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Institut Luxembourgeois de
Régulation (ILR)
17, rue du Fossé,
L-2922, Luxembourg
Luxembourg

For the attention of:
Mr. Luc Tapella
Directeur

Fax: +352 28 228 229

Dear Mr Tapella,

Subject: Commission Decision concerning Case LU/2016/1868: Determination of the Weighted Average Cost of Capital (WACC) for fixed and mobile networks in Luxembourg

Article 7(3) of Directive 2002/21/EC: No comments

1. PROCEDURE

On 2 May 2016, the Commission registered a short form notification from Luxembourg's national regulatory authority, Institut Luxembourgeois de Régulation (ILR)¹, concerning the determination of the Weighted Average Cost of Capital (WACC) for fixed and mobile networks in Luxembourg.

The national consultation² ran from 15 March to 15 April 2016.

On 11 May 2016, a request for information³ was sent to ILR and a response was received on 18 May 2016. Additional information was provided on 19 May 2016.

¹ Under Article 7 of 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 (Framework Directive), OJ L 108, 24.4.2002, p. 33, as amended by Directive 2009/140/EC, OJ L 337, 18.12.2009, p. 37, and Regulation (EC) No 544/2009, OJ L 167, 29.6.2009, p. 12.

² In accordance with Article 6 of the Framework Directive.

³ In accordance with Article 5(2) of the Framework Directive.

2. DESCRIPTION OF THE DRAFT MEASURE

2.1. Background

ILR previously determined the value of the WACC for fixed networks in the context of cases LU/2014/1682-1683⁴, when the regulator notified the cost model for the determination of wholesale fixed origination and termination rates. ILR determined a pre-tax nominal WACC of 8.79%, as well as a risk premium of 2.5% to be added to the pre-tax real WACC for the calculation of price caps linked to services provided over next generation access (NGA) networks.⁵

The value of the WACC for mobile networks was previously determined by ILR in the context of case LU/2015/1712⁶, when the regulator notified the cost model for the determination of wholesale mobile termination rates. ILR used a pre-tax nominal WACC of 12%.⁷

2.2. The draft measure notified by way of a short form

2.2.1. WACC for legacy networks

ILR's draft measure concerns the update of the WACC value and is based on a methodology similar to the one used in 2014 for the determination of the WACC for fixed networks. This time, the regulator proposes to set the same WACC value for services provided over fixed and mobile networks, as it concluded that there is no longer a significant difference between the fixed and mobile network businesses, which would justify the application of different WACC levels.⁸

Following its analysis, the ILR sets a pre-tax nominal WACC of 7.1%, which corresponds to a decrease of 1.69 percentage points for fixed and of 4.9 percentage points for mobile services compared to the previous decisions.

The newly-calculated WACC will be applied for the determination of price caps for all the markets included in the Commission's Recommendation on Relevant Markets⁹, which ILR is planning to review over the next few years.

⁴ C(2014) 10218

⁵ The sum of the pre-tax real WACC and of the NGA risk premium resulted in a value of 9.16%.

⁶ C(2015) 1763

⁷ This WACC was based on data provided by Luxembourgish mobile operators.

⁸ ILR analysed three potential sources of difference in the WACC for fixed and mobile networks, namely the level of gearing, the asset beta and the debt premium. For the asset beta, for example, ILR adopted a so-called "full information" approach, which involves disentangling the different activities (such as mobile, fixed communications and other activities) within the holding groups and estimating the asset beta individually. ILR concluded that the analysis did not support the theory that there is a significant difference between the values of the parameters in the WACC for fixed and mobile markets.

⁹ Commission Recommendation 2014/710/EU 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

The ILR reached the following conclusions on the WACC parameters:

- I. For the calculation of the *gearing* level, the ILR considered the 3-year average gearing level of thirteen listed European telecommunications companies¹⁰, as well as the gearing level recommended by Moody's, a credit rating agency, for regulated energy companies. The ILR concluded it was appropriate to maintain a target gearing level of 40%, as in its previous calculation.
- II. ILR calculated the *cost of equity* according to the Capital Asset Pricing Model (CAPM)¹¹, using a *risk-free rate* of 2.24%, which corresponds to the average yields on the Luxembourgish government bonds over the last 7 years¹². As for the *equity risk premium*, which is set at 4.8%, ILR used data from the latest Dimson, Marsh and Staunton (DMS) (2015) study and from a survey of academics, analysts and executives done by Fernandez et al. (2014). Finally, ILR calculated the *equity beta* by considering beta observations of the thirteen comparators also used for the calculation of the target gearing level (see above). ILR chose an asset beta of 0.64, which corresponds to the 3-year average of the daily betas of the comparators. The asset beta is then re-leveraged by using a gearing level of 40% and a corporate tax rate of 29.22%, which results in an equity beta of 0.94. In conclusion, the ILR determined a nominal cost of equity of 6.75% for both fixed and mobile networks.
- III. The *cost of debt*¹³ was calculated by adding the *risk-free rate* (as set out above) to a *debt premium*. For the calculation of the latter, which was set at 1.2%, the ILR analysed the average debt premium, over the last 3 years, of 55 bonds traded by telecommunication companies with at least a BBB-credit rating and a maturity close to 10-years. In conclusion, the ILR determined a cost of debt of 3.44% for both fixed and mobile networks.
- IV. For the *corporate income tax rate*, the regulator used the Luxembourgish statutory tax rate of 29.22%.
- V. For the *inflation rate*, ILR considered both the average forward-looking inflation rate in the Eurozone and in Luxembourg and adopted an inflation rate of 1.8%.¹⁴

framework for electronic communications networks and services (Recommendation on Relevant Markets), OJ L 295, 11.10.2014, p. 79.

