing (high level of debt relative to the level of debt plus equity), carries forward tax losses or where depreciation profiles for tax purposes (capital allowances) are different to accounting depreciation. These situations create the potential for what are sometimes called tax shields. A tax shield is the reduction in corporation tax that results from taking an allowable deduction from taxable income. In particular, since interest on debt is a tax-deductible expense, taking on debt acts as a tax shield. The application of the effective tax rate with WACC calculations claws back the benefits of debt tax shields and reduces the incentives to take on excessive debt levels.

4.27 A further refinement of this approach would be to take the accounting effective tax rate, including deferred tax charges or credits, which is intended to smooth out temporary timing differences between a company's effective tax rate from year to year.

4.28 ComReg notes that the selection of tax rate is largely dependent on the chosen methodology for estimating a regulated company's gearing level. The application of the effective tax rate might be preferred in instances where the chosen notional level of gearing (gearing level of an efficiently financed firm) is substantially lower than the actual gearing level of the regulated firm.

4.29 In previous ComReg reviews of the WACC, the statutory corporation tax level of 12.5% was used. In this review, the proposed pre-tax WACC is also calculated using a statutory tax rate of 12.5%. This is because, for each of the WACC estimates, we are calculating it on the basis of a hypothetical efficient operator, i.e. an operator with an efficient capital structure. In the 2014 Decision ComReg considered it would be inappropriate to factor in company specific factors such as the availability of losses forward or accelerated capital allowances.

[35] Equity dividend payment is made from a post-tax profit; therefore the cost of equity is a post-tax cost. The cost of debt is considered to be a pre-tax cost and thus grossing up is not required.

4.30 ComReg notes, however, that in the case of Eircom, based on its statutory financial statements and bondholder reports, it has paid little corporation tax for several years. In some cases it has recorded tax credits in its accounts. In the case of 2rn it also paid little corporation tax for several years although in its 2017 statutory financial statements it recorded an income tax expense of €1,151,000 against a profit before income tax of €8,553,000[36]. Therefore, while estimating a WACC for a hypothetical efficient operator, the use of the statutory corporation tax rate results in the operator being compensated for tax charges which may not arise in the short to medium term.

4.31 The use of a statutory corporation tax rate of 12.5% results in a WACC rate of c.0.6% higher when compared to a WACC estimated using an effective rate of 0%.

Q. 2	Where a company's effective tax rate is significantly different to the statutory tax rate should the WACC be estimated using the statutory corporation tax rate or the company's effective corporation tax rate? Please clearly indicate the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views.

ComReg's preliminary view

4.32 ComReg is of the preliminary view that the following estimates should be used for the generic parameters of the WACC estimations.

Table 4 Generic parameters - ranges & point estimates

Parameter	Range	Point Estimate
Nominal risk free rate	2.82% to 4.04%	3.43%
Equity Risk Premium	4.30% to 4.75%	4.60%
Taxation	12.5%	12.5%

[36] Based on accounts filed with the Companies Registration Office.

Q. 3	Do you agree with ComReg's proposed approach to estimating the generic parameters for the respective WACCs and the preliminary point estimates chosen? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views.

5 Mobile Telecommunications

5.1 Currently the following Mobile Service Providers ("MSP") [37] are deemed to have SMP in relation to wholesale voice call termination on individual mobile networks in Ireland [38]; namely:

- Lycamobile Ireland Limited;
- Meteor Mobile Communications Limited;
- Tesco Mobile Ireland Limited;
- Three Ireland (Hutchison) Limited,
- Virgin Media Ireland Limited, and
- Vodafone Ireland Limited.

In Estimation of the specific parameters used to calculate WACC

5.2 This is the second time that the WACC has been estimated by ComReg for the mobile telecommunications sector. This chapter sets out ComReg's assumptions and preliminary proposals in relation to key determinants of the WACC for a hypothetical efficient MSP.

5.3 This chapter examines the sector specific parameters for a hypothetical efficient MSP. It details the estimation of asset and equity betas, which in turn enables estimation of the cost of equity given an asset's systematic risk.

5.4 This chapter also identifies the chosen methodology for estimating the debt premium for a hypothetical efficient MSP and in turn provides an estimated cost of debt.

Gearing for mobile telecommunications

5.5 Each MSP operating in Ireland will have a unique actual gearing rate, specific to its own operations. It is however not possible to apply the gearing of each individual company for the purposes of calculating the WACC. For a hypothetical efficient MSP, only one gearing value can be selected as the same WACC and Mobile Termination Rates ("MTR") will apply to all operators subject to SMP.

[37] See "*Market Review: Fixed Voice Call Termination and Mobile Voice Call Termination, Response to Consultation and Decision, ComReg Document 19/47, ComReg Decision D10/19*

[38] ComReg identified six separate markets relating to the market identified by the European Commission for voice call termination on individual mobile networks as outlined in Section 4.2 of ComReg Document 19/47, ComReg Decision Number D10/19.

5.6 In estimating gearing, Europe Economics Technical Report examined recent regulatory decisions of Irish regulators and of European telecommunications regulators that opted for a notional gearing approach[39]. It is evident that asset heavy regulated industries tend to be more highly geared than mobile operators with the former tending to have a range in the region of 40% to 60%. Notwithstanding this range, precedent for the mobile telecommunications sector suggests that the gearing range should in fact be lower.

5.7 The Europe Economics Technical Report examined credit ratings, ratings outlooks, and average gearing levels[40] for companies providing mobile telephony. Europe Economics calculated a sector average gearing of 36% and noted Vodafone's credit rating of BBB+ and gearing level of 34%. In its assessment of gearing Europe Economics assumed that a hypothetical efficient Irish operator must maintain a credit rating within investment grade.

5.8 A notional gearing level of 35% is proposed by ComReg which is consistent with Europe Economics' Technical Report[41] which suggests gearing percentages for pure play mobile operators of c. 30% and below the 50%/60% gearing of multi-service operators. This chosen level of gearing is also broadly consistent with the observed gearing level of mobile operators outside of Ireland.

5.9 In the 2014 Decision ComReg assessed mobile gearing to be 30%. The 5% increase to the proposed value of 35% arises due to more refined data becoming available in the intervening period.

5.10 ComReg is of the preliminary view that the notional gearing approach is appropriate.

5.11 Having analysed Europe Economics' Technical Report and for the reasons outlined above, ComReg's preliminary view is that, for the purposes of the mobile telecommunication WACC estimation, a notional gearing approach is used and that a point estimate of 35% is appropriate.

Asset beta for mobile telecommunications

5.12 ComReg recognises that estimating an asset beta for a hypothetical efficient MSP is complicated by several factors. It is difficult to find good comparators for beta estimation as there are a limited number of mobile only operators in Europe. As mobile operators in Europe tend to exist as part of a multi-service telecommunications company, it is therefore difficult to isolate their pure-play mobile activities and to also identify the returns. There also happens to be relatively few post-crisis precedents on betas for efficient mobile operators.

[39] See section 5.1.1 of Europe Economics Technical Report.
[40] See Table 5.3 of Europe Economics Technical Report.
[41] See section 5.1.3 of Europe Economics Technical Report.

5.13 Europe Economics' approach to estimating an asset beta for a hypothetical efficient MSP is set out in chapter 5 of its Technical Report. It considered the following in reaching a proposal on a suitable range for a hypothetical efficient MSP's asset beta[42], in order to arrive at a best approximation:

- A combination of direct statistical estimates based on market data from a sample of European and non-European mobile telecommunications asset betas;
- Relevant regulatory precedent; asset betas, as estimated by other National Regulatory Authorities ("NRAs") in their respective MTR determinations; and
- Comparison of 1, 2 and 5 year rolling asset betas.

5.14 Table 5.4 and figures 5.2 and 5.3 of Europe Economics' Technical Report present a summary of asset beta estimates from the various approaches outlined above.

5.15 From the Europe Economics Technical Report two year asset betas for telecommunications companies have generally converged since 2012 with an overall range of approximately 0.3 to 0.5. Assessing asset betas since c. 2015 would result in a range of 0.42 to 0.44.

5.16 Having analysed Europe Economics' Technical Report and for the reasons outlined above, ComReg's preliminary view is that, for the purposes of the mobile telecommunication WACC estimation, an unlevered beta point estimate of 0.43 should be used[43].

Proposed estimation of equity beta

5.17 As noted in Annex 6 of this document the equity beta describes the analysed stock's exposure to systematic risks. A lower sensitivity to systematic risks is rewarded by a lower cost of equity.

5.18 The preliminary equity beta is estimated to be 0.66 resulting from a preliminary asset beta of 0.43, the debt beta of zero and notional gearing of 35%.

Equity beta = Asset Beta / (1 – Gearing)

Equity beta = 0.43 / (1 – 0.35)

[42] It is important to note that the asset beta is industry specific and not country specific meaning that we can take guidance from other countries and operators in other areas.

[43] The asset beta is also referred to an unlevered beta. This is subsequently levered (with gearing) to achieve the equity beta which ultimately feeds through to the estimation of the cost of equity

Proposed estimate of the cost of equity

5.19 The preliminary nominal post tax cost of equity is 6.47%. It is measured by multiplying the equity beta by the ERP and then adding the nominal risk free rate. In order to calculate a nominal pre-tax WACC it is then necessary to derive a nominal pre-tax cost of equity. This equates to the nominal post tax cost of equity divided by [1 minus the tax rate] i.e. 6.47%/(1-0.125). The preliminary nominal pre-tax cost of equity (r_e) is therefore equal to 7.39% (Table 5).

Table 5 Nominal pre-tax cost of equity for Mobile Telecommunications

	Parameter	Rate	
A	Corporation Tax rate	12.5%	
B	Real risk-free rate	2.10%	
C	Inflation	1.30%	
D	Nominal risk-free rate	3.43%	(1+B)*(1+C)-1
E	Equity risk premium	4.60%	
F	Equity Beta at notional gearing	0.66	
G	Nominal post-tax cost of equity	6.47%	D + (F*E)
H	Nominal pre-tax cost of equity	7.39%	G/(1-A)

Source: Europe Economics' Technical Report

Mobile cost of debt

5.20 From the equation $r_{debt} = r_f + \textit{debt premium}$, the nominal risk free rate is used in order to derive a nominal pre-tax cost of debt. Europe Economics Technical Report[44] estimates the cost of debt by comparing the return on bonds of a peer group against German government bonds for those within the Eurozone or against the national government bond for those outside of the Eurozone. This determines how much bonds of mobile operators trade above government bonds.

5.21 This results in a debt premium of 1.50%. This compares to a debt premium of 1.45% in the 2014 Decision.

5.22 ComReg is of the preliminary view that a debt premium of 1.50% is appropriate.

5.23 Combining the nominal risk free rate of 3.43% gives a nominal pre-tax cost of debt of 4.93%.

[44] See section 5.3 of Europe Economics Technical Report.

$$r_{debt} = r_f + \textit{debt premium},$$

$$4.93\% = 3.43\% + 1.50\%$$

5.24 Having analysed Europe Economics' Technical Report and for the reasons outlined above, ComReg's preliminary view is that, for the purposes of the mobile telecommunication WACC estimation the forward looking nominal pre-tax cost of debt should be estimated to be 4.93%.

Proposed WACC for a Hypothetical Efficient MSP

5.25 The construction of the overall nominal pre-tax WACC requires point estimates from each of the parameter ranges presented. The point estimates are not necessarily taken from the midpoint of the range for reasons already explained and, as such, high and low points of parameter ranges are used to construct an overall WACC range. There is good reason to calculate the WACC on the basis that the ERP and risk free rate move in opposite direction as a low ERP point estimate and a low risk free rate would significantly understate reality[45]. The ERP can be expected to move in the opposite direction to the risk free rate so that total market returns are more stable than their components.

[45] Table 6 presents the WACC as if calculated on the basis of the lowest and highest parameters. However, in calculating the point estimate it should be noted that the lowest or highest risk free rate and ERP cannot be used simultaneously as they both move inversely to each other.

Table 6 WACC for Mobile Telecommunications

	Low	High	Point Estimate
Gearing (%)	35%	35%	35%
Tax rate (%)	12.5%	12.5%	12.5%
Real risk-free rate (%)	1.70%	2.20%	2.10%
Inflation (%)	1.10%	1.80%	1.30%
Nominal risk-free rate (%)	2.82%	4.04%	3.43%
Equity risk premium (%)	4.30%	4.75%	4.60%
Equity Beta at notional gearing	0.65	0.68	0.66
Nominal post-tax cost of equity (%)	5.60%	7.25%	6.47%
Nominal pre-tax cost of equity (%)	6.40%	8.29%	7.39%
Debt Premium (%)	1.45%	1.50%	1.50%
Nominal pre-tax cost of debt (%)	4.27%	5.54%	4.93%
Nominal Vanilla WACC (%)	5.13%	6.65%	5.93%
Nominal pre-tax WACC (%)	5.65%	7.33%	6.53%

Source: Europe Economics' Technical Report

5.26 The nominal pre-tax WACC is preliminarily estimated to be 6.53%, with a high and low bound estimated to be 7.33% and 5.65% respectively.

5.27 Having analysed Europe Economics' Technical Report and for the reasons outlined above, ComReg's preliminary view is that a nominal pre-tax WACC of 6.53% should be used in the mobile sector. This is based upon the following parameters specific to mobile telecommunications (Table 7):

Table 7 Mobile parameters - ranges & point estimates

Parameter	Range	Point Estimate
Asset beta	0.42 to 0.44	0.43
Gearing	35%	35%
Debt premium	1.45% to 1.50%	1.50%

Eurozone comparator - Italy

5.28 In 2018 the European Commission responded to an Italian mobile WACC notification[46]. In its letter of 15 November 2018 the European Commission listed the parameters used by AGCOM to estimate the WACC.

5.29 A comparison of these parameters and final WACC estimation compared to ComReg's preliminary view is set out below.

Table 8 Comparison between Italian mobile WACC & ComReg estimate

Parameter	Italy	ComReg preliminary view
Risk free rate	2.31%	3.43%
Cost of debt	4.61%[47]	n/a
Tax shield	24%	n/a
Tax rate	33%	12.5%
Pre-tax cost of debt	5.2%	4.93%
Equity risk premium	6.07%	4.60%
Gearing	49%	40%
Asset beta	0.47	0.43
Equity beta	0.92	0.66
Post tax cost of equity	7.90%	6.47%
Pre-tax cost of equity	11.79%	7.39%
Nominal pre-tax WACC	8.55%	6.53%

[46] C(2018) 7709 final

[47] *"It is the average interest rate at the 31 December 2017 of the obligations of the considered operators".*

5.30 It should be noted that if a tax rate of 12.5% were applied to the Italian estimation the Italian nominal pre-tax WACC would change from 8.55% to c. 6.86%. Having compared the parameters ComReg considers that its proposed value appears reasonable.

Q. 4	Do you agree with ComReg's proposed approach to estimating the WACC specific to the mobile telecommunications sector? Please explain the reasons for your answer, in particular your views on the specific parameters used. Please clearly indicate the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views.

