

## Comparing Ireland and UK WACCs

14 July 2014

### 1. Introduction

Regulators in Ireland understandably like to compare their cost of capital calculations with regulators in the UK. In recent months, we have noticed a major error creeping into these comparisons: specifically, Irish regulators have been benchmarking their CPI-stripped real WACCs to UK regulators' RPI-stripped real WACCs without any adjustments. This is not a like-for-like comparison. A CPI-stripped WACC should naturally sit at a much higher level than an RPI-stripped WACC, meaning that any attempt to align real rates of return in Ireland to observed real rates of return in the UK will short-change Irish regulated companies.

We explain this important point in this short briefing note.

### 2. Background

#### 2.1 The real rate of return

Regulators in both Ireland and the UK typically set price caps that index in line with inflation. One of the building blocks within the price cap calculation is usually a regulatory asset base (RAB) that also indexes annually in line with inflation. As a corollary, so as to avoid compensating investors twice for the effects of inflation, the rate of return that feeds into allowed revenues needs to be an inflation-stripped, real rate of return.

It can be seen that the total return that investors take from regulated companies under this model comes in two parts: the in-year real rate of return and the annual, inflation-linked appreciation in the value of the RAB. The two pieces should not really be viewed in isolation from each other. Investors that care about the nominal return that they make from their investments will look first and foremost at the sum of the parts rather than the size of either individual component.

#### 2.2 Inflation measures

Inflation may be measured in different ways. Inflation in Ireland is almost always the annual change in the Consumer Price Index. In the UK, the situation is more complicated in that two different inflation measures are in everyday usage:

- the annual change in the Consumer Price Index; and
- the annual change in the Retail Price Index.

Ireland's CPI and the UK's CPI are broadly very similar. The UK's RPI is a different type of inflation measure which uses the arithmetic mean price of individual goods and services rather than the geometric mean used in CPI calculations. Because of their different statistical properties, RPI almost always increases at a faster rate than CPI (i.e. the so-called "formula effect", which the Office of National Statistics estimates to be worth around 1 percentage point per annum).

In a 2013 review, the UK's National Statistician found<sup>1</sup> that RPI does not meet international standards and that CPI is objectively the better measure of inflation in the UK. RPI has since had

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<sup>1</sup> <http://www.ons.gov.uk/ons/rel/mro/news-release/rpirecommendations/rpinewsrelease.html>

its designation as a national statistic withdrawn, but will still be published monthly alongside CPI to assist organisations that have historically made reference to RPI.

### 3. Inflation forecasts

Current inflation forecasts are given in tables 1 and 2 below.

**Table 1: IMF forecasts of CPI inflation in Ireland**

	2014	2015	2016	2017	2018	2019
CPI, Ireland	0.6%	1.1%	1.2%	1.4%	1.7%	1.7%

Source: IMF World Economic Outlook, April 2014.

**Table 2: Office of Budget Responsibility forecasts of CPI and RPI inflation in the UK**

	2014/15	2015/16	2016/17	2017/18	2018/19
CPI, UK	1.9%	2.0%	2.0%	2.0%	2.0%
RPI, UK	2.7%	3.3%	3.6%	3.8%	3.9%

Source: OBR economic outlook, March 2014.

The latest projections have CPI inflation in Ireland running at below 2% over a period of five years. In the UK, CPI inflation is forecast to be in line with the Bank of England's inflation target of 2% per annum. This puts annual average RPI inflation at around 3.5% over a five-year period.

### 4. Implications

If the forecasts are correct, regulated companies in Ireland will give investors the real rate of return included in their price controls plus the RAB indexation shown in table 1. Regulated companies in the UK almost all have RPI-linked price caps and so will give investors the real rate of return included in their price controls plus the RAB indexation shown in the RPI line in table 2.

It can be seen straight away that UK RPI RAB indexation is worth far more than CPI RAB indexation in Ireland. Indeed, under some recent proposals, UK investors may soon get more from RAB indexation than they will from their allowed in-year real return.

This is important context when one seeks to compare the real WACCs being used by regulators in the two countries. To illustrate this point, we set out in table 3 how investors might compare recent cost of capital pronouncements from the Commission for Energy Regulation and Ofgem and from the Commission for Aviation Regulation and the CAA.

**Table 3: Returns in Ireland and the UK compared**

Sector/company	In-year, real rate of return <sup>1</sup>	Value of RAB indexation	Total return
<i>Electricity networks</i>			
ESB Networks	~ 4.85%	1.5%	~ 6.35%
GB DNOs	3.85%	3.5%	7.35%
<i>Airports</i>			
Dublin Airport	~ 5.25%	1.5%	~ 6.75%
Heathrow Airport	4.65%	3.5%	8.15%

<sup>1</sup> The in-year real rate of return is the regulator's most recent estimate of the real, vanilla WACC.

The table shows that investors in UK regulated companies are being offered significantly higher total returns than investors in Ireland’s regulated companies, once account is made of both of the components of return.

