ofgem

Memo

Amendments to Cost of Debt Indexation Model

A summary of the issues regarding the calculation for MOD year 2018/19 in the Cost of Debt Indexation model, and proposed way forward	From	RIIO Finance
	To	Interested parties
	Cc	
	Date	30 November 2017

1.1. The IUDMRZC series, published by The Bank of England (BoE), is the 10 Years Real Zero Coupon Yield from British Government Securities. In accordance with paragraph 5.9 of the Financial Handbook, Ofgem uses IUDMRZC to derive the market view of inflation, which in turn is applied to derive the real cost of investment-grade debt used in the Price Control Financial Model (PCFM).

1.2. In May 2017 the BoE suspended the publication of IUDMRZC. At the time of the Annual Iteration Process (AIP) for the Relevant Year 2018/19, we have not yet ascertained as to whether this is a temporary suspension or whether IUDMRZC will cease to be published and will be replaced with an alternative.

1.3. Paragraph 5.10 of the Financial Handbook states:

> *"If, for any reason, iBoxx data or Bank of England data is unavailable for an entire trading days period in time to determine revised PCFM Variable Values for the cost of corporate debt for any Annual Iteration Process, then for that Annual Iteration Process only, the trading days period concerned shall be deemed to have ended on the last trading day for which data has been published. If the data concerned is subsequently published, revised PCFM Variable Values for the affected Relevant Years will be directed."*

1.4. As we have not ascertained that IUDMRZC will cease to be published, we have applied Paragraph 5.10 in determining the PCFM Variable Value cost of debt for Relevant Year 2018/19 by using IUDMRZC until the latest available data (4 May 2017).

1.5. In line with Paragraph 5.10, if IUDMRZC is subsequently published we intend to redirect the PCFM Variable Value cost of debt for Relevant Year 2018/19 as part of a subsequent AIP.

1.6. If it is confirmed that IUDMRZC will cease to be published and will be replaced with an alternative, we will apply Paragraph 5.11 of the Financial Handbook, which states:

> *"If, for any reason, the iBoxx or Bank of England series identified above cease to be published, or if there is a material change in the basis of those indices, Ofgem will consult on alternatives, as well as on any reconciliation that may need to be undertaken between the above series and any replacements."*

1.7. In this case we will consult on alternatives and we would intend to apply any reconciliation to redirect the PCFM Variable Value cost of debt for Relevant Year 2018/19 as part of a subsequent AIP.

1.8. The determination of the PCFM Variable Value cost of debt for Relevant Year 2018/19 in application of Paragraph 5.10, has required the update of the calculation of the annual average of the real cost of debt series in the Cost of Debt Indexation Model (file named "Cost of Debt Indexation Model AIP 2017.xlsx"). In particular, we have calculated the "6 month" and "10yr" trailing averages for Relevant Year 2018/19 using data from 1 April 2017 and 1 November 2007 respectively, up until 4 May 2017 (as opposed to 31 October 2017).

1.9. In order to address the specific issue of calculating the cost of debt on fewer than 10 years' data, we found the most appropriate place to produce our calculations was the "**SHET weighted index**" sheet of the aforementioned Cost of Debt Indexation Model workbook. Calculations for all sectors can be found on this sheet.

1.10. To achieve the desired result, we have modified, in the "Dates" table in sheet "**SHET weighted index**", the "Start 10yr", "End index" and "Prior 31 October" dates for Relevant Year 2018/19 only (range **'SHET weighted index'!G4:G5** and cell **'SHET weighted index'!G8**, highlighted in yellow and formatted in bold and red font colour). This, in turn, impacts on the row reference numbers in the "Rows" table, ensuring that the formulae for Relevant year 2018/19 in the "Interest rate averages" table (cells **G21:G23**) calculate the interest rate averages by selecting data up until 4 May 2017 only.

1.11. First, we have hardcoded 04/05/2017 in cell G4 as the end index date of the calculation for the 10yr and 10-20yr trailing averages. However, this affects the content of cell **G5**, i.e. the start date (that is derived moving 10 years backwords from the end date). In order to keep the start date at 1 November 2007, we have also amended cell **G5,** so that it carries one year forward the date in the adjacent cell **F5**. We have achieved this result by inserting, in cell **G5**, the formula **=EOMONTH(F5,11)+1**. Finally, to complete the update of the PCFM Variable Value cost of debt applied to SHE-T only, we have hardcoded **04/05/2017** in cell **G8**, as the "Prior 31 October" end date of the calculation for Relevant Year 2017/18.

1.12. The PCFM Variable Value cost of debt used in AIP 2017, following the above modifications, can be found in Table 1 below:

Table 1: Real cost of debt

Relevant Year:	**2013/14**	**2014/15**	**2015/16**	**2016/17**	**2017/18**	**2018/19**
Data up to:	**31/10/2012**	**31/10/2013**	**31/10/2014**	**31/10/2015**	**31/10/2016**	**04/05/2017**
GD / GT / ET (exc. SHE-T)	2.92%	2.72%	2.55%	2.38%	2.22%	2.03%
SHE-T	2.92%	2.55%	2.16%	1.80%	1.53%	1.25%
ED-Fast Track	2.92%	2.72%	2.55%	2.38%	2.22%	2.03%
ED-Slow Track	-	-	2.55%	2.42%	2.29%	2.19%