6 Fixed Line Telecommunications

6.1 The following fixed telecommunications operators are deemed to have SMP, namely Eircom Limited's fixed line telecommunications business[48], and in fixed voice call termination the following operators are designated with SMP[49]:

- Airspeed Communications Unlimited Company;
- BT Communications Ireland Limited;
- Blueface Limited**;**
- Colt Technology Services Limited;
- Dialoga Servicios Interactivos, SA;
- Eircom Limited;
- Equant Network Services International Limited;
- Finarea SA;
- Imagine Communications Ireland Limited;
- In2com Limited;
- Intellicom Ireland Limited;
- Internet Protocol Telecom Limited;
- Magnet Networks Limited;
- Magrathea Telecommunications (Ireland) Limited;
- Modeva Networks Unlimited Company;
- PlanNet 21 Communications Limited;

[48] Including but not limited to the following markets; Wholesale Call Origination on the Public Telephone Network Provided at a Fixed Location (ComReg Decision D05/15); Wholesale high-quality access provided at a fixed location (ComReg Decision D06/08); Wholesale Call Termination on Individual Public Telephone Networks Provided at a Fixed Location (ComReg Decision D10/19); Retail Access to the Public Telephone Network at a Fixed Location (ComReg Decision D12/14); Wholesale Local Access provided at a Fixed Location (ComReg Decision D10/18); Wholesale Central Access provided at a Fixed Location for Mass-Market Products (ComReg Decision D10/18).

[49] [49] See "*Market Review: Fixed Voice Call Termination and Mobile Voice Call Termination, Response to Consultation and Decision, ComReg Document 19/47, ComReg Decision D10/19.*

- Telcom Limited;
- Verizon Ireland Limited;
- Viatel Ireland Limited;
- Virgin Media Ireland Limited;
- Vodafone Ireland Limited; and
- Voxbone SA.

Estimation of the different parameters used to calculate WACC

6.2 Previous WACC estimations, on a pre-tax nominal basis, for Eircom's fixed line business and other fixed line operators with SMP were as follows:

Table 9 Previous fixed line WACC percentages

Period	WACC rate %
2000	12.00%
2003	11.50%
2008	10.21%
2014	8.18%[50]

6.3 ComReg notes that the current review of the fixed line WACC is based on a hypothetical efficient FSP with an efficient capital structure. It is also estimated on a forward looking basis.

6.4 This chapter sets out ComReg's assumptions and preliminary proposals in relation to key determinants of the WACC to be applied to the fixed line sector. This WACC will in turn feed into the various price control remedies, where appropriate, in the fixed line market. It details the estimation of asset and equity betas for which in turn provides the required cost of equity given an asset's systematic risk.

6.5 This chapter also identifies the chosen methodology for estimating the debt premium of a hypothetical efficient FSP, and in turn provides an estimated cost of debt.

[50] The 2014 Decision

Gearing for fixed line telecommunications

6.6 ComReg notes that while Eircom exited examinership it still has debt levels higher than most of its European peers and considers that this does not represent the capital structure of an efficient operator. The Annual Report for Bondholders Year Ended 30 June 2018 for Eircom Holdings (Ireland) Limited[51] shows total liabilities of €3,071m of which borrowings are €2,244m (c. 73% of total liabilities). This is compared to a negative total equity of €902m.

6.7 Table 11 below presents preliminary estimates of the fixed line WACC under the assumption of notional gearing.

6.8 Ireland's previous nominal pre-tax WACC determination of 8.18% for the fixed line telecommunications market in 2014 was based on a notional gearing point estimate of 40%. This was set in the context of Eircom being the fixed line incumbent.

6.9 The 2018 BEREC report[52] indicates that since 2015 NRA's have applied a gearing ratio of between c. 35% and 40%.

6.10 The Europe Economics Technical Report[53] provides a comparison of gearing among European fixed-line operators and the corresponding credit ratings.

6.11 Having analysed Europe Economics' Technical Report[54] and for the reasons outlined above ComReg's preliminary view is that, for the purposes of the fixed line telecommunication WACC estimation, a notional gearing approach should be used and that a point estimate of 40% is appropriate.

Asset beta for fixed line telecommunications

6.12 The most straightforward way of estimating the equity beta is to estimate current equity beta from the stock market. In a best case scenario, ComReg would be able to estimate the beta values from the stock price of a fixed line incumbent in the Irish market and make a judgment surrounding perceived efficiencies.

6.13 Due to the amount of time that has passed since Eircom was a listed company, it was not considered appropriate to use historical market data to directly estimate the equity beta of Eircom. Europe Economics instead rely on regulatory precedent and comparator analysis to estimate the efficient equity beta for a hypothetical efficient FSP.

6.14 Europe Economics Technical Report suggests that asset betas from European comparator countries are in the range of 0.38 to 0.41[55].

[51] https://www.eir.ie/opencms/export/sites/default/.content/pdf/IR/reports/2017_2018/quarter4/eir_4th_quarter_results_presentation_FY18_report.pdf
[52] BOR (18) 215
[53] See Table 6.2 of Europe Economics Technical Report.
[54] See section 6.1 of Europe Economics Technical Report.
[55] See Table 6.3 and figures 6.2 and 6.3 of the Europe Economics Technical Report

6.15 Europe Economics applied the above methodologies to calculate the hypothetical efficient FSP's unlevered beta in the range of 0.38 to 0.41. ComReg concurs with this proposal and believes that a suggested point estimate of 0.40 is appropriate for a hypothetical efficient FSP.

6.16 The approach of estimating the asset beta for the hypothetical efficient FSP is based on several different methodologies and is in line with asset betas of other fixed line incumbents across Europe.

6.17 Having analysed Europe Economics' Technical Report and for the reasons outlined above, ComReg's preliminary view is that, for the purposes of the fixed line telecommunication WACC estimation, an unlevered point beta estimate of 0.40 should be used.

Proposed estimation of equity beta

6.18 As noted in Annex 6 of this document the equity beta describes the analysed stock's exposure to systematic risks. A lower sensitivity to systematic risks is rewarded by a lower cost of equity, since investors are unable to diversify away from systematic risks that affect the entire equity market.

6.19 The preliminary equity beta is estimated to be 0.67, resulting from a preliminary asset beta of 0.40, a debt beta of zero and notional gearing of 40%.

Equity beta = Asset Beta / (1 – Gearing)

6.20 An equity beta of 0.67 is therefore derived from the following:

Equity beta = Asset Beta / (1 – Gearing)

Equity beta = 0.4 / (1 – 0.4)

Proposed cost of equity

6.21 The preliminary nominal post tax cost of equity is 6.49%. It is measured by multiplying the equity beta by the Equity Risk Premium and then adding the nominal risk free rate. In order to calculate a nominal pre-tax WACC it is necessary to then derive a nominal pre-tax cost of equity.

6.22 The pre-tax cost of equity is obtained by dividing the nominal post tax cost of equity by (1 minus the tax rate). The preliminary nominal pre-tax cost of equity (r_e) is therefore equal to 7.42% (Table 10).

Table 10 Nominal pre-tax cost of equity for Fixed Line Telecommunications

	Parameter	Rate	
A	Tax rate	12.5%	
B	Real risk-free rate	2.10%	
C	Inflation	1.30%	
D	Nominal risk-free rate	3.43%	(1+B)*(1+C)-1
E	Equity risk premium	4.60%	
F	Equity Beta at notional gearing	0.67	
G	Nominal post-tax cost of equity	6.49%	D + (F*E)
H	Nominal pre-tax cost of equity	7.42%	G/(1-A)

Source: Europe Economics' Technical Report

Fixed line cost of debt

6.23 From the equation $r_{debt} = r_f +$ *debt premium*, the nominal risk free rate is used in order to derive a nominal pre-tax cost of debt. Europe Economics estimates the cost of debt by comparing the return on bonds of a peer group against German government bonds for those within the Eurozone or against the national government bond for those outside of the Eurozone. This determines how much bonds of fixed line telecommunication service providers' trade above government bonds.

6.24 This results in a debt premium of 1.50%. This compares to a debt premium of 1.45% in the 2014 Decision.

6.25 ComReg is of the preliminary view that a debt premium of 1.50% is appropriate.

6.26 Combining the nominal risk free rate of 3.43% gives a nominal pre-tax cost of debt of 4.93%.

$$r_{debt} = r_f + \textit{debt premium},$$

$$4.93\% = 3.43\% + 1.50\%$$

6.27 Having analysed Europe Economics' Technical Report and for the reasons outlined above, ComReg's preliminary view is that, for the purposes of the fixed line telecommunication WACC estimation the forward looking nominal pre-tax cost of debt should be estimated to be 4.93%.

Proposed WACC for a hypothetical efficient FSP

6.28 The construction of the overall nominal pre-tax WACC requires point estimates from each of the parameter ranges presented. The point estimates are not necessarily taken from the midpoint of the range for reasons outlined above. As such, high and low points of parameter ranges are used to construct an overall WACC range. There is good reason to calculate the WACC on the basis that the ERP and risk free rate move in opposite direction as a low ERP point estimate and a low risk free rate would significantly understate reality[56]. The ERP can be expected to move in the opposite direction to the risk free rate so that total market returns are more stable than their components.

[56] Table 11 presents the WACC as if calculated on the basis of the lowest and highest parameters. However, in calculating the point estimate it should be noted that the lowest or highest risk free rate and ERP cannot be used simultaneously as they both move inversely to each other.

Table 11 WACC for a hypothetical FSP

	Low	High	Point Estimate
Gearing (%)	40%	40%	40%
Tax rate (%)	12.5%	12.5%	12.5%
Real risk-free rate (%)	1.70%	2.20%	2.10%
Inflation (%)	1.10%	1.80%	1.30%
Nominal risk-free rate (%)	2.82%	4.04%	3.43%
Equity risk premium (%)	4.30%	4.75%	4.60%
Equity Beta at notional gearing	0.63	0.68	0.67
Nominal post-tax cost of equity (%)	5.54%	7.29%	6.49%
Nominal pre-tax cost of equity (%)	6.33%	8.33%	7.42%
Debt Premium (%)	1.45%	1.65%	1.50%
Nominal pre-tax cost of debt (%)	4.27%	5.69%	4.93%
Nominal Vanilla WACC (%)	5.03%	6.65%	5.87%
Nominal pre-tax WACC (%)	5.51%	7.27%	6.42%

Source: Europe Economics' Technical Report

6.29 The nominal pre-tax WACC is preliminarily estimated to be 6.42%, with a high and low bound estimated to be 7.27% and 5.51% respectively.

6.30 Having analysed Europe Economics' Technical Report and for the reasons outlined above, ComReg's preliminary view is that a nominal pre-tax WACC of 6.42% should be used in the fixed telecommunications sector. This is based upon the following parameters specific to fixed line telecommunications (Table 12):

Table 12 Fixed line parameters - ranges & point estimates

Parameter	Range	Point Estimate
Asset beta	0.38 to 0.41	0.40
Gearing	40%	40%
Debt premium	1.45% to 1.65%	1.50%

Eurozone comparator - Portugal

6.31 In 2019 the European Commission responded to a Portuguese fixed line WACC notification[57]. In its letter of 30 April 2019 the European Commission listed the parameters used by ANACOM to estimate the WACC.

6.32 A comparison of these parameters and final WACC estimation compared to ComReg's preliminary view is set out below.

Table 13 Comparison between Portuguese fixed line WACC & ComReg estimate

Parameter	Portugal	ComReg preliminary view
Nominal Risk free rate	3.11%	3.43%
Equity risk premium	6.22%	4.60%
Equity beta	0.804	0.66
Nominal cost of equity (post tax)	8.11%	6.49%
Nominal cost of equity (pre tax)	10.47%	7.42%
Notional cost of debt	4.47%	4.93%
Debt premium over risk free rate	1.36%	1.5%
Gearing	40.05%	40%
Marginal tax rate	22.50%	12.5%
Nominal pre-tax WACC	8.07%	6.42%

[57] C(2019) 3426 final

6.33 It should be noted that if a tax rate of 12.5% were applied to the Portuguese WACC estimation the nominal pre-tax WACC would change from 8.07% to c. 7.35%. Having compared the parameters ComReg considers that its proposed value remains appropriate.

Eurozone comparator – Slovenia

6.34 In 2018 the European Commission also responded to a Slovenian fixed line WACC notification[58]. In its letter of 26 September 2018 the European Commission listed the parameters used by AKOS to estimate the WACC.

6.35 A comparison of these parameters and final WACC estimation compared to ComReg's preliminary view is set out below.

Table 14 Comparison between Slovenian fixed line WACC & ComReg estimate

Parameter	Slovenia	ComReg preliminary view
Risk free rate	2.78%	3.43%
Equity risk premium	5.71%	4.60%
Equity beta	0.76	0.66
Nominal cost of equity (post tax)	7.12%	6.49%
Notional cost of debt	4.05%	4.93%
Debt premium over risk free rate	1.27%	1.5%
Gearing	34.28%	40%
Marginal tax rate	19%	12.5%
Nominal pre-tax WACC	7.16%	6.42%

6.36 It should be noted that if a tax rate of 12.5% were applied to the Slovenian WACC estimation the nominal pre-tax WACC would change from 7.16% to c. 6.74%. Having compared the parameters ComReg considers that its proposed value remains appropriate.

[58] C(2018) 6369 final

Q. 5	Do you agree with ComReg's proposed approach to estimating the WACC specific to the fixed line telecommunications sector? Please explain the reasons for your answer, in particular your views on the specific parameters used. Please clearly indicate the relevant paragraph numbers to which your comments refer, along with all relevant evidence and argumentation supporting your views.

7 Broadcasting (Market A and Market B)

7.1 In 2013 ComReg conducted a market analysis on the market for broadcasting transmission services in Ireland[59]. In that review, 2rn and RTÉ were found to have SMP in the following markets:

- 2rn – Wholesale access to national terrestrial broadcast transmission services (“Market A”); and

- RTÉ – Wholesale access to digital terrestrial television (“DTT”) multiplexing services (“Market B”)

7.2 This chapter sets out ComReg’s assumptions and preliminary proposals in relation to key determinants of the WACC for a hypothetical efficient broadcaster. This WACC will be an input into the pricing decisions for setting tariffs in Market A and Market B.

7.3 This chapter also examines whether a separate WACC should be estimated for Markets A and B. The broadcasting sector specific parameters, such as gearing, for a hypothetical efficient broadcaster are then estimated. The chapter also details the estimation of asset and equity betas for a broadcaster in the Irish market with an efficient capital structure.

7.4 Finally, this chapter identifies the chosen methodology for estimating a debt premium for a hypothetical efficient broadcaster and in turn provides an estimated cost of debt.

The WACCs in Market A and Market B

7.5 Based on the Europe Economics Technical Report[60] ComReg has considered that the WACCs for Market A and Market B should be estimated on the same basis. The evidence considered consisted of previous regulatory WACC estimations in the broadcasting sector in Europe.

7.6 Based on the Europe Economics Technical Report ComReg is of the preliminary view that one WACC should apply to both Market A and Market B for the following reasons:

- There is no regulatory precedent for estimating separate WACCs in Market A and Market B. Both the United Kingdom and Sweden estimate a WACC for broadcasting without differentiating between Market A and Market B[61];

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[59] *Market Review: Broadcasting Transmission Services in Ireland”, Response to Consultation and Decision,* ComReg Document 13/71, Decision D11/13, dated 26 July 2013
[60] See section 7.1 of Europe Economics Technical Report.
[61] See section 7.2 of Europe Economics Technical Report.