It is not our intention in this paper to assess what the right level of return is in either country, nor to pronounce on whether this differential is justified and fair. Instead, we wish to point out that some of the cross-country comparisons that regulators in Ireland have relied upon recently when making WACC calculations have been inappropriate. We illustrate this with two examples below.

Commission for Energy Regulation, January 2014

*Risk Free Rate (RfR)*

The CC indicates it considers the range 1.0 to 1.5 per cent relevant for the risk-free rate,<sup>14</sup> and indicates an “illustrative figure” compatible with its final proposed WACC value of 1.1-1.4 for the risk-free rate.<sup>15</sup>

This contrasts with the August 2013 EE range for 2011-12 of 1.4-2.0 per cent for the risk-free rate, and 1.75-2.0 for 2014-2015.

Although Irish risk-free rate values may have been slightly above the UK value and Eurozone risk-free rate values may be higher than those in the UK at present, the gap between the Competition Commission’s values and those EE propose is significant.

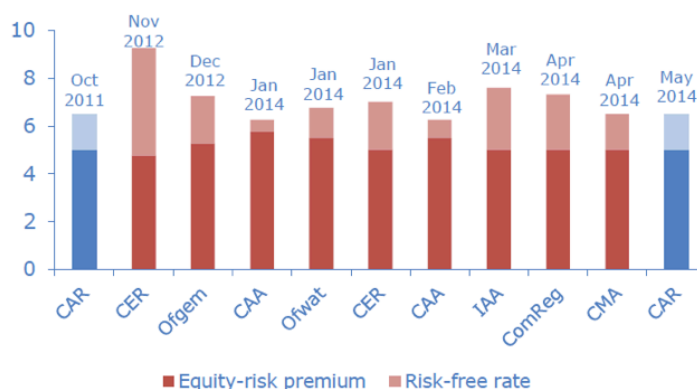
EE believe that the risk-free rate for the Eurozone in 2011 and 2012 is likely to have been materially above 1 per cent, but EE note also that a key plank of the lower end of their 2011-2012 range was the Ofcom risk-free rate determinations of 2011 and 2012.

On that basis EE feel that this new CC precedent suggests that the lower ends of their risk-free rate estimates should be reduced. For 2011-2012 EE do not propose to go all the way down to the bottom of the CC’s range, instead “splitting the difference”, shifting from 1.4 to 1.2 per cent and keeping EE’s upper-end estimate unchanged.

Commission for Aviation Regulation, May 2014

6.66 Our point estimates imply a total market return (the sum of the risk-free rate and the equity-risk premium) of 6.5%, the same as in our 2011 IAA Determination. This corresponds to the value used by the UK’s Competition and Markets Authority in its review of Northern Ireland Electricity in November 2013. The total market return does not directly feed into our calculations for the cost of capital, but nevertheless serves as a check. Where we have adopted a lower (higher) risk-free rate, our equity-risk premium would have been higher (lower), so as to preserve a total market return that is around 6.5% for this Draft Determination.

**Chart 6.7: Total Market Returns (%) Assumed by Regulators Since 2011**



In the first of these examples, the Commission for Energy Regulation benchmarks its calculation of the risk-free rate to the assessment that the UK Competition Commission (CC) made in draft proposals for Northern Ireland Electricity. This is a comparison between a CPI-stripped Irish real risk-free rate and an RPI-stripped UK real risk-free rate. There is no reason to think that these numbers should be similar. Had the CC calculated a CPI-stripped real risk-free rate, then one could see why some benchmarking might be appropriate. But, as it is, the CC was estimating the value of the risk-free rate once allowance is made for a statistically invalid measure of inflation that runs in excess of 3% per annum. This is naturally a much lower number than a CPI-stripped real risk-free rate.

In the second example, the Commission for Aviation Regulation benchmarks its calculation of the expected return on the market portfolio (i.e. the  $R_m$  term in CAPM) to a basket of Irish and UK estimates. These are comparisons between CPI-stripped stock market returns and RPI-stripped stock market returns. Again, there is no reason to think that the numbers should be similar. Real returns after allowing for CPI inflation will naturally sit much higher than real returns after allowing for RPI inflation.

In both of the cases the regulator has therefore made a mistake. Insofar as the Commission for Energy Regulation and the Commission for Aviation Regulation used UK precedent to fix real returns for Irish companies, the benchmarking led it to lower numbers than would be justified by a like-for-like read-across to recent UK estimates.

## **5. Conclusion**

Proper, like-for-like comparisons between WACCs in Ireland and the UK need to make allowance for the differences in CPI and RPI inflation measures. We can offer the following rule of thumb: any RPI-stripped real terms figure that a UK regulator quotes will naturally be 1 to 2 percentage points lower than the equivalent CPI-stripped real terms figure. It is the latter benchmark that Irish regulators and regulated companies should be referencing in their analysis.