

Both draft worked examples of the QTC weighted trailing average approach have been prepared for illustrative purposes. The initial inputs (eg, PTRM debt balances and 10-year BBB+ yields) are hypothetical.

QTC WTA V1

This version initially compensates each annual increase in PTRM debt at the prevailing 10yr BBB+ yield. This is done by producing ten ‘weighted average’ 10yr BBB+ yields each year. The weight given to the prevailing 10yr BBB+ yield equals the change in opening PTRM debt divided by opening PTRM debt for that year.

For example, if PTRM debt increases from \$1,000 to \$1,250, the weight given to the prevailing 10yr BBB+ yield is 0.20 (ie, \$250 / \$1,250). A 0.80 weight is given to the previous 10yr BBB+ yields in the trailing average after the annual refinancing. The allowed cost of debt is a simple average of the weighted average yields:

Yield	10yr BBB+ yields post 10% refi	Weighted average 10yr BBB+ calculations	Weighted 10yr BBB+ yields post 10% refi and Δ debt
1	4.45%	$4.45\% \times 0.80 + 7.00\% \times 0.20$	4.96%
2	4.50%	$4.50\% \times 0.80 + 7.00\% \times 0.20$	5.00%
3	3.30%	$3.30\% \times 0.80 + 7.00\% \times 0.20$	4.04%
4	2.70%	$2.70\% \times 0.80 + 7.00\% \times 0.20$	3.56%
5	2.85%	$2.85\% \times 0.80 + 7.00\% \times 0.20$	3.68%
6	6.50%	$6.50\% \times 0.80 + 7.00\% \times 0.20$	6.60%
7	6.30%	$6.30\% \times 0.80 + 7.00\% \times 0.20$	6.44%
8	5.75%	$5.75\% \times 0.80 + 7.00\% \times 0.20$	6.00%
9	6.00%	$6.00\% \times 0.80 + 7.00\% \times 0.20$	6.20%
10 (prevailing)	7.00%	$7.00\% \times 0.80 + 7.00\% \times 0.20$	7.00%
Allowed Kd			5.35%

The **AER OTD transition** sheet shows that if each annual change in PTRM debt is greater than or equal to zero, this version produces the same allowed cost of debt as:

1. continuing to apply a simple trailing average to the initial opening PTRM debt balance (ie, the first year under the WTA approach)
2. *separately*, applying the AER’s on-the-day transition to a 10yr simple trailing average to each subsequent annual increase in PTRM debt, and then
3. aggregating the results to produce a single average allowed cost of debt on total opening PTRM debt.

If the annual change in PTRM debt is negative the weight is set to equal zero for that year.

QTC WTA V2

This version produces the same allowed cost of debt as QTC QTA V1 if each annual change in PTRM debt is greater than or equal to zero. In years where PTRM debt reduces, the amount of maturing debt that is refinanced is reduced by the same amount, which results in an uneven benchmark debt profile. The main issue with this version is that the reduction in PTRM debt may be greater than the amount of maturing debt (eg, a NSP undergoing accelerated RAB depreciation).

Adjustment for differences in forecast/roll forward weights

Both WTAs include an adjustment for differences in weights based on forecast and roll forward PTRM debt. The adjustment is performed at the end of the 5-year regulatory period after the roll forward RABs have been determined. The adjustment involves two steps:

1. In the first year of the next regulatory period, the ten weighted average 10yr BBB+ yields are reset to equal the yields based on the roll forward weights in the previous regulatory period.
2. Determining the annual differences in the current regulatory period between the allowed cost of debt based on forecast and roll forward weights. To avoid double-counting with CESS, the differences are applied to forecast PTRM debt, with the total dollar amount being a positive/negative revenue adjustment in the next regulatory period (rows 39-42 in QTC WTA V1 and rows 61-64 in QTC WTA V2).