- There is a lack of pure play DTT operators. Among the few[62] publicly listed DTT multiplex operators (e.g. ITV in the UK), DTT multiplexing forms a small part of its diverse operations making it difficult to confidently estimate a separate WACC in Market B; and

7.7 On this basis, Europe Economics proposes that a single WACC is appropriate for both Market A and Market B.

7.8 ComReg agrees with this view. There is limited available information upon which the separate WACCs could be estimated. Furthermore, following the assessment of international evidence, ComReg has not encountered any persuasive evidence indicating that there is a difference in the exposure to systematic risks between Market A and Market B. In addition, in excess of 90% of the costs incurred in Market B are derived from Market A. Therefore, while Market A and Market B are separate markets they are nonetheless vertically related and there is a close relationship between the two.

7.9 ComReg is therefore of the preliminary view that the same WACC should be applied in both Market A and Market B and be estimated for a hypothetical efficient broadcaster.

Gearing for broadcasting

7.10 In estimating gearing, the Europe Economics Technical Report examined recent regulatory decisions of European regulators that opted for a notional gearing approach[63]. In such instances, regulatory agencies have relied on the gearing levels of tower and mast companies, integrated telecommunications operators and utility operators. Applying this approach to an Irish context suggests that notional gearing level in the broadcasting sector should be within the range of 25% to 55%.

7.11 There are relatively few publicly listed companies that can be considered as suitable comparators to a company operating in the broadcasting sector. Europe Economics therefore examine gearing levels of companies that operate in the towers and masts sector, for which market data is available. Europe Economics has selected companies that it deems to be the most relevant comparators to a hypothetical efficient broadcaster.

[62] For operators such as BBC in the UK or TDF Group in France market data is not available as they are either state-owned or privately owned.
[63] See section 7.3 of Europe Economics Technical Report

7.12 Gearing of these companies (in the towers and masts sector) has generally been between 20% and 40%[64]. However, companies with investment grade credit rating (such as Baa3 by Moody's rating or BBB by S&P's rating) tend to have gearing levels at the lower end of this range.

7.13 Finally, the assessment of notional gearing of companies operating in the broadcasting sector indicated the range of 25% to 55%[65].

7.14 Europe Economics conclude by selecting a preliminary notional gearing of 25%, with which ComReg concurs.

7.15 ComReg notes that this point estimate for gearing is lower than notional gearing adopted in previous regulatory decisions in other European countries. However, more weight is placed on the observed gearing levels of comparators with investment grade ratings. As the gearing of these companies is below 30%, notional gearing of 25% is chosen for estimating the broadcasting WACC in Market A and Market B.

7.16 Having analysed Europe Economics' Technical Report and for the reasons outlined above, ComReg's preliminary view is that, for the purposes of the broadcasting WACC estimation, a notional gearing approach should be used with a point estimate of 25% being appropriate.

Asset beta for broadcasting

7.17 The asset beta is estimated based on evidence from regulatory precedent and comparator companies. Regulatory precedent suggests a range of 0.49 to 0.65 for the asset beta. Europe Economics Technical Report[66] considers two year asset betas for tower and mast companies (which are used as the most relevant comparators) indicate the relevant range of 0.3 to 0.5, which are similar to those of fixed line companies.

7.18 Europe Economics examine the aforementioned evidence and propose the range of 0.3 to 0.5 with a point estimate of 0.4 for the asset beta of a hypothetical efficient broadcaster. In determining this range Europe Economics mostly rely on evidence based on the two year asset betas of comparator companies.

[64] Excluding periods when financial crisis and the sovereign crisis in Italy were prevailing, thus affecting gearing levels of examined companies.
[65] See Table 7.1 of Europe Economics Technical Report
[66] See section 7.5 of Europe Economics Technical Report.

7.19 ComReg is of the preliminary view that the point estimate of 0.4 for the asset beta of a hypothetical efficient broadcaster is appropriate. The approach of estimating asset beta is based on several sources of evidence and is in line with approaches taken by other European regulators. The reliance on the various sources of information produces a range for the asset beta that is rigorous and evidence-based. The value of this comprehensive approach is that each source of information acts as a separate data point in the analysis while providing a cross-check on the other results.

7.20 Having analysed Europe Economics' Technical Report and for the reasons outlined above, ComReg's preliminary view is that, for the purposes of the broadcasting WACC estimation, an unlevered beta point estimate of 0.4 should be used.

Proposed estimation of equity beta

7.21 As noted in Annex 6 of this document, the equity beta describes the analysed stock's exposure to systematic risks. A lower sensitivity to systematic risks is rewarded by a lower cost of equity.

7.22 The preliminary equity beta is estimated to be 0.53, resulting from an estimated asset beta of 0.4, a debt beta of zero and notional gearing of 25%.

Equity beta = Asset Beta / (1 – Gearing)

7.23 An equity beta of 0.53 is therefore derived from the following:

Equity beta = 0.4 / (1 – 0.25)

The Proposed Cost of Equity

7.24 The preliminary nominal post tax cost of equity is 5.88%. It is measured by multiplying the equity beta by the ERP and then adding the nominal risk free rate. In order to calculate a nominal pre-tax WACC it is then necessary to derive a nominal pre-tax cost of equity. This equates to the nominal post tax cost of equity divided by (1 minus the tax rate) i.e. 5.88%/(1-0.125). The preliminary nominal pre-tax cost of equity (r_e) is therefore equal to 6.72%.

Table 15 Nominal pre-tax cost of equity for Broadcasting (Market A and Market B)

	Parameter	Rate	
A	Tax rate	12.5%	
B	Real risk-free rate	2.10%	
C	Inflation	1.3%	
D	Nominal risk-free rate	3.43%	(1+B)*(1+C)-1
E	Equity risk premium	4.60%	
F	Equity Beta at notional gearing	0.53	
G	Nominal post-tax cost of equity	5.88%	D + (F*E)
H	Nominal pre-tax cost of equity	6.72%	G/(1-A)

Source: Europe Economics' Technical Report

Broadcasting cost of debt

7.25 Europe Economics in its analysis of the debt premium for the broadcasting sector noted that there was limited publically available information in relation to the debt of "towers and masts" type. The information that is most readily available is for US companies.

7.26 As this information is not readily available for towers and mast companies in the Eurozone, Europe Economics Technical Report has compared the corporate bonds of US towers and mast companies to those of the US government[67]. A comparison can also be made to the fixed line debt premium. Europe Economics has estimated the premium to be 1.50%. This compares to a debt premium of 1.45% in the 2014 Decision.

7.27 ComReg is of the preliminary view that a debt premium of 1.50% is appropriate.

7.28 Combining the nominal risk free rate of 3.43% gives a nominal pre-tax cost of debt of 4.93%.

$$r_{debt} = r_f + \textit{debt premium},$$

$$4.93\% = 3.43\% + 1.50\%$$

7.29 Having analysed Europe Economics' Technical Report and for the reasons outlined above, ComReg's preliminary view is that, for the purposes of the Broadcasting (Market A / Market B) WACC estimation the forward looking nominal pre-tax cost of debt should be estimated as 4.93%.

[67] See section 7.4 of the Europe Economics' Technical Report

Proposed WACC for a hypothetical efficient Broadcaster

7.30 The construction of the overall nominal pre-tax WACC requires point estimates from each of the parameter ranges presented. The point estimates are not necessarily taken from the midpoint of the range for reasons already explained above and, as such, high and low points of parameter ranges are used to construct an overall WACC range[68]. The ERP can be expected to move in the opposite direction to the risk free rate so that total market returns are more stable than their components.

Table 16 WACC for Broadcasting (Market A and B)

	Low	High	Point Estimate
Gearing (%)	25%	25%	25%
Tax rate (%)	12.5%	12.5%	12.5%
Real risk-free rate (%)	1.7%	2.2%	2.1%
Inflation (%)	1.2%	1.8%	1.3%
Nominal risk-free rate (%)	2.82%	4.04%	3.43%
Equity risk premium (%)	4.30%	4.75%	4.60%
Equity Beta at notional gearing	0.40	0.67	0.53
Nominal post-tax cost of equity (%)	4.54%	7.21%	5.88%
Nominal pre-tax cost of equity (%)	5.19%	8.24%	6.72%
Debt Premium (%)	1.40%	1.80%	1.50%
Nominal pre-tax cost of debt (%)	4.22%	5.84%	4.93%
Nominal Vanilla WACC (%)	4.46%	6.86%	5.64%
Nominal pre-tax WACC (%)	4.94%	7.64%	6.27%

Source: Europe Economics' Technical Report

[68] Table 16 presents the WACC as if calculated on the basis of the lowest and highest parameters. However, in calculating the point estimate it should be noted that the lowest or highest risk free rate and ERP cannot be used simultaneously as they both move inversely to each other.

7.31 Having analysed Europe Economics' Technical Report and for the reasons outlined above, ComReg's preliminary view is that a nominal pre-tax WACC of 6.27% should be used in the broadcasting sector. This is based upon the following parameters specific to broadcasting (Table 17):

Table 17 Broadcasting parameters - ranges & point estimates

Parameter	Range	Point Estimate
Asset beta	0.30 to 0.50	0.40
Gearing	25%	25%
Debt premium	1.40% to 1.80%	1.50%

Q. 6 Do you agree with ComReg's proposed approach to estimating the WACC specific to Market A and Market B in the broadcasting sector? Please explain the reasons for your answer, in particular your views on the specific parameters used. Please clearly indicate the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views.

8 Other issues regarding the WACC

8.1 As outlined in Section 1.9 above there are a number of objectives that ComReg must take into account when estimating an appropriate WACC. These policy considerations involve the need to create appropriate incentives for future investment in telecoms and broadcasting infrastructure in Ireland.

8.2 ComReg is aware of a number of other possible mechanisms at its disposal for the purposes of promoting investment incentives and public interest considerations going forward.

8.3 These are addressed under the following headings:

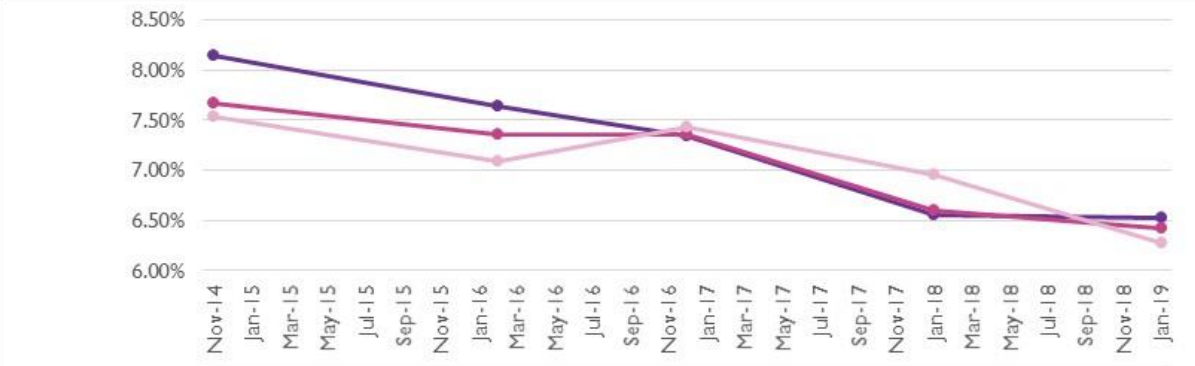
- Frequency of WACC reviews;
- Aiming up;
- Implementation of new WACCs;
- Should there be differentiated WACCs within the fixed line telecommunications sector.

Frequency of WACC reviews

8.4 ComReg is of the preliminary view that the WACC estimation would be based on the methodologies discussed in this consultation and these would remain in force until a new methodology was determined. However, ComReg is of the preliminary view that it may be desirable to update the parameters underpinning the WACC calculations more frequently than has been the practice up to now, if possible annually, using the methodologies ultimately decided upon as part of the consultation. These updated parameters may be consulted on as part of a separate price review.

8.5 As can be seen in Figure 1 there has been significant movement in the WACCs since the 2014 Decision. ComReg is of the preliminary view that updating WACC estimations will help ensure that appropriate WACCs are used for subsequent price reviews.

Figure 1: Evolution of WACCs since the 2014 Decision



	Nov-14	Feb-16	Dec-16	Jan-18	Jan-19
Mobile	8.14%	7.64%	7.34%	6.55%	6.53%
Fixed-line	7.67%	7.35%	7.36%	6.60%	6.42%
Broadcasting	7.53%	7.09%	7.43%	6.96%	6.27%

Source: Europe Economics Technical Report

Q. 7 Do you agree or disagree with ComReg's preliminary view that WACC parameters could be updated more frequently and consulted on separately (as part of a pricing consultation) as opposed to conducting a full WACC methodology review and consultation? Please clearly indicate the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views.

Aiming Up

8.6 In the 2014 Decision ComReg explicitly "aimed-up" three key parameters:

- Risk free rate;
- Asset beta; and
- Debt premium.

8.7 The purpose of aiming up was to reflect the asymmetry of consequences between setting the WACC too low and setting it too high. In the 2014 Decision ComReg considered that the negative consequences of setting the WACC too low are potentially greater that the negative consequences of setting it too high[69].

8.8 The use of aiming-up had the effect of increasing the WACC by the following amounts:

[69] In the 2014 Decision aiming up was estimated using a Monte Carlo simulation

Table 18 Aiming up adjustments from 2014

	Mobile	Fixed Line	Broadcasting
Pre-aimed up WACC	8.14%	7.67%	7.53%
Aiming-up adjustment	0.49%	0.51%	0.58%
Post-aimed up WACC	8.63%	8.18%	8.11%

8.9 ComReg has calculated the impact of aiming-up (if it were applied) on the preliminary WACC estimates in the following table:

Table 19 Impact of aiming-up on proposed rates

	Mobile	Fixed Line	Broadcasting
Pre-aimed up WACC	6.53%	6.42%	6.27%
Aiming-up adjustment **(if applied)**	0.25%	0.25%	0.37%
Post-aimed up WACC	6.78%	6.67%	6.64%

8.10 As noted above, the main reason for using aiming up is due to the asymmetry of consequences between setting it too low and too high. Where WACCs are set for several years there is a risk that the WACC in general will increase or decrease over that time period. In such a case prudence would suggest using aiming up to mitigate the consequences of the WACC increasing.

8.11 If WACCs were revised more frequently than at present, there would be less risk of using a WACC that was either too low or too high in a pricing decision. The frequency of WACC reviews is discussed in paragraph 8.4.

8.12 Based on the data available to it ComReg is of the preliminary view that aiming-up should not be applied to these three WACC estimations.

Q. 8 Do you consider that the risk free rate, asset beta and debt premium should be aimed up? Please clearly indicate the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views

Implementation of new WACCs

8.13 ComReg has considered the financial impact upon the three sectors should the proposed WACCs be implemented.

8.14 The following are possible options for implementing the WACC in price controls:

- Option 1 – Apply the revised WACC with immediate effect to all cost oriented prices;
- Option 2 – Apply the revised WACC only as new price controls are imposed;
- Option 3 – Apply the revised WACC as new price controls are imposed. Furthermore the revised WACC should be applied immediately in assessing compliance with cost oriented prices including any submissions by regulated entities.