¹⁰ British Telecom, Deutsche Telekom, KPN, Mobistar, Orange, Proximus, Swisscom, Telecom Italia, Telefonica, Telekom Austria, Telenor, TeliaSonera and Vodafone.

¹¹ Cost of equity = risk-free rate + equity risk premium * equity beta.

¹² ILR considers that the current long-term interest rates of government bonds are very low, but that low yields will not persist indefinitely. It argues that, as the global economy recovers and market uncertainty declines, investors are likely to shift funds from safe assets towards riskier investments, driving up yields on government bonds. The ILR is therefore of the opinion that a longer averaging period should be used to estimate the risk-free rate.

¹³ Cost of debt = risk-free rate + debt premium.

¹⁴ ILR explains that the five-year average inflation rate was 1.4% for the Euro area and 1.82% for Luxembourg. Adopting a longer-term perspective, the "ECB survey of professional forecasters" estimates an average inflation rate of 1.8% by 2020 for the Eurozone.

2.2.2. NGA risk premium

As in its 2014 determination of the WACC, ILR allows for an NGA risk premium of 2.5%, which is to be added to the real pre-tax WACC for the calculation of wholesale price caps linked to fixed wholesale services provided over NGA networks.¹⁵

ILR concluded that allowing the incumbent, 'Entreprise des Postes et Télécommunications' (EPT), to recover an NGA risk premium was reasonable due to the fact that demand for very high speeds provided over NGA networks still remains marginal compared to the overall broadband demand, despite EPT having invested in the roll-out of NGA networks and, especially, in Fibre-to-the-Home (FTTH) in recent years¹⁶. Therefore, the regulator concludes that it is for now difficult to foresee when NGA services will overtake services over copper in terms of demand, in order for investments in the roll-out of NGA networks to eventually pay off. Therefore, considering the intention of EPT to further roll-out FTTH on the one hand and the riskiness of these investments on the other, the ILR believes that maintaining the NGA risk premium is justified.

Table 1: Parameters and values used by ILR to calculate the WACC

	Fixed network	Mobile network
Cost of debt = $R_F + DP$		
Risk-free rate (R_F)		2.24 %
Debt Premium (DP)		1.20 %
Nominal cost of debt (C_D)		3.44 %
Cost of equity = $R_F + \beta * ERP$		
Risk-free rate (R_F)		2.24 %
Equity Beta (β)		0.94
Equity Risk Premium (ERP)		4.80 %
Nominal cost of equity (C_E)		6.75 %
Other parameters		
Tax rate (t)		29.22 %
Gearing (G)		40.00 %
Inflation rate		1.80 %
NGA risk premium	2.50 %	n/a
WACC		
Post-tax nominal WACC		5.03 %
Pre-tax nominal WACC		7.10 %
Pre-tax real WACC		5.21 %
Pre-tax real WACC + NGA risk premium	7.71 %	n/a

¹⁵ In its response to the RFI, ILR confirmed that the NGA risk premium will not be used for the determination of price caps of services provided over the copper legacy network or for mobile termination rates.

¹⁶ NGA coverage in Luxembourg has reached 89% in 2014 and the coverage of FTTH has increased from 32% in 2012 to 40% in 2014.

3. NO COMMENTS

The Commission has examined the notifications and has no comments.¹⁷

Pursuant to Article 7(7) of the Framework Directive, ILR may adopt the draft measure and, where it does so, shall communicate it to the Commission.

The Commission's position on this particular notification is without prejudice to any position it may take *vis-à-vis* other notified draft measures.

Pursuant to Point 15 of Recommendation 2008/850/EC¹⁸ the Commission will publish this document on its website. The Commission does not consider the information contained herein to be confidential. You are invited to inform the Commission¹⁹ within three working days following receipt whether you consider that, in accordance with EU and national rules on business confidentiality, this document contains confidential information which you wish to have deleted prior to such publication.²⁰ You should give reasons for any such request.

Yours sincerely,

For the Commission,
Roberto Viola
Director-General

¹⁷ In accordance with Article 7(3) of the Framework Directive.

¹⁸ Commission Recommendation 2008/850/EC of 15 October 2008 on notifications, time limits and consultations provided for in Article 7 of 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 301, 12.11.2008, p. 23.

¹⁹ Your request should be sent either by email: CNECT-ARTICLE7@ec.europa.eu or by fax: +32 2 298 87 82.

²⁰ The Commission may inform the public of the result of its assessment before the end of this three-day period.