

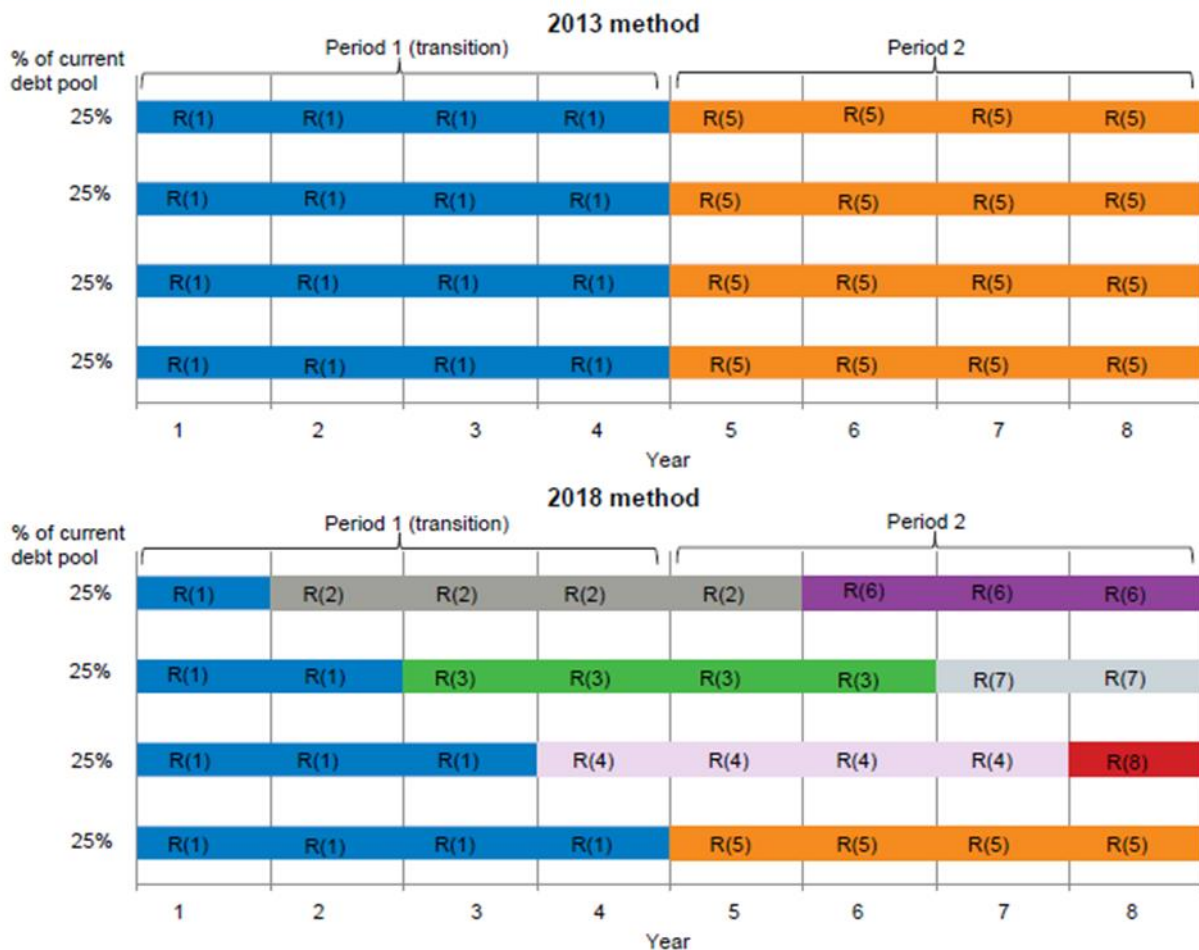
# Bi-annual update addendum

28 February 2019

The WACC calculations presented in the February 2019 bi-annual update are based on a current cost of debt figure that was calculated using a trailing average method.

In our February 2018 final report on our review of the WACC method, we decided to provide for a transition between the prior method of calculating the current cost of debt and the new trailing average method. The figure below, from our 2018 final report on the WACC method, illustrated how the transition would work.