Option 1

8.15 Option 1 would involve changing existing and new tariffs for any revised WACC. This was discussed as a possible option in ComReg Decision D11/18 (see section 8.22 below). ComReg is of the preliminary view that this method may not be appropriate as arguably, other parameter changes should be considered in tandem.

Option 2

8.16 Previously ComReg updated the WACC every three to five years. This revised WACC was then applied to new price controls coming into force after the update.

8.17 Given the trajectory of the WACC as shown in Figure 1, ComReg is of the preliminary view that this method (Option 2) has a potential shortcoming. There is a risk that regulated tariffs could be overstated or understated in the period between the imposition of new price controls and that this period might be relatively extended. Therefore SMP service providers, subject to cost oriented price controls, could be over or under compensated for a period of time, longer than necessary.

Option 3

8.18 Option 3 involves the application of the revised WACC to subsequent price controls that come into effect after this review and reflects ComReg's proposal that more frequent WACC reviews are undertaken. Option 3 would apply to the WACCs proposed in this consultation and also to any future revisions.

8.19 This would mean that any cost oriented prices calculated after this WACC review will apply the revised WACC as a parameter in their calculation.

8.20 Furthermore, when assessing its compliance with its cost orientation price control obligations the SMP service providers, subject to cost oriented price controls would apply the revised WACC in any submissions or calculations (where considered necessary). This would apply to cost oriented tariffs that were in force prior to the revision of the WACCs.

Q. 9	Do you agree or disagree with ComReg's preliminary view that Option 3 is the most appropriate method to implement the revised WACC? Please clearly indicate the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views.

8.21 ComReg has estimated the financial impact on the three sectors should the proposed WACCs be implemented.

Fixed line communications.

8.22 In ComReg Decision D11/18 it was noted that[70]:

"[…] ComReg plans to review the WACC rate, with a consultation planned for Q1 2019. ComReg reserves the right to require prices to be updated depending on the outcome of any decision ComReg may take on the WACC rate as a result of that consultation process"

8.23 In order to demonstrate the possible revenue impact on Eircom for changes in the WACC, ComReg is adopting the following approach:

- It is assessing the impact of a change in WACC on "headline" tariffs;
- To these it will take a forward looking view using volumes previously reported on by Eircom in its Historical Separated Accounts as at 30 June 2018;

8.24 The headline tariffs that ComReg considers need to be assessed are:

- WLR[71]
- Markets 3a/3b – cost oriented broadband prices

8.25 While there are several other cost oriented regulated tariffs across all markets, ComReg considers that these are the most significant cost oriented tariffs.

8.26 These estimations are done without aiming-up, adjusting the tax rate to the effective tax rate or amending any other underlying assumptions.

[70] Footnote 60 of D11/18 (page 43)
[71] Wholesale line rental.

8.27 For WLR, ComReg estimates that the revenue impact on Eircom of a reduction in the WACC from 8.18% to 6.42% would be c. €8.5m per annum and for cost oriented broadband prices, ComReg considers that the revenue impact would be of a similar amount.

8.28 ComReg intends to commence a review of the costs associated with Eircom's WLR service and Eircom's adherence to its cost orientation obligation[72]. One element of this review would be the inclusion of the WACC of 6.42% as proposed in this document. Other parameters, such as volume forecasts, operating costs and various assumptions will also be reviewed.

8.29 In 2018 ComReg completed a review of Eircom's broadband prices, including virtual unbundled access. These prices include a WACC of 8.18%. During the period of the price control, similar to that for WLR, ComReg may assess Eircom's adherence to its cost orientation obligations. However, a review is not envisaged at this time.

8.30 It should be noted, that while ComReg may conduct reviews of cost oriented tariffs during the period of a price control it is for Eircom to ensure that it adheres to its cost orientation obligation. Where it considers it is either under recovering or over recovering its costs it should inform ComReg of this fact so that tariffs can be adjusted where considered necessary.

Broadcasting Market A

8.31 ComReg considers that the impact on 2rn of a reduction in the WACC from 8.11% to 6.27% would be c. €600,000. While in 2018, 2rn made a return on its regulated activities of €3.6m (8.18%) this needs to be assessed in the context of Appendix 1 of its accounts where for several years the return was below the WACC[73]. Over a five year period to December 2018, 2rn earned, on average, €3.4m per annum on an average mean capital employed of €47.4m (7.2%).

Broadcasting Market B

8.32 While ComReg has determined a WACC for Market B it does not consider that there is a direct financial impact on RTÉ at this time[74]. This is because by the time any revised WACC comes in to force RTÉ is likely to have a fully depreciated asset base as ComReg understands that further significant investment is not considered likely for the foreseeable future.

Mobile Sector

8.33 ComReg has assessed that the potential impact on the mobile sector of amending the WACC from 8.63% to 6.56% would be immaterial.

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[72] See European Commission letter C(2018) 6788 final

[73] http://www.2rn.ie/wp-content/uploads/2019/05/REGULATED-ACCOUNTS-MARKET-A-2018.pdf

[74] There is an indirect financial impact through the Market A tariffs charged to Market B.

Should there be differentiated WACCs within the fixed line telecommunications sector

8.34 ComReg usually assesses the WACC at a sector-wide level. However, companies commonly make investment decisions at a project or activity level (for instance individual services within markets or retail activities) that take into account differences 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. ComReg is therefore exploring a number of possible measures that may be used, if appropriate, to promote efficient investment incentives. One of these measures is the possibility of setting different levels of WACC for certain activities or assets carrying more systematic risk than is currently reflected in asset betas for the sector. This is also being considered by the European Commission[75].

8.35 For investment in the roll-out of fibre to the home there is currently difficulty in determining asset betas as there are insufficient pure-play fibre operators from which to estimate appropriate asset betas. This will likely evolve over time as more fibre is deployed and copper retired. Hence it would be expected that the increased use of fibre will be reflected in the asset betas for fixed line telecommunications. For now, though, trying to assess pure-play fibre roll-out betas is problematic

8.36 Another possibility for promoting efficient investment may be the use of project specific risk premia. Many projects have their own project specific risks. For example, investments in very high capacity networks ("VHCN") are likely to have different risk profiles to legacy investments. However, some risks may be diversifiable.

8.37 For fibre assets the European Commission recommendation on "regulated access to Next Generation Access Networks[76]" noted:

> *"NRAs should ensure that access prices reflect the costs effectively borne by the SMP operator, including, where appropriate, a higher risk premium to reflect any additional and quantifiable risk incurred by the SMP operator".*

8.38 ComReg discusses below the possible differentiation of WACCs under the headings:

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[75] https://ec.europa.eu/digital-single-market/en/news/targeted-consultation-guidance-cost-capital-eu-electronic-communications-regulators

[76] 2010/572/EC - https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010H0572&from=EN

- Fibre to the Home ("FTTH");
- Fibre to the Cabinet ("FTTC");
- Assets relating to Civil Engineering Infrastructure ("CEI").

FTTH

8.39 FTTH rental charges are currently priced on a retail minus basis. This means that Eircom is free to determine the wholesale charge for FTTH so long as it does not cause a margin squeeze at the retail level. This pricing mechanism has been imposed by ComReg as the rollout of FTTH is uncertain. To apply cost orientation at this stage could be considered premature as the uptake in demand at both a wholesale level and a retail level is unknown.

8.40 Therefore the application of a WACC premium to FTTH rental currently does not apply. This is described in paragraph 2.22 of ComReg document No. 18/95[77]:

"For FTTH based VUA a margin squeeze obligation should continue to apply such that Eircom should maintain a sufficient economic space between FTTH based VUA (in the WLA Market) and FTTH based NGA Bitstream (in the WCA Markets)"

8.41 Further text is included at paragraph 2.35 of ComReg document No. 18/95:

In summary, the only specific standalone retail margin squeeze obligation that shall apply going forward relates to FTTH based services.

8.42 However, should FTTH rental charges become cost oriented ComReg is seeking the views of operators as to how a risk premium, if any, should be determined if they are calculated.

FTTC

8.43 In paragraph 7.1349 of ComReg document No. 18/94[78], ComReg notes that:

"In the context of Eircom's FTTC (or EVDSL) deployment, ComReg considers that there is no need to apply a risk premium"

8.44 Therefore, ComReg does not consider that a risk premium need be added for FTTC deployment.

[77] Pricing of wholesale broadband services – D11/18
[78] Market Review – D10/18

8.45 When determining the level of risk associated with cost oriented prices ComReg is of the preliminary view that there may be other factors, in addition to the WACC, that need to be considered (for example the potential take-up of services and its timeframe).

Assets relating to Civil Engineering Infrastructure ("CEI")

8.46 Certain CEI assets owned by Eircom may be used as part of the National Broadband Plan ("NBP"). These are likely to be primarily ducts and poles.

8.47 Currently these are subject to the same WACC as other regulated assets of Eircom.

8.48 ComReg has not yet determined whether a separate WACC should apply to CEI associated with the NBP or if the conditions and systematic risks are different to those of non-CEI assets. This is because the final structure of the NBP has yet to be determined and this may influence underlying assumptions.

8.49 Once this has been determined ComReg may revisit the estimation of a WACC for CEI in the context of the NBP.

8.50 ComReg considers, however, that it is important to establish the principles for estimating a WACC associated with certain CEI assets.

8.51 For FTTH and CEI ComReg would welcome views on the possibility of implementing incentive-based mechanisms whereby any particularly systematically risky or state-backed capital-intensive projects could be assessed on an individual basis to determine if a modification of the average WACC might be appropriate. In considering this issue ComReg will be mindful of the need to ensure efficient investment. It will also be highly cognisant of the impact on alternative operators and their incentive to invest and the impact on competition more generally.

Q. 10 What principles do you think should be adopted, if any, for differentiating WACCs? What principles should be adopted, if any, to decide if project specific risks need to be taken into account? Please clearly indicate the relevant paragraph numbers to which your comments refer, along with all relevant factual evidence supporting your views.

Q. 11 Are there any aspects that respondents consider important and that have not been covered under the previous questions? Please explain the reasons for your answer, clearly indicating the relevant paragraph numbers to which your comments refer, along with evidence and argumentation supporting your views.

9 Submitting comments

9.1 All comments are welcome to the consultation however it would make the task of analysing responses easier if comments were referenced to the relevant question numbers and/or paragraphs from this document.

9.2 The consultation period will run from 31 May 2019 to 12 July 2019 during which ComReg welcomes written comments on any of the issues raised in this paper.

9.3 Having analysed and considered the comments received, ComReg will review the main proposals set out in the consultation, amend if necessary in light of representations received and will then notify the draft measure to the European Commission, the NRAs of other Member States and BEREC, pursuant to Regulation 13 of the Framework Regulations. ComReg will take utmost account of any comments received from the European Commission, BEREC and NRAs of other Member States and will adopt and publish the final decision.

9.4 In order to promote further openness and transparency ComReg will publish all respondents' submissions to this consultation, subject to the provisions of ComReg's guidelines on the treatment of confidential information in ComReg Document No. 05/24. We would request that electronic submissions be submitted in a format that allows them to be appended into the ComReg submissions document for publishing electronically.

9.5 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.

9.6 Respondents should be aware that all non-confidential responses to this Consultation will be published, subject to the provisions of ComReg's guidelines on the treatment of confidential information[79]. Similarly, any associated correspondence received by ComReg from Service Providers in the course of the consultation process may also be published.

9.7 When submitting a response to this consultation that contains confidential information, respondents must choose one of the following options:

9.8 **A.** Submit both a non-confidential version and a confidential version of the response. The confidential version must have all confidential information clearly marked and highlighted in accordance with the instruction set out below. The separate non-confidential version must have actually redacted all items that were marked and highlighted in the confidential version.

9.9 OR

[79] See ComReg Document 05/24, "Guidelines on the treatment of confidential information", March 2005.

9.10 **B.** Submit only a confidential version and ComReg will perform the required redaction to create a non-confidential version for publication. With this option, respondents must ensure that confidential information has been marked and highlighted in accordance with the instructions set out below. Where confidential information have not been marked as per our instructions below, then ComReg will not create the non-confidential redacted version and the respondent will have to provide the redacted non-confidential version in accordance with option A above.

9.11 For ComReg to perform the redactions under Option B above, respondents must mark and highlight all confidential information in their submission as follows:

9.12 a. Confidential information contained within a paragraph must be highlighted with a chosen particular colour,

9.13 b. Square brackets must be included around the confidential text (one at the start and one at the end of the relevant highlighted confidential information),

Annex: 1 Draft decision instrument – Mobile Telecommunications

Q. 12 Do you believe that the draft text of the proposed decision instrument for Mobile Telecommunications is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.

1. STATUTORY POWERS GIVING RISE TO THIS DECISION

1.1. This Decision Instrument is made by the Commission for Communications Regulation ("ComReg") and relates to the Market for wholesale voice call termination on individual mobile networks identified as Market 2 by the European Commission in its 2014 Recommendation ("Market 2 of the 2014 Recommendation") and as analysed, for this jurisdiction, by ComReg in ComReg Decision D10/19 and applies to any subsequent review undertaken by ComReg of Market 2 of the 2014 Recommendation.

1.2. This Decision Instrument is made:

(i) Pursuant to and having regard to the functions and objectives of ComReg as set out in Sections 10 and 12 of the Communications Regulation Act 2002 (as amended), Regulation 6(1) of the Access Regulations and Regulation 16 of the Framework Regulations; and

(ii) Having, where appropriate, pursuant to Section 13 of the Communications Regulation Act 2002 (as amended), complied with Ministerial Policy Directions; and

(iii) Having taken the utmost account of the European Commission's Termination Rates Recommendation; and

(iv) Pursuant to and having had regard to the designation of the SMP Undertakings as having SMP on the Relevant Markets under the provisions of Regulations 25, 26 and 27 of the Framework Regulations, and the obligations imposed on the appropriate Relevant Markets pursuant to Regulation 13 of the Access Regulations; and

(v) Having had regard to the reasoning and analysis set out in ComReg Decision No. D10/19*;* and

(vi) Having had regard to the reasoning and analysis set out in consultation and draft decision entitled "*Review of Cost of Capital - Mobile Telecommunications - Fixed Line Telecommunications - Broadcasting (Market A and Market B)*" (ComReg Document No. [THIS DOCUMENT NO.]) and having considered submissions received from interested parties in response to the consultation and draft decision (ComReg Document No. [THIS DOCUMENT NO.]) following public consultation pursuant to Regulation 12 of the Framework Regulations; and

(vii) Having notified the draft measure and the reasoning on which same is based to the European Commission, BEREC and the national regulatory authorities in other EU Member States in accordance with Regulation 13 of the Framework Regulations and having taken the utmost account, pursuant to Regulation 13(6) of the Framework Regulations, of any comments made by the European Commission, BEREC and any national regulatory authority in another EU Member State in accordance with Article 7(3) of the Framework Directive; and

(viii) Pursuant to Regulations 8, 13 and 18 of the Access Regulations.

1.3. The provisions of the consultation and draft decision (ComReg Document No. [THIS DOCUMENT NO.]) and the "[Title of Response to Consultation and Decision]", (Document No. XX/XX), (ComReg Decision No. XX/XX) shall, where appropriate, be construed consistently with this Decision Instrument. For the avoidance of doubt, however, to the extent that there is any conflict between a decision instrument dated prior to the Effective Date (as defined in Section 2.1 of this Decision Instrument) and this Decision Instrument, this Decision Instrument shall prevail.

PART I – GENERAL PROVISIONS

2. DEFINITIONS AND INTERPRETATION

2.1. In this Decision Instrument, unless the context otherwise suggests:

"Access Regulations" means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011) as may be amended from time to time or replaced with equivalent effect;

"BEREC" means the Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EU) 2018/1971 of the European Parliament and of the Council of 11 December 2018 establishing the Body of European Regulators for Electronic Communications (BEREC) and the

Agency for Support for BEREC (BEREC Office), amending Regulation (EU) 2015/2120 and repealing Regulation (EC) No. 1211/2009;

“Communications Regulation Act 2002 (as amended)” means the Communications Regulation Act 2002 (No. 20 of 2002) (as amended);

“ComReg” means the Commission for Communications Regulation, established under Section 6 of the Communications Regulation Act, 2002 (as amended);

“ComReg Decision D15/14” means the decision contained in ComReg Document No. 14/136 entitled “*Cost of Capital: Mobile Telecommunications – Fixed Line Telecommunications – Broadcasting (Market A and Market B) – Response to Consultation and Decision*”, dated 18 December 2014;

“ComReg Decision D10/19” means ComReg Document 19/47 entitled “Market Review – Fixed Voice Call Termination and Mobile Voice Call Termination, Response to Consultation and Decision”, ComReg Document 19/47, Decision D10/19, dated 23 May 2019;

“ComReg Document 17/90r” means ComReg Document 17/90r entitled “Market Review – Fixed Voice Call Termination and Mobile Voice Call Termination, Consultation and Draft Decision”, dated 2 November 2017;

“ComReg Document XX/XX” means ComReg Document [THIS DOCUMENT No.] entitled “*Review of Cost of Capital, Mobile Telecommunications, Fixed Line Telecommunications, Broadcasting (Market A and Market B)*”, dated DD Month YYYY;

“Effective Date” means the date set out in Section 7.1 of this Decision Instrument;

“Framework Directive” means Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, as amended by Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009;

“Framework Regulations” means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011), as may be amended from time to time or replaced with equivalent effect;

“Lycamobile” means Lycamobile Ireland Limited and its subsidiaries, and any undertaking which it owns or controls and any undertaking which owns or controls it, and its successors, affiliates and assigns;

"Meteor" means Meteor Mobile Communications Limited, which is the mobile arm of the eir Group (which includes Eircom Limited and Eircom Holdings (Ireland) Limited), trading under the business name eir Mobile, and for the purpose of this Decision Instrument includes its subsidiaries, and any undertaking which it owns or controls and any undertaking which owns or controls it, and its successors, affiliates and assigns[80];

"Ministerial Policy Directions" for the purposes of this Decision Instrument means Policy Directions made by Dermot Ahern TD, then Minister for Communications, Marine and Natural Resources, dated 21 February 2003 and 26 March 2004;

"pre-tax WACC formula" means the formula, described in Chapter 3.4 of ComReg Document XX/XX [THIS DOCUMENT No.] defined as:

$$WACC_{pre-tax} = g * r_{debt} + (1 - g) * (\frac{r_{equity}}{(1 - t)})$$

Where:

- *g = gearing, which is measured as follows: net debt ÷ (net debt + equity)*
- *r_{debt} = cost of debt. The cost of debt is equal to the sum of two components, the 'risk free rate' plus any debt premium applied to the debt incurred i.e.*

  (r_f + debt premium).
- *Equity risk premium or ERP. This is the additional return over the risk free rate demanded by investors for investing in the entire equity market.*
- *r_{equity} = according to the capital asset pricing model or CAPM, the cost of equity of a stock is obtained by adding the risk free rate to the product of the equity beta and the equity risk premium i.e. (r_f + ß * ERP).*
- *r_f= nominal risk-free rate which is the theoretical rate at which investors can borrow and lend funds with zero risk.*
- *ß = equity beta. This is a measure of the stock's exposure to systematic risks. The equity beta indicates the sensitivity of the returns on the stock that is being examined to the entire equity market.*
- *t = tax rate.*

[80] Meteor announced in July 2017 that is branding would be retired and replaced with Eircom branding from September 2017. At present Meteor is the licensed Mobile Service Provider and so for the purposes of this Decision Instrument, ComReg has continued to refer to Meteor, however this position should be understood to apply to Eircom Limited, or some other Undertaking, should it become a successor or assign of Meteor or in any other way the appropriate Undertaking to be designated with SMP.

“the Relevant Markets” are the markets (relating to the market for voice call termination on individual mobile networks as identified by the European Commission in the 2007 Recommendation) as defined by ComReg in Section 4.2 of the Decision Instrument annexed to ComReg Decision No. D10/19 and in which the SMP Undertakings are designated as having SMP under the provisions of Regulations 25, 26 and 27 of the Framework Regulations and any market(s) on which any further SMP Undertaking(s) is (are) subsequently identified in any review by ComReg of Market 2 of the 2014 Recommendation*;*

“the Termination Rates Recommendation” means the European Commission Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU (2009/396/EC) (OJ L124/67);

“the 2007 Recommendation” means the European Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 344, 28.12.2007, p65);

“the 2014 Recommendation” means the European Commission Recommendation of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 295, 11.10.2014, p.79);

“SMP” means significant market power, as the term is used in Regulation 25 of the Framework Regulations;

“SMP Undertaking(s)”, means those Undertakings currently designated with SMP under ComReg Decision D10/19 in respect of the Relevant Markets;

“Tesco Mobile” means Tesco Mobile Ireland Limited and its subsidiaries, and any undertaking which it owns or controls and any undertaking which owns or controls it, and its successors, affiliates and assigns;

“Three” means Three Ireland (Hutchison) Limited and its subsidiaries, and any Undertaking which it owns or controls and any undertaking which owns or controls it, and its successors, affiliates and assigns, which for the avoidance of doubt includes Three Ireland Services (Hutchison) Limited;

“Undertaking” has the meaning set out in Regulation 2 of the Framework Regulations;

“Virgin Media” means Virgin Media Ireland Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns;

“Vodafone” means Vodafone Ireland Limited and its subsidiaries, and any undertaking which it owns or controls and any undertaking which owns or controls it, and its successors, affiliates and assigns; and

“WACC” means the weighted average cost of capital.

3. SCOPE AND APPLICATION

3.1. This Decision Instrument applies to all operators designated as having SMP on the Relevant Markets. Those operators currently designated as having SMP are Lycamobile, Meteor, Tesco Mobile, Three, Virgin Media and Vodafone.

3.2. This Decision Instrument is binding upon all operators designated as having SMP on the Relevant Markets. Those operators currently designated as having SMP are Lycamobile, Meteor, Tesco Mobile, Three, Virgin Media and Vodafone and each of the designated SMP Undertakings shall comply with this Decision Instrument in all respects.

PART II – DECISION

4. WACC

4.1. A nominal pre-tax WACC of X%, calculated on the basis of the pre-tax WACC formula, will be used as a basis for allowing the SMP Undertakings a reasonable rate of return in the context of obligations imposed on the SMP Undertakings in the Relevant Markets relating to cost recovery and price controls pursuant to Regulation 13 of the Access Regulations and in accordance with Regulations 8 and 18 of the Access Regulations, including the setting of regulated wholesale prices.

4.2. Any obligations imposed on the SMP Undertakings relating to cost recovery and price controls (including regulated wholesale prices) prior to the Effective Date and calculated using a previous WACC set by ComReg shall not be affected by this decision and shall continue to have full force and effect.

PART III – FURTHER GENERAL PROVISIONS AND EFFECTIVE DATE

5. STATUTORY POWERS NOT AFFECTED

5.1. Nothing in this Decision Instrument shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation (in force prior to or after the Effective Date of this Decision Instrument).

6. MAINTENANCE OF OBLIGATIONS

6.1. Unless expressly stated otherwise in this Decision Instrument, all obligations and requirements contained in Decision Notices and Directions made by ComReg applying to the SMP Undertakings and in force immediately prior to the Effective Date of this Decision Instrument, continue in force and the SMP Undertakings shall comply with same.

6.2. If any Section(s), clause(s) or provision(s) or portion(s) thereof contained in this Decision Instrument is(are) found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that(those) Section(s), clause(s) or provision(s) or portion(s) thereof shall, to the extent required, be severed from this Decision Instrument and rendered ineffective as far as possible without modifying the remaining Section(s), clause(s) or provision(s) or portion(s) thereof of this Decision Instrument, and shall not in any way affect the validity or enforcement of this Decision Instrument or other Decision Instruments.

7. EFFECTIVE DATE

7.1. The Effective Date of this Decision Instrument shall be, unless otherwise expressly stated in this Decision Instrument, the date of its notification to the SMP Undertakings and it shall remain in force until further notice by ComReg.

GARRETT BLANEY

CHAIRPERSON

THE COMMISSION FOR COMMUNICATIONS REGULATION

THE […] DAY OF […] 2019

Annex: 2 Draft decision instrument – Fixed Line Telecommunications

Q. 13 Do you believe that the draft text of the proposed decision instrument for Fixed Line Telecommunications is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.

1. STATUTORY POWERS GIVING RISE TO THIS DECISION

1.1. This Decision Instrument is made by the Commission for Communications Regulation ("ComReg") and relates to fixed line telecommunications Markets in this jurisdiction ("the Markets") and as analysed by ComReg in ComReg Decision D10/19.

1.2. This Decision Instrument is made:

(i) Pursuant to and having regard to the functions and objectives of ComReg, as set out in Sections 10 and 12 of the Communications Regulation Act 2002, as amended, Regulation 6(1) of the Access Regulations and Regulation 16 of the Framework Regulations; and

(ii) Having, where appropriate, pursuant to Section 13 of the Communications Regulation Act 2002 (as amended), complied with Ministerial Policy Directions; and

(iii) Having taken the utmost account of the European Commission's Termination Rates Recommendation; and

(iv) Pursuant to and having had regard to the designation of Eircom as having significant market power on the Markets under the provisions of Regulations 25, 26 and 27 of the Framework Regulations and obligations imposed on Eircom pursuant to Regulations 11 and 13 of the Access Regulations in the Markets; and

(v) Pursuant to and having had regard to the designation of Other SMP Fixed Service Providers as having significant market power on the Markets under the provisions of Regulations 25, 26 and 27 of the Framework Regulations and obligations imposed pursuant to Regulation 13 of the Access Regulations and any Market(s) on which any further SMP Undertaking(s) is (are) subsequently identified in any review following this decision;

(vi) Having had regard to the reasoning and analysis set out in the consultation and draft decision entitled "Review of Cost of Capital - Mobile Telecommunications - Fixed Line Telecommunications - Broadcasting (Market A and Market B)" (ComReg Document No. [THIS DOCUMENT No.]) and having considered submissions received from interested parties in response to the consultation and draft decision (ComReg Document No. [THIS DOCUMENT No.]) following public consultation pursuant to Regulation 12 of the Framework Regulations; and

(vii) Having notified the draft measure and the reasoning on which same is based to the European Commission, BEREC and the national regulatory authorities in other EU Member States in accordance with Regulation 13 of the Framework Regulations and having taken the utmost account, pursuant to Regulation 13(6) of the Framework Regulations, of any comments made by the European Commission, BEREC and any national regulatory authority in another EU Member State in accordance with Article 7(3) of the Framework Directive; and

(viii) Having had regard to the reasoning and analysis set out in the papers containing and relating to ComReg Decision No. D06/07, ComReg Decision D06/08, ComReg Decision No. D08/10, ComReg Decision No. D12/14, ComReg Decision No. D15/14; ComReg Decision No. D05/15, ComReg Decision No. D10/18 and ComReg Decision D10/19; and

(ix) Pursuant to Regulations 8, 11, 13 and 18 of the Access Regulations.

1.3. The provisions of the consultation and draft decision (ComReg Document No. [THIS DOCUMENT No.]) and the "[Title of Response to Consultation and Decision]", (Document No. XX/XX), (ComReg Decision No. XX/XX) shall, where appropriate, be construed with this Decision Instrument. For the avoidance of doubt, however, to the extent that there is any conflict between a decision instrument dated prior to the Effective Date (as defined in Section 2.1 of this Decision Instrument) and this Decision Instrument, this Decision Instrument shall prevail.

PART I – GENERAL PROVISIONS

2. DEFINITIONS AND INTERPRETATION

2.1. In this Decision Instrument, unless the context otherwise suggests:

"Access Regulations" means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011) as may be amended from time to time or replaced with equivalent effect;

"Airspeed Communications" means Airspeed Communications Unlimited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns;

"BEREC" means the Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EU) 2018/1971 of the European Parliament and of the Council of 11 December 2018 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Agency for Support for BEREC (BEREC Office), amending Regulation (EU) 2015/2120 and repealing Regulation (EC) No. 1211/2009;

"Blueface" means Blue Face Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns;

"**BT Communications**" means BT Communications Ireland Limited and includes its subsidiaries, and any undertaking which it owns or controls, and any undertaking which owns or controls it and its successors and assigns. For the avoidance of doubt, BT Communications includes British Telecommunications plc which is the Undertaking authorised in Ireland in accordance with Regulation 4 of the European Communities (Electronic Communications Networks and Services)(Authorisation) Regulations 2011;

"**Colt Technology Services**" means Colt Technology Services Limited and includes its subsidiaries, and any undertaking which it owns or controls, and any undertaking which owns or controls it and its successors, affiliates and assigns;

"Communications Regulation Act 2002 (as amended)" means the Communications Regulation Act 2002 (No. 20 of 2002) (as amended);

"ComReg" means the Commission for Communications Regulation established under Section 6 of the Communications Regulation Act, 2002 (as amended);

"ComReg Decision No. D06/07" means the decision contained in ComReg Document No. 07/109 entitled *"Market Analysis – Interconnection Market Review Fixed Wholesale Call Termination Services"* dated 21 December 2007;

“ComReg Decision No. D06/08” means the decision contained in ComReg Document No. 08/103 entitled *“Market Analysis – Leased Line Market Review”* dated 22 December 2008;

“ComReg Decision No. D08/10” means the decision contained in ComReg Document No. 10/67 entitled, “*Response to Consultation Document No. 09/75 and Final Direction and Decision: Accounting Separation and Cost Accounting - Review of Eircom Limited;*

“ComReg Decision D12/14” means the decision contained in ComReg Document No. 14/89 entitled “*Market Review: Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non Residential Customers, Response to Consultation and Decision*”, dated 28 August 2014;

“ComReg Decision D15/14” means the decision contained in ComReg Document No. 14/136 entitled “*Cost of Capital: Mobile Telecommunications – Fixed Line Telecommunications – Broadcasting (Market A and Market B) – Response to Consultation and Decision*”, dated 18 December 2014;

“ComReg Decision D05/15” means the decision contained in ComReg Document No. 15/82 entitled “*Market Review: Wholesale Fixed Voice Call Origination and Transit Markets, Response to Consultation and Decision*”, dated 24 July 2015;

“ComReg Decision D10/18” means the decision contained in ComReg Document No. 18/94 entitled, “*Market Review: Wholesale Local Access (WLA) provided at a Fixed Location; Wholesale Central Access (WCA) provided at a Fixed Location for Mass Market Products, Response to Consultation and Decision”,* dated 19 November 2018;