**Figure 4.4 Calculating the current cost of debt under our 2013 method and 2018 method**



Note: R(y) is the interest rate on a bond issued in Year y. For example, R(0), is the interest rate for a 10-year bond issued in Year 0.

To provide additional information on the WACC where we apply a transition period for the trailing average, we have published this additional fact sheet.

To provide more complete information to stakeholders, this addendum sets out what the current cost of debt and WACC should be for a water utility with the transition incorporated for the first year of the new regulatory period.

The bi-annual update assumes a four year regulatory period. The numbers shown below would vary for regulatory periods of different length. That is because the number of current debt tranches is equal to the length of the regulatory period, and because the inflation forecast is a geometric average across the number of years in the regulatory period.

Table 1 shows the WACC calculation for a water utility with a four year regulatory period on the transition basis. This may be contrasted to Table 2, which shows the WACC calculation for a water utility on a four year regulatory period on the trailing average basis, as we used in the February 2019 bi-annual update.

For other upcoming water reviews where a five year determination period may apply, these WACC estimates would change, due to the effect of the period on the current cost of debt and inflation.

**Table 1. Water industry WACC including transition at the first regulatory reset (4 year regulatory period)**

	Step 1		Step 2 - Final WACC range		
	Current market data	Long term averages	Lower	Midpoint	Upper
Nominal risk free rate	2.4%	3.6%			
Inflation	2.4%	2.4%			
Implied Debt Margin	2.5%	2.7%			
Market Risk premium	8.6%	6.0%			
Debt funding	60%	60%			
Equity funding	40%	40%			
Total funding (debt + equity)	100%	100%			
Gamma	0.25	0.25			
Corporate tax rate	30%	30%			
Effective tax rate for equity	30%	30%			
Effective tax rate for debt	30%	30%			
Equity beta	0.70	0.70			
Cost of equity (nominal post-tax)	8.4%	7.8%			
Cost of equity (real-post tax)	5.9%	5.3%			
Cost of debt (nominal pre-tax)	4.9%	6.3%			
Cost of debt (real pre-tax)	2.4%	3.8%			
Nominal Vanilla (post-tax nominal) WACC	6.3%	6.9%	6.3%	6.6%	6.9%
<b>Post-tax real WACC</b>	<b>3.8%</b>	<b>4.4%</b>	<b>3.8%</b>	<b>4.1%</b>	<b>4.4%</b>
Pre-tax nominal WACC	7.3%	7.8%	7.3%	7.5%	7.8%
pre-tax real WACC point estimate	4.8%	5.3%	4.8%	5.0%	5.3%

**Table 2. Water industry WACC based on Feb 2019 bi-annual update report**

	Step 1		Step 2 - Final WACC range		
	Current market data	Long term averages	Lower	Midpoint	Upper
Nominal risk free rate	2.7%	3.6%			
Inflation	2.4%	2.4%			
Implied Debt Margin	2.3%	2.7%			
Market Risk premium	8.6%	6.0%			
Debt funding	60%	60%			
Equity funding	40%	40%			
Total funding (debt + equity)	100%	100%			
Gamma	0.25	0.25			
Corporate tax rate	30%	30%			
Effective tax rate for equity	30%	30%			
Effective tax rate for debt	30%	30%			
Equity beta	0.70	0.70			
Cost of equity (nominal post-tax)	8.7%	7.8%			
Cost of equity (real-post tax)	6.2%	5.3%			
Cost of debt (nominal pre-tax)	5.0%	6.3%			
Cost of debt (real pre-tax)	2.5%	3.8%			
Nominal Vanilla (post-tax nominal) WACC	6.5%	6.9%	6.5%	6.7%	6.9%
<b>Post-tax real WACC</b>	<b>4.0%</b>	<b>4.4%</b>	<b>4.0%</b>	<b>4.2%</b>	<b>4.4%</b>
Pre-tax nominal WACC	7.5%	7.8%	7.5%	7.7%	7.8%
pre-tax real WACC point estimate	5.0%	5.3%	5.0%	5.1%	5.3%