“ComReg Decision D10/19” means ComReg Document 19/47 entitled “Market Review – Fixed Voice Call Termination and Mobile Voice Call Termination, Response to Consultation and Decision”, ComReg Document 19/47, Decision D10/19, dated 23 May 2019;

“ComReg Document 17/90r” means ComReg Document 17/90r entitled “Market Review – Fixed Voice Call Termination and Mobile Voice Call Termination, Consultation and Draft Decision”, dated 2 November 2017;

“ComReg Document XX/XX” means ComReg Document [THIS DOCUMENT No.] entitled “*Review of Cost of Capital, Mobile Telecommunications, Fixed Line Telecommunications, Broadcasting (Market A and Market B)*”, dated DD Month YYYY;

“Dialoga Servicios Interactivos” means Dialoga Servicios Interactivos, SA and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns;

“Effective Date” means the date set out in Section 7.1 of this Decision Instrument;

“Eircom” means Eircom Limited and its subsidiaries, and any Undertaking which it owns or controls, and any Undertaking which owns or controls Eircom Limited and its successors, affiliates and assigns;

“End-User” shall have the same meaning as under Regulation 2 of the Framework Regulations;

“Equant Network Systems” means Equant Network Systems Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and it successors, affiliates and assigns;

“Finarea” means Finarea SA and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns;

“Fixed Service Provider(s)” or **“FSP(s)”**means an Undertaking providing End-Users with publicly available voice telephony services using a fixed number at a fixed location, irrespective of the underlying technology over which such services are delivered;

“Framework Directive” means Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, as amended by Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009;

“Framework Regulations” means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011) as may be amended from time to time or replaced with equivalent effect;

“Imagine Communications” means Imagine Communications Ireland Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns;

“Intellicom” means Intellicom Ireland Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns;

“In2com” means In2com Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns;

“IP Telecom” means Internet Protocol Telecom Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns;

“**Magnet Networks**” means Magnet Networks Limited and includes its subsidiaries, and any undertaking which it owns or controls, and any undertaking which owns or controls it and its successors, affiliates and assigns;

“Magrathea Telecommunications” means Magrathea Telecommunications (Ireland) Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns;

“Ministerial Policy Directions” for the purposes of this Decision Instrument means Policy Directions made by Dermot Ahern TD, then Minister for Communications, Marine and Natural Resources, dated 21 February 2003 and 26 March 2004;

“Modeva Networks” means Modeva Networks Unlimited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns;

“**Other SMP Fixed Service Provider(s)**” means a Fixed Service Provider designated with SMP in section 4.2 of the Decision Instrument annexed to ComReg Decision No. D10/19, but for the purposes of this definition does not include Eircom;;

“PlanNet 21 Communications” means PlanNet 21 Communications Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and it successors, affiliates and assigns, which for the avoidance of doubt includes 3Play Plus Limited;

“pre-tax WACC formula” means the formula, described in Chapter 3.4 of ComReg Document XX/XX [THIS DOCUMENT No.] defined as:

$$WACC_{pre-tax} = g * r_{debt} + (1-g) * (\frac{r_{equity}}{(1-t)})$$

Where:

- *g = gearing, which is measured as follows: net debt ÷ (net debt + equity)*

- r_{debt} = *cost of debt. The cost of debt is equal to the sum of two components, the 'risk free rate' plus any debt premium applied to the debt incurred i.e.*

  (r_f + debt premium).

- *Equity risk premium or ERP. This is the additional return over the risk free rate demanded by investors for investing in the entire equity market.*

- r_{equity} = *According to the capital asset pricing model or CAPM, the cost of equity of a stock is obtained by adding the risk free rate to the product of the equity beta and the equity risk premium i.e. (r_f + ß * ERP).*

- r_f= *nominal risk-free rate which is the theoretical rate at which investors can borrow and lend funds with zero risk.*

- *ß = equity beta. This is a measure of the stock's exposure to systematic risks. The equity beta indicates the sensitivity of the returns on the stock that is being examined to the entire equity market.*

- t = *tax rate.*

"Regulated Accounts" means the financial information referred to in Section 5.1 of the Decision Instrument annexed to ComReg Decision No. D08/10;

"SMP" means significant market power, as the term is used in Regulation 25 of the Framework Regulations;

"Telcom" means Telcom Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates, and assigns, which for the avoidance of doubt includes Agility Communications Limited;

"the Markets" means, for the purposes of this decision instrument, the markets identified in the 2007 Recommendation and the 2014 Recommendation, and relate to those Markets upon which Eircom and the Other SMP Fixed Service Providers are designated as having SMP, and are more particularly described as:

2014 Recommendation

i. Market 1: Wholesale Call Termination on Individual Public Telephone Networks Provided at a Fixed Location (contained in ComReg Decision D06/07, ComReg Decision D10/19);

ii. Market 3(a): Wholesale Local Access provided at a Fixed Location (contained in ComReg Decision D10/18);
iii. Market 3(b): Wholesale Central Access provided at a Fixed Location for Mass-Market Products (contained in ComReg Decision D10/18);
iv. Market 4: Wholesale high-quality access provided at a fixed location (contained in ComReg Decision D06/08);

2007 Recommendation

i. Market 1: Retail Access to the Public Telephone Network at a Fixed Location (contained in ComReg Decision D12/14);
ii. Market 2: Wholesale Call Origination on the Public Telephone Network Provided at a Fixed Location (contained in ComReg Document D05/15).

and, for the avoidance of doubt, includes any markets upon which Eircom and the Other SMP Fixed Service Providers are designated as having SMP.

"the Termination Rates Recommendation" means the European Commission Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU (2009/396/EC) (OJ L124/67);

"the 2007 Recommendation" means the European Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 344, 28.12.2007, p65);

"the 2014 Recommendation" means the European Commission Recommendation of 9 October 2014 on relevant product and service markets with the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L295, 11.10.2014, p. 79);

"Undertaking" has the meaning set out in Regulation 2 of the Framework Regulations;

"Verizon Ireland" means Verizon Ireland Limited and includes its subsidiaries, and any undertaking which it owns or controls and any undertaking which owns or controls it, and its successors, affiliates and assigns; and

"Viatel" means Viatel Ireland Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns, which for the avoidance of doubt includes Digiweb Telecom Ireland Limited;

"Virgin Media means Virgin Media Ireland Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns

"Vodafone" means Vodafone Ireland Limited and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns;

"Voxbone" means Voxbone SA and its subsidiaries, and any Undertaking which it owns or controls and any Undertaking which owns or controls it, and its successors, affiliates and assigns:

"WACC" means the weighted average cost of capital.

3. SCOPE AND APPLICATION

3.1. This Decision Instrument applies to all operators designated as having SMP on the Markets. Those operators currently designated as having SMP are:

Airspeed Communications, Blueface, BT Communications, Colt Technology Services, Dialoga Servicios Interactivos, Eircom, Equant Network Systems, Finarea, Imagine Communications, Intellicom, In2com, IP Telecom, Magnet Networks, Magrathea Telecommunications, Modeva Networks, PlanNet 21 Communications, Telcom, Verizon, Viatel, Virgin Media, Vodafone and Voxbone.

3.2. This Decision Instrument is binding upon all operators designated as having SMP on the Markets. Those operators currently designated as having SMP are Airspeed Communications, Blueface, BT Communications, Colt Technology Services, Dialoga Servicios Interactivos, Eircom, Equant Network Systems, Finarea, Imagine Communications, Intellicom, In2com, IP Telecom, Magnet Networks, Magrathea Telecommunications, Modeva Networks, PlanNet 21 Communications, Telcom, Verizon, Viatel, Virgin Media, Vodafone and Voxbone and they shall comply with it in all respects.

PART II – DECISION

4. WACC

4.1. A nominal pre-tax WACC of X%, calculated on the basis of the pre-tax WACC formula, will be used for Eircom's Regulated Accounts as a basis for allowing Eircom a reasonable rate of return in the context of obligations imposed on Eircom in the Markets relating to accounting separation, cost recovery and price controls (pursuant to Regulation 11 and 13 of the Access Regulations in accordance with Regulations 8 and 18 of the Access Regulations), including the setting of regulated wholesale prices.

4.2. Eircom shall apply, in the on-going assessment of its compliance with cost recovery and price control obligations (including regulated wholesale prices) imposed prior to the Effective Date, the revised nominal pre-tax WACC rate of X% as set out in Section 4.1 of this Decision Instrument.

4.3. A nominal pre-tax WACC of X%, calculated on the basis of the pre-tax WACC formula, will be used as a basis for allowing the Other SMP Fixed Service Providers a reasonable rate of return in the context of obligations imposed on the Other SMP Fixed Service Providers in the Markets relating to cost recovery and price controls (pursuant to Regulation 13 of the Access Regulations in accordance with Regulations 8 and 18 of the Access Regulations), including the setting of regulated wholesale prices.

4.4. Any obligations imposed on the Other SMP Fixed Service Providers relating to cost recovery and price controls (including regulated wholesale prices) imposed prior to the Effective Date and calculated using a previous WACC set by ComReg shall not be affected by this decision and shall continue to have full force and effect.

PART III – FURTHER GENERAL PROVISIONS AND EFFECTIVE DATE

5. STATUTORY POWERS NOT AFFECTED

5.1. Nothing in this Decision Instrument shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation (in force prior to or after the Effective Date of this Decision Instrument).

6. MAINTENANCE OF OBLIGATIONS

6.1. Unless expressly stated otherwise in this Decision Instrument, all obligations and requirements contained in Decision Notices and Directions made by ComReg applying to Eircom and Other SMP Fixed Service Providers in force immediately prior to the Effective Date of this Decision Instrument, continue in force and Eircom and the Other SMP Fixed Service Providers shall comply with same.

6.2. If any Section(s), clause(s) or provision(s) or portion(s) thereof contained in this Decision Instrument is(are) found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that(those) Section(s), clause(s) or provision(s) or portion(s) thereof shall, to the extent required, be severed from this Decision Instrument and rendered ineffective as far as possible without modifying the remaining Section(s), clause(s) or provision(s) or portion(s) thereof of this Decision Instrument, and shall not in any way affect the validity or enforcement of this Decision Instrument or other Decision Instruments.

7. EFFECTIVE DATE

7.1. The Effective Date of this Decision Instrument shall be, unless otherwise expressly stated in this Decision Instrument, the date of its notification to Eircom and the Other SMP Fixed Service Providers, and it shall remain in force until further notice by ComReg.

GARRETT BLANEY

CHAIRPERSON

THE COMMISSION FOR COMMUNICATIONS REGULATION

THE […] DAY OF […] 2019

Annex: 3 Draft decision instrument – Broadcasting (Market A)

Q. 14 Do you believe that the draft text of the proposed decision instrument for Broadcasting - Market A is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.

1. STATUTORY POWERS GIVING RISE TO THIS DECISION

1.1. This Decision Instrument ("Decision Instrument") is made by the Commission for Communications Regulation ("ComReg") and relates to the Market[81] for wholesale access to national terrestrial broadcast transmission services, as defined and analysed by ComReg in Decision D11/13.

1.2. This Decision Instrument is made:

(i) Pursuant to and having regard to the functions and objectives of ComReg as set out in Sections 10 and 12 of the Communications Regulation Act 2002 (as amended), Regulation 6(1) of the Access Regulations and Regulation 16 of the Framework Regulations; and

(ii) Having had regard to the Broadcasting Act 2009; and

(iii) Having, where appropriate, pursuant to Section 13 of the Communications Regulation Act 2002 (as amended), complied with Ministerial Policy Directions; and

(iv) Pursuant to and having had regard to the designation of 2rn as having significant market power on the Market under the provisions of Regulations 25, 26 and 27 of the Framework Regulations, and the accounting separation, price control and cost accounting obligations imposed on the Market pursuant to Regulations 11 and 13 of the Access Regulations; and

(v) Having had regard to the reasoning and analysis set out in the consultation and draft decision entitled "Review of Cost of Capital - Mobile Telecommunications - Fixed Line Telecommunications - Broadcasting

[81] ComReg has recently commenced a market analysis process with a view to a public consultation being issued by end 2019/beginning 2020.

(Market A and Market B)” (ComReg Document No. [THIS DOCUMENT No.]) and having considered submissions received from interested parties in response to the consultation and draft decision (ComReg Document No. [THIS DOCUMENT No.]) following public consultation pursuant to Regulation 12 of the Framework Regulations; and

(vi) Having notified the draft measure and the reasoning on which same is based to the European Commission, BEREC and the national regulatory authorities in other EU Member States in accordance with Regulation 13 of the Framework Regulations and having taken the utmost account, pursuant to Regulation 13(6) of the Framework Regulations, of any comments made by the European Commission, BEREC and any national regulatory authority in another EU Member State in accordance with Article 7(3) of the Framework Directive; and

(vii) Pursuant to Regulations 8, 11, 13 and 18 of the Access Regulations.

1.3. The provisions of the consultation and draft decision (ComReg Document No. [THIS DOCUMENT NO.]) and the “[Title of Response to Consultation and Decision]”, (Document No. XX/XX), (ComReg Decision No. XX/XX) shall, where appropriate, be construed with this Decision Instrument. For the avoidance of doubt, however, to the extent that there is any conflict between a decision instrument dated prior to the Effective Date (as defined in Section 2.1 of this Decision Instrument) and this Decision Instrument, this Decision Instrument shall prevail.

PART I – GENERAL PROVISIONS

2. DEFINITIONS AND INTERPRETATION

2.1. In this Decision Instrument, unless the context otherwise suggests:

“Access Regulations” means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011) as may be amended from time to time or replaced with equivalent effect;

“BEREC” means the Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EU) 2018/1971 of the European Parliament and of the Council of 11 December 2018 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Agency for Support for BEREC (BEREC Office), amending Regulation (EU) 2015/2120 and repealing Regulation (EC) No. 1211/2009;

“Broadcasting Act 2009” means the Broadcasting Act 2009 (No. 18 of 2009);

"Communications Regulation Act 2002 (as amended)" means the Communications Regulation Act 2002 (No. 20 of 2002) (as amended);

"ComReg" means the Commission for Communications Regulation, established under Section 6 of the Communications Regulation Act, 2002 (as amended);

"ComReg Decision No. D11/13" means the decision contained in ComReg Document No. 13/71, entitled "*Market Review: Broadcasting Transmission Services in Ireland, Response to Consultation and Decision, ComReg Document 13/71, Decision D11/13"*, dated 26 July 2013;

"ComReg Decision D15/14" means the decision contained in ComReg Document No. 14/136 entitled "*Cost of Capital: Mobile Telecommunications – Fixed Line Telecommunications – Broadcasting (Market A and Market B) – Response to Consultation and Decision*", dated 18 December 2014;

"ComReg Decision DXX/XX" means ComReg Document XX/XX entitled "Market Review – Review of Cost of Capital, Mobile Telecommunications, Fixed Line Telecommunications, Broadcasting (Market A and Market B), Response to Consultation and Decision", ComReg Document XX/XX, ComReg Decision XX/XX dated DD Month 2019

ComReg Document XX/XX" means ComReg Document [THIS DOCUMENT No.] entitled "Review of Cost of Capital, Mobile Telecommunications, Fixed Line Telecommunications, Broadcasting (Market A and Market B), Consultation and draft Decision", dated DD Month 2019;

"Effective Date" means the date set out in Section 7.1 of this Decision Instrument;

"Framework Directive" means Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, as amended by Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009;

"Framework Regulations" means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011) as may be amended from time to time or replaced with equivalent effect;

"Ministerial Policy Directions" for the purposes of this Decision Instrument means Policy Directions made by Dermot Ahern TD, then Minister for Communications, Marine and Natural Resources, dated 21 February 2003 and 26 March 2004;

"pre-tax WACC formula" means the formula, described in Chapter 3.4 of ComReg Document XX/XX [THIS DOCUMENT No.] defined as:

$$WACC_{pre-tax} = g * r_{debt} + (1 - g) * (\frac{r_{equity}}{(1 - t)})$$

9.14 Where:

- *g = gearing, which is measured as follows: net debt ÷ (net debt + equity)*
- *r_{debt} = cost of debt. The cost of debt is equal to the sum of two components, the 'risk free rate' plus any debt premium applied to the debt incurred i.e.*

  (r_f + debt premium).
- *Equity risk premium or ERP. This is the additional return over the risk free rate demanded by investors for investing in the entire equity market.*
- *r_{equity} = According to the capital asset pricing model or CAPM, the cost of equity of a stock is obtained by adding the risk free rate to the product of the equity beta and the equity risk premium i.e. (r_f + ß * ERP).*
- *r_f = nominal risk-free rate which is the theoretical rate at which investors can borrow and lend funds with zero risk.*
- *ß = equity beta. This is a measure of the stock's exposure to systematic risks. The equity beta indicates the sensitivity of the returns on the stock that is being examined to the entire equity market.*
- *t = tax rate.*

"RTÉ" means Raidió Teilifís Éireann and its subsidiaries (excluding RTÉ Transmission Network Limited), and any Undertaking which it owns or controls, and any Undertaking which owns or controls RTÉ and its successors, affiliates and assigns;

"SMP" means significant market power, as the term is used in Regulation 25 of the Framework Regulations;

"the Market" is the market[82] for wholesale access to national terrestrial broadcast transmission services as identified by ComReg in Section 4.1 of the decision instrument annexed to ComReg Decision No. D11/13 in which 2rn is designated as having significant market power under the provisions of Regulations 25, 26 and 27 of the Framework Regulations and any market(s) on which any further SMP

[82] ComReg has recently commenced a market analysis process with a view to a public consultation being issued by end 2019/beginning 2020.

Undertaking(s) is (are) subsequently identified in any review of this market following this decision;

"Undertaking" has the meaning set out in Regulation 2 of the Framework Regulations;

"WACC" means the weighted average cost of capital; and

"2rn" means RTÉ Transmission Network Limited and its subsidiaries, and any Undertaking which it owns or controls, and any Undertaking which owns or controls RTÉ Transmission Network Limited and its successors, affiliates and assigns, including for the avoidance of doubt Raidió Teilifís Éireann.

3. SCOPE AND APPLICATION

3.1. This Decision Instrument applies to 2rn.

3.2. This Decision Instrument is binding upon 2rn and 2rn shall comply with it in all respects.

PART II – DECISION

4. WACC

4.1. A nominal pre-tax WACC of X%, calculated on the basis of the pre-tax WACC formula, will be used as a basis for allowing 2rn a reasonable rate of return in the context of obligations imposed on 2rn in the Market relating to accounting separation, cost recovery and price controls (pursuant to Regulations 11 and 13 of the Access Regulations in accordance with Regulations 8 and 18 of the Access Regulations), including the setting of regulated wholesale prices.

4.2. In the on-going assessment of compliance with cost recovery and price control obligations (including regulated wholesale prices) imposed prior to the Effective Date, 2rn shall apply the revised nominal pre-tax WACC rate of X% as set out in section 4.1 of this Decision Instrument.

PART III– FURTHER GENERAL PROVISIONS AND EFFECTIVE DATE

5. STATUTORY POWERS NOT AFFECTED

5.1. Nothing in this Decision Instrument shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation (in force prior to or after the Effective Date of this Decision Instrument).

6. MAINTENANCE OF OBLIGATIONS

6.1. Unless expressly stated otherwise in this Decision Instrument, all obligations and requirements contained in Decision Notices and Directions made by ComReg applying to 2rn and in force immediately prior to the Effective Date of this Decision Instrument, continue in force and 2rn shall comply with same.

6.2. If any Section(s), clause(s) or provision(s) or portion(s) thereof contained in this Decision Instrument is(are) found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that(those) Section(s), clause(s) or provision(s) or portion(s) thereof shall, to the extent required, be severed from this Decision Instrument and rendered ineffective as far as possible without modifying the remaining Section(s), clause(s) or provision(s) or portion(s) thereof of this Decision Instrument, and shall not in any way affect the validity or enforcement of this Decision Instrument or other Decision Instruments.

7. EFFECTIVE DATE

7.1. The Effective Date of this Decision Instrument shall be, unless otherwise expressly stated in this Decision Instrument, the date of its notification to 2rn and it shall remain in force until further notice by ComReg.

GARRETT BLANEY

CHAIRPERSON

THE COMMISSION FOR COMMUNICATIONS REGULATION

THE […] DAY OF […] 2019

Annex: 4 Draft decision instrument – Broadcasting (Market B)

Q. 15 Do you believe that the draft text of the proposed decision instrument for Broadcasting – Market B is from a legal, technical and practical perspective, sufficiently detailed, clear and precise with regards to the specifics proposed? Please explain your response and provide details of any specific amendments you believe are required.

1. STATUTORY POWERS GIVING RISE TO THIS DECISION

1.1. This Decision Instrument ("Decision Instrument") is made by the Commission for Communications Regulation ("ComReg") and relates to the Market[83] for wholesale access to Digital Terrestrial Television ("DTT") multiplexing services as defined and analysed by ComReg in Decision D11/13.

1.2. This Decision Instrument is made:

(i) Pursuant to and having regard to the functions and objectives of ComReg as set out in Sections 10 and 12 of the Communications Regulation Act 2002 (as amended), Regulation 6(1) of the Access Regulations, and Regulation 16 of the Framework Regulations; and

(ii) Having had regard to the Broadcasting Act 2009; and

(iii) Having, where appropriate, pursuant to Section 13 of the Communications Regulation Act 2002 (as amended), complied with Ministerial Policy Directions; and

(iv) Pursuant to and having had regard to the designation of RTÉ as having significant market power on the Market under the provisions of Regulations 25, 26 and 27 of the Framework Regulations, and the accounting separation, price control and cost accounting obligations imposed on the Market pursuant to Regulations 11 and 13 of the Access Regulations; and

(v) Having had regard to the reasoning and analysis set out in the consultation and draft decision entitled "Review of Cost of Capital - Mobile Telecommunications - Fixed Line Telecommunications - Broadcasting (Market A and Market B)" (ComReg Document No. [THIS DOCUMENT No.]) and having considered submissions received from interested parties

[83] ComReg has recently commenced a market analysis process with a view to a public consultation being issued by end 2019/beginning 2020.

in response to the consultation and draft decision (ComReg Document No. [THIS DOCUMENT No.]) following public consultation pursuant to Regulation 12 of the Framework Regulations; and

(vi) Having notified the draft measure and the reasoning on which same is based to the European Commission, BEREC and the national regulatory authorities in other EU Member States in accordance with Regulation 13 of the Framework Regulations and having taken the utmost account, pursuant to Regulation 13(6) of the Framework Regulations, of any comments made by the European Commission, BEREC and any national regulatory authority in another EU Member State in accordance with Article 7(3) of the Framework Directive; and

(vii) Pursuant to Regulations 8, 11, 13 and 18 of the Access Regulations.

1.3. The provisions of the consultation and draft decision (ComReg Document No. [THIS DOCUMENT No.]) and the "[Title of Response to Consultation and Decision]", (Document No. XX/XX), (ComReg Decision No. XX/XX) shall, where appropriate, be construed with this Decision Instrument. For the avoidance of doubt, however, to the extent that there is any conflict between a decision instrument dated prior to the Effective Date (as defined in Section 2.1 of this Decision Instrument) and this Decision Instrument, this Decision Instrument should prevail.

PART I – GENERAL PROVISIONS

2. DEFINITIONS AND INTERPRETATION

2.1. In this Decision Instrument, unless the context otherwise suggests:

"Access Regulations" means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011) as may be amended from time to time or replaced with equivalent effect;

"BEREC" means the Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EU) 2018/1971 of the European Parliament and of the Council of 11 December 2018 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Agency for Support for BEREC (BEREC Office), amending Regulation (EU) 2015/2120 and repealing Regulation (EC) No. 1211/2009;

"Broadcasting Act 2009" means the Broadcasting Act 2009 (No. 18 of 2009);

“Communications Regulation Act 2002 (as amended)” means the Communications Regulation Act 2002 (No. 20 of 2002) (as amended);

“ComReg” means the Commission for Communications Regulation, established under Section 6 of the Communications Regulation Act, 2002;

“ComReg Decision No. D11/13” means the decision contained in ComReg Document No. 13/71, entitled “*Market Review: Broadcasting Transmission Services in Ireland, Response to Consultation and Decision, ComReg Document 13/71, Decision D11/13”*, dated 26 July 2013;

“ComReg Decision D15/14” means the decision contained in ComReg Document No. 14/136 entitled “*Cost of Capital: Mobile Telecommunications – Fixed Line Telecommunications – Broadcasting (Market A and Market B) – Response to Consultation and Decision*”, dated 18 December 2014;

“ComReg Decision DXX/XX” means ComReg Document XX/XX entitled “Market Review – Review of Cost of Capital, Mobile Telecommunications, Fixed Line Telecommunications, Broadcasting (Market A and Market B), Response to Consultation and Decision”, ComReg Document XX/XX, ComReg Decision XX/XX, dated DD Month YYYY

ComReg Document XX/XX” means ComReg Document [THIS DOCUMENT No.] entitled “Review of Cost of Capital, Mobile Telecommunications, Fixed Line Telecommunications, Broadcasting (Market A and Market B), Consultation and draft Decision”, dated DD Month YYYY;

“DTT” means Digital Terrestrial Television;

“Effective Date” means the date set out in Section 7.1 of this Decision Instrument;

“Framework Directive” means Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services, as amended by Directive 2009/140/EC of the European Parliament and of the Council of 25 November 2009;

“Framework Regulations” means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011) as may be amended from time to time or replaced with equivalent effect;

“Ministerial Policy Directions” for the purposes of this Decision Instrument means Policy Directions made by Dermot Ahern TD, then Minister for

Communications, Marine and Natural Resources, dated 21 February 2003 and 26 March 2004;

"Multiplex" means an electronic system which combines programme material and related and other data in digital form and the transmission of that material and data so combined by means of wireless telegraphy directly or indirectly for reception by the general public;

"pre-tax WACC formula" means the formula, described in Chapter 3.4 of ComReg Document XX/XX [THIS DOCUMENT No.] defined as:

$$WACC_{pre-tax} = g * r_{debt} + (1 - g) * (\frac{r_{equity}}{(1 - t)})$$

9.15 Where:

- *g = gearing, which is measured as follows: net debt ÷ (net debt + equity)*
- *r_{debt} = cost of debt. The cost of debt is equal to the sum of two components, the 'risk free rate' plus any debt premium applied to the debt incurred i.e.*

  (r_f + debt premium).
- *Equity risk premium or ERP. This is the additional return over the risk free rate demanded by investors for investing in the entire equity market.*
- *r_{equity} = According to the capital asset pricing model or CAPM, the cost of equity of a stock is obtained by adding the risk free rate to the product of the equity beta and the equity risk premium i.e. (r_f + ß * ERP).*
- *r_f= nominal risk-free rate which is the theoretical rate at which investors can borrow and lend funds with zero risk.*
- *ß = equity beta. This is a measure of the stock's exposure to systematic risks. The equity beta indicates the sensitivity of the returns on the stock that is being examined to the entire equity market.*
- *t = tax rate.*

"RTÉ" means Raidió Teilifís Éireann and its subsidiaries (excluding RTÉ Transmission Network Limited), and any Undertaking which it owns or controls, and any Undertaking which owns or controls RTÉ and its successors, affiliates and assigns;

"RTÉ Transmission Network Limited" or **"2rn"** means RTÉ Transmission Network Limited and its subsidiaries, and any Undertaking which it owns or controls, and any Undertaking which owns or controls RTÉ Transmission Network

Limited and its successors, affiliates and assigns, including for the avoidance of doubt Raidió Teilifís Éireann.

"SMP" means significant market power, as the term is used in Regulation 25 of the Framework Regulations;

"the Market" is the market[84] for wholesale access to DTT Multiplexing services as identified by ComReg in Section 4.1 of the decision instrument annexed to ComReg Decision No. D11/13 in which RTÉ is designated as having significant market power under the provisions of Regulations 25, 26 and 27 of the Framework Regulations and any market(s) on which any further SMP Undertaking(s) is (are) subsequently identified in any review of this market following this decision;

"Undertaking" has the meaning set out in Regulation 2 of the Framework Regulations; and

"WACC" means the weighted average cost of capital.

3. SCOPE AND APPLICATION

3.1. This Decision Instrument applies to RTÉ.

3.2. This Decision Instrument is binding upon RTÉ and RTÉ shall comply with it in all respects.

PART II – DECISION

4. WACC

4.1. A nominal pre-tax WACC of X%, calculated on the basis of the pre-tax WACC formula, will be used as a basis for allowing RTÉ a reasonable rate of return in the context of obligations imposed on RTÉ in the Market relating to accounting separation, cost recovery and price controls, pursuant to Regulations 11 and 13 of the Access Regulations in accordance, with Regulations 8 and 18 of the Access Regulations, including the setting of regulated wholesale prices.

4.2. RTÉ shall apply, in the on-going assessment of compliance with cost recovery and price control obligations (including regulated wholesale prices) imposed prior to the Effective Date, the revised nominal pre-tax WACC rate of X% as set out in Section 4.1 of this Decision Instrument.

[84] ComReg has recently commenced a market analysis process with a view to a public consultation being issued by end 2019/beginning 2020.

PART III– FURTHER GENERAL PROVISIONS AND EFFECTIVE DATE

5. STATUTORY POWERS NOT AFFECTED

5.1. Nothing in this Decision Instrument shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation (in force prior to or after the Effective Date of this Decision Instrument).

6. MAINTENANCE OF OBLIGATIONS

6.1. Unless expressly stated otherwise in this Decision Instrument, all obligations and requirements contained in Decision Notices and Directions made by ComReg applying to RTÉ and in force immediately prior to the Effective Date of this Decision Instrument, continue in force and RTÉ shall comply with same.

6.2. If any Section(s), clause(s) or provision(s) or portion(s) thereof contained in this Decision Instrument is(are) found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that(those) Section(s), clause(s) or provision(s) or portion(s) thereof shall, to the extent required, be severed from this Decision Instrument and rendered ineffective as far as possible without modifying the remaining Section(s), clause(s) or provision(s) or portion(s) thereof of this Decision Instrument, and shall not in any way affect the validity or enforcement of this Decision Instrument or other Decision Instruments.

7. EFFECTIVE DATE

7.1. The Effective Date of this Decision Instrument shall be, unless otherwise expressly stated in this Decision Instrument, the date of its notification to RTÉ and it shall remain in force until further notice by ComReg.

GARRETT BLANEY

CHAIRPERSON

THE COMMISSION FOR COMMUNICATIONS REGULATION

THE […] DAY OF […] 2019

Annex: 5 Legal Basis

A 5.1 Pursuant to Regulation 8 of the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 ("the Access Regulations"), where an undertaking or operator has been designated has having significant market power on a relevant market as a result of a market analysis carried out in accordance with Regulation 27 of the European Communities (Electronic Communications Networks and Services) (Framework) Regulations ("the Framework Regulations"), ComReg shall impose on such undertaking or operator such obligations as set out in Regulation 9 to 13 of the Access Regulations, as appropriate.

A 5.2 Regulation 13 of the Access Regulations provides for price control and cost accounting obligations. In particular, Regulation 13(2) provides, *"To encourage investments by the operator, including in next generation networks, the Regulator shall, when considering the imposition of obligations under paragraph (1), take into account the investment made by the operator which the Regulator considers relevant and allow the operator a reasonable rate of return on adequate capital employed, taking into account any risks involved specific to a particular new investment network project."* (emphasis added).

A 5.3 This consultation is part of a process whereby ComReg establishes the *"reasonable rate of return on adequate capital employed"* referred to above for the purposes of price controls in wholesale mobile call termination markets, fixed line telephone markets and broadcasting transmission services markets.

Functions and objectives of ComReg

A 5.4 The functions of ComReg are set out in section 10 of the Communications Regulation Act 2002 (as amended) and Regulation 6 of the Access Regulations.

A 5.5 The objectives of ComReg are set out in section 12 of the Communications Regulation Act 2002 (as amended) and Regulation 16 of the Framework Regulations. Of particular relevance to this consultation are:

- Section 12(1)(a) of the Communications Regulation Act 2002 (as amended), provides that the objectives of ComReg in exercising its functions in relation to the provision of electronic communications networks, electronic communications services and associated facilities are *"(i) to promote competition, (ii) to contribute to the development of the internal market, and (iii) to promote the interests of users within the Community."*; and

- Section 16(1)(d) of the Framework Regulations provides that in pursuit of the objectives under section 12 of the Communications Regulation Act 2002 (as amended), ComReg shall *"apply objective, transparent, non-discriminatory and proportionate regulatory principles by, amongst other things "promoting efficient investment and innovation in new and enhanced infrastructures…".*

Summary of consultation requirements

A 5.6 Regulation 12(3) of the Framework Regulations requires that, except in cases falling within Regulation 13(8) (i.e. exceptional cases involving urgency), where ComReg intends to take a measure which has a significant impact on a relevant market, ComReg must publish the text of the proposed measure, give the reasons for it, including information as to which of ComReg's statutory powers gives rise to the measure, and specify the period within which submissions relating to the proposal may be made by interested parties. Regulation 12(4) states that ComReg, having considered any representations received under Regulation 12(3), may take the measure with or without amendment.

A 5.7 Regulation 13(3) of the Framework Regulations provides that, upon completion of the consultation provided for in Regulation 12, where ComReg intends to take a measure which falls within the scope of Regulation 26 or 27 of the Framework Regulations, or Regulation 6 or 8 of the Access Regulations, and which would affect trade between Member States, it shall make the draft measure accessible to the European Commission, BEREC[85] and the national regulatory authorities in other Member States at the same time, together with the reasoning on which the measure is based.

[85] The Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EU) 2018/1971 of the European Parliament and of the Council of 11 December 2018 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Agency for Support for BEREC (BEREC Office), amending Regulation (EU) 2015/2120 and repealing Regulation (EC) No. 1211/2009;

Annex: 6 Proposed methodology to estimate industry specific parameters

A 6.1 The follow paragraphs discuss ComReg's proposed methodology for the estimation of the following industry specific factors:

- Gearing
- Asset beta
- Debt beta
- Cost of debt

A 6.2 Where there are topics specific to a sector these are discussed in their relevant chapter.

Proposed approach to gearing

A 6.3 In determining the WACC it is necessary to consider the financial gearing[86] (hereafter, referred to as gearing) for a hypothetical efficient operator. Gearing reflects the relative weighting of debt and equity in the overall capital structure. Regulators can assume the actual level of gearing for an industry specific company, such as the SMP operator, or alternatively assume a notional level.

A 6.4 The notional level of gearing is an approach which is widely used by regulators and has a number of merits. It provides flexibility to the regulated company to adopt the most efficient capital structure and it also reduces the degree of regulatory intervention in the financing of the business. Importantly, it does not reward the regulated entity for an inefficient capital structure or for sub-optimal decisions made in the past. It also reflects the inherent uncertainty regarding the future evolution of the company's capital structure.

A 6.5 The notional gearing approach involves choosing a credit rating for the hypothetical efficient operator. The gearing level is then typically set at a level of gearing compatible with the target credit rating. Europe Economics suggest using notional gearing on the grounds that companies should decide their efficient capital structure.

[86] Gearing is defined as the ratio of debt to the sum of debt plus equity (i.e. net debt divided by net debt plus equity)

Proposed estimation of asset beta

A 6.6 Within the CAPM framework it is necessary to estimate the equity beta for a hypothetical efficient operator (i.e. the extent to which net returns on the asset as a whole (the operators network) are correlated with changes in returns in the entire equity market).

- If equity beta = 1: when the entire equity market return rises by 5%, the return on the analysed stock would rise by 5% on average;
- If equity beta = 2: when the entire equity market return rises by 5%, the return on the analysed stock would rise by 10% on average; and
- If equity beta = 0.5: when the entire equity market rises by 5%, the return on the analysed stock rises by 2.5% on average.

A 6.7 ComReg notes that the equity beta is derived via the following formula:

$$\beta_A = \beta_D \times g + \beta_E \times (1 - g)$$

- β_A = asset beta[87] which similarly to equity beta (β_E) measures company's exposure to systematic risk.
- β_D = debt beta
- g = gearing

Proposed estimation of debt beta

A 6.8 In general, Irish regulators have chosen not to include a debt beta in their assessment of the regulatory WACC (i.e. debt beta equal to zero).

A 6.9 The use of zero debt betas reflects the difficulties of producing reliable estimates of debt beta. It also reflects the fact that, where debt beta is low and notional gearing is close to companies' actual gearing levels, the inclusion of debt beta does not make a material difference to the WACC. However, a non-zero debt beta may be appropriate in some circumstances, for example if elevated debt premiums suggest that the systematic risk of debt has increased.

A 6.10 The rationale behind estimation of debt beta is explained in Europe Economics' Technical Report[88]. Debt betas of zero and 0.1 are considered by Europe Economics, but the overall WACC is presented with a zero debt beta due to its negligible impact on equity beta when re-levered to the notional gearing level.

[87] The asset beta is also referred to an unlevered beta. This is subsequently levered (with gearing) to achieve the equity beta which ultimately feeds through to the estimation of the cost of equity.
[88] See section 4.3.3 of Europe Economics Technical Report.

A 6.11 Having analysed Europe Economics' Technical Report and for the reasons outlined above, ComReg is of the preliminary view that, for the purposes of the mobile telecommunication WACC estimation, debt beta should be zero.

Proposed cost of debt

A 6.12 As the proposed WACC is calculated on the basis of a hypothetical efficient operator, there is no clear basis on which to judge what, if any, existing debt that an efficient operator would have incurred, nor the size of this relative to future debt requirements. It is quite feasible to expect this to be minimal for a hypothetical efficient MSP as an efficient new entrant would not have any legacy debt. It is on this basis that the cost of debt parameter uses a forward looking cost of debt.

A 6.13 Europe Economics favours a forward-looking cost of debt approach and suggest exclusion of adjustments for any embedded debt on the basis that the preliminary WACC is estimated for a hypothetical efficient operator.

A 6.14 An alternative way of thinking of the cost of debt is as the sum of the risk-free rate and the debt premium:

$$r_{debt} = r_f + dp$$

Cost of Debt = Risk Free Rate + Debt Premium

A 6.15 There are two reasons why the actual cost of debt for a hypothetical efficient operator would exceed that of the risk free rate.

- Firstly, corporate bonds trade at a rate higher than government bonds as they have a higher level of risk; and
- Secondly, Eurozone bonds tend to carry a premium over German bonds of the same rating.

Annex: 7 Comparison of WACC parameters (2014 & 2019)

A 7.1 The following tables list the WACC parameters from the 2014 Decision (pre aimed-up) compared to those being estimated in this consultation[89].

Mobile Telecommunications sector

	2014 Decision	Table 6	Movement
Gearing (%)	30%	35%	5.00%
Tax rate (%)	12.5%	12.5%	-
Real risk-free rate (%)	2.10%	2.10%	-
Inflation (%)	1.50%	1.30%	<0.20%>
Nominal risk-free rate (%)	3.63%	3.43%	<0.20%>
Equity risk premium (%)	5.00%	4.60%	<0.40%>
Equity Beta at notional gearing	0.93	0.66	<0.27>
Nominal post-tax cost of equity (%)	8.27%	6.47%	<1.82%>
Nominal pre-tax cost of equity (%)	9.46%	7.39%	<2.08%>
Debt Premium (%)	1.45%	1.50%	0.05%
Nominal pre-tax cost of debt (%)	5.08%	4.93%	<0.15%>
Nominal Vanilla WACC (%)	7.32%	5.93%	<1.39%>
Nominal pre-tax WACC (%)	8.14%	6.53%	<1.61%>
Aiming up adjustment	0.49%	N/A	<0.49%>

[89] Some figures have been rounded.

WACC	8.63%	6.53%	<2.10%>

A 7.2 The reduction in the ERP from 5.00% to 4.60% if taken on its own would have lowered the WACC from the 2014 Decision by 0.30%. Similarly for the equity beta its reduction from 0.93 to 0.66 would have lowered the WACC by 1.08%. As both of these parameters are elements of the nominal pre-tax cost of equity their total impact on the WACC estimated in the 2014 Decision would have been to reduce it by 1.29%. The pre-aimed up WACC for 2014 would then have been 6.86% versus the proposed WACC for 2019 of 6.53%.

A 7.3 Similarly inflation and the debt premium are elements of the nominal pre-tax cost of debt. The reduction in inflation from 1.50%% to 1.30% if taken on its own would have lowered the WACC from the 2014 Decision by 0.22%. Similarly for debt premium its increase from 1.45% to 1.50% would have increased the WACC by 0.01%. Combining the impact of the changes in inflation and debt premium in the 2014 Decision would have been to reduce it by 0.21%. The pre-aimed up WACC for 2014 would then have been 7.94% versus the proposed WACC for 2019 of 6.53%.

A 7.4 In addition for the mobile telecommunications sector it is proposed to amend its gearing level from 30% to 35%. The increase in gearing by 5% on the WACC estimated in the 2014 Decision would have been to reduce it by 0.12%.

Fixed Line Telecommunications sector

	2014 Decision	Table 13	Movement
Gearing (%)	40%	40%	-
Tax rate (%)	12.5%	12.5%	-
Real risk-free rate (%)	2.10%	2.10%	-
Inflation (%)	1.50%	1.30%	<0.20%>
Nominal risk-free rate (%)	3.63%	3.43%	<0.20%>
Equity risk premium (%)	5.00%	4.60%	<0.40%>
Equity Beta at notional gearing	0.92	0.67	<0.25>
Nominal post-tax cost of equity (%)	8.21%	6.49%	<1.72%>
Nominal pre-tax cost of equity (%)	9.39%	7.42%	<1.97%>
Debt Premium (%)	1.45%	1.50%	0.05%
Nominal pre-tax cost of debt (%)	5.08%	4.93%	<0.15%>
Nominal Vanilla WACC (%)	6.96%	5.87%	<1.09%>
Nominal pre-tax WACC (%)	7.67%	6.42%	<1.25%>
Aiming up adjustment	0.51%	N/A	<0.51%>
WACC	8.18%	6.42%	<1.76%>

A 7.5 The reduction in the ERP from 5.00% to 4.60% if taken on its own would have lowered the WACC from the 2014 Decision by 0.25%. Similarly for the equity beta its reduction from 0.92 to 0.67 would have lowered the WACC by 0.86%. As both of these parameters are elements of the nominal pre-tax cost of equity their total impact on the WACC estimated in the 2014 Decision would have been to reduce it by 1.04%. The pre-aimed up WACC for 2014 would then have been 6.64% versus the proposed WACC for 2019 of 6.42%.

A 7.6 Similarly inflation and the debt premium are elements of the nominal pre-tax cost of debt. The reduction in inflation from 1.50%% to 1.30% if taken on its own would have lowered the WACC from the 2014 Decision by 0.22%. Similarly for debt premium its increase from 1.45% to 1.50% would have increased the WACC by 0.02%. Combining the impact of the changes in inflation and debt premium in the 2014 Decision would have been to reduce it by 0.20%. The pre-aimed up WACC for 2014 would then have been 7.48% versus the proposed WACC for 2019 of 6.42%.

Broadcasting (Market A and Market B)

	2014 Decision	Table 16	Movement
Gearing (%)	25%	25%	-
Tax rate (%)	12.5%	12.5%	-
Real risk-free rate (%)	2.10%	2.1%	-
Inflation (%)	1.50%	1.3%	<0.20%>
Nominal risk-free rate (%)	3.63%	3.43%	<0.20%>
Equity risk premium (%)	5.00%	4.60%	<0.40%>
Equity Beta at notional gearing	0.73	0.53	<0.20>
Nominal post-tax cost of equity (%)	7.30%	5.88%	<1.42%>
Nominal pre-tax cost of equity (%)	8.34%	6.72%	<1.62%>
Debt Premium (%)	1.45%	1.50%	0.50%
Nominal pre-tax cost of debt (%)	5.08%	4.93%	<0.15%>
Nominal Vanilla WACC (%)	6.74%	5.64%	<1.10%>
Nominal pre-tax WACC (%)	7.53%	6.27%	<1.26%>
Aiming up adjustment	0.58%	N/A	<0.58%>
WACC	8.11%	6.27%	<1.84%>

A 7.7 The reduction in the ERP from 5.00% to 4.60% if taken on its own would have lowered the WACC from the 2014 Decision by 0.25%. Similarly for the equity beta its reduction from 0.73 to 0.53 would have lowered the WACC by 0.86%. As both of these parameters are elements of the nominal pre-tax cost of equity their total impact on the WACC estimated in the 2014 Decision would have been to reduce it by 1.04%. The pre-aimed up WACC for 2014 would then have been 6.47% versus the proposed WACC for 2019 of 6.27%.

A 7.8 Similarly inflation and the debt premium are elements of the nominal pre-tax cost of debt. The reduction in inflation from 1.50%% to 1.30% if taken on its own would have lowered the WACC from the 2014 Decision by 0.23%. Similarly for debt premium its increase from 1.45% to 1.50% would have increased the WACC by 0.01%. Combining the impact of the changes in inflation and debt premium in the 2014 Decision would have been to reduce it by 0.21%. The pre-aimed up WACC for 2014 would then have been 7.30% versus the proposed WACC for 2019 of 6.27%.

Annex: 8 Europe Economics Technical Report

Questions

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