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# PR24

**NORTHUMBRIAN**  
**WATER** *living water*

**ESSEX & SUFFOLK**  
**WATER** *living water*

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## **RISK AND RETURN TABLE COMMENTARY**

**NES\_COM2**



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## **1. RISK AND RETURN GENERAL COMMENTARY**

We have submitted two financial models<sup>1</sup> – one for notional gearing and one for actual gearing. Whilst we appreciate that it is the notional gearing one that Ofwat will be using, for transparency, we have supplied the actual gearing model we used to populate the RR tables such as RR16-20.

## **2. RR1 – REVENUE COST RECOVERY INPUTS**

We have used the Ofwat EV adjusted WACC<sup>2</sup> as set out in RR26, with values in nominal terms.

We have used the same Ofwat EV adjusted WACC components for all controls for all years 2025-30. Nominal values include 2% CPIH inflation.

For 2030 onwards, we have forecast an increase in the cost of all debt to 5.74% to reflect the transition from current embedded debt to post 2025 debt. We leave the cost of equity at the RR25 level, due to uncertainty over the risk free rate trajectory.

We have made no adjustment to either PAYG or Run Off Rates for financeability.

We have set PAYG rates at the 'natural rate' to match opex for all controls and all years. We set PAYG to target a zero value for all years for the Financial Model, Financial Indicators, line 72 – Excess Fast Money – Appointee Nominal.

We have set PAYG Base run off rate to match the 4.5% rate set out by Ofwat in the PR24 Guidance<sup>3</sup>. For Bioresources, we used the NWL PR19 7.28% rate as per Table 7.3 of the guidance.

For post 2025 investment, we used the full asset lives of the AMP8 capital programme. These were derived from a weighted average analysis of the separate investment drivers. The run off rates are lower than the base ones as we are using full life rather than remaining lives. Wastewater investment is particularly long life with the long life storm overflow sewers dominating. See RR29 for more details.

We assumed a 1% pa RPI-CPIH index linked wedge. In the 15 years since 08/09, the average wedge has been 0.96%. We revert to zero wedge from 2030 onwards<sup>4</sup>.

## **3. RR2 – TOTEX INPUTS TO CROSS REFERENCE WITH CA**

We have used our Long Term Delivery Strategy capex and opex for 2025-30 totex.

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<sup>1</sup> Version 21a <https://www.ofwat.gov.uk/publication/pr24-final-methodology-financial-model-excel-file/>

<sup>2</sup> Updated for market data as per Ofwat email of 8<sup>th</sup> September

<sup>3</sup> Table 7.2 Appendix 10 PR24 final methodology

<sup>4</sup> <https://uksa.statisticsauthority.gov.uk/news/response-to-the-joint-consultation-on-reforming-the-methodology-of-the-retail-prices-index/>

We have assumed equity issuance costs at 2% of equity issuance<sup>5</sup>. We have included the costs in Tables CW1 & CWW! Line 3.

For capital grants and contributions, all data is taken from Table DS1e and align to CW1.14, CWW1.14. We note that, whilst Tables CW1.14 and CWW1.14 **include** contributions for diversions, lines CW1.10 and CWW1.10 **exclude** diversions costs, per the guidance. This appears to be a funding mismatch, that we bring to Ofwat’s attention.

We do not forecast any grants & contributions for operating costs.

**4. RR3 – RCV OPENING BALANCES**

We take the data for this table from the RCV feeder model outputs, lines 46-59.

**5. RR4 – FINANCING MODEL INPUTS**

For all debt allocations across the wholesale price controls, we used allocations by % of opening RCV at 1/4/25 (per RR3).

**Line RR4.7: Proportion of Index Linked Debt – Notional company; 40% proportion assumed**

The PR24 guidance<sup>6</sup> states: *For the notional capital structure, we will adopt an opening proportion of index linked debt of 33% and maintain the proportion of index linked debt at a minimum of 33% over 2025-30, with new index linked debt raised over the period being linked to CPIH (p39)*

*Consistent with the methodology set out, and consistently applied since the publication of Financing Networks in 2006, our approach is to adopt a level of index-linked debt that reflects a level that is achievable by the sector (page 43)*

As at 31/3/23, the average industry proportion of index linked debt was 53%<sup>7</sup> and has been consistently over 50% since 2020.

For this reason, whilst we use the opening proportion of 33%, we believe an increase to the industry average of 50% over 2025-30 would be in line with Ofwat’s guidance and is clearly achievable for actual structures.

In practice, the financial model does not allow an annually increasing ILD% target<sup>8</sup>, so we have instead set a 40% flat proportion in RR4.7 for the notional company to reflect the average for 2025-30.

Year	2025-26	2026-27	2027-28	2028-29	2029-30
Proportion of ILD	30%	35%	<b>40%</b>	45%	50%

Data Block	Source	Note
Notional gearing target	55% Notional App10 p39	We use 55 for notional and 75% for 1/4/25 actual gearing
<b>Opening Balances (all set at actual levels)</b>		
Index linked debt	33% Notional App10 p39	We used <b>40%</b> for notional and 50% for 1/4/25 actual gearing

<sup>5</sup> Appendix 10, p48

<sup>6</sup> Appendix 10

<sup>7</sup> 2023APR table 1E

<sup>8</sup> See 'Wholesale debt' lines 10-23

	Balance from RR24	
Fixed rate debt	Balance from RR24	FM does not allow this to be increased through issuance
Floating rate debt	Balance from RR24	FM adds this to fixed debt
<b>Interest Rates</b>		
Index linked debt		
RPI	RR24.17&18	Fixed existing RPI ILD rate only
CPIH	RR24.19&20	Weighted mix of existing & new CPIH ILD interest rate
Fixed rate debt	RR24.15	Existing Fixed Debt interest rate only as the FM uses cash balance rather than increased Fixed Debt issuance
Cash balance	Cash balance at 1/4/25	Cash balance
Cash interest rate	Nominal cost of new debt	From WACC
Equity	Share capital balance	
Equity issued	Equity issued	Allocated by control
Dividend creditors	None	
Dividends	Ordinary dividends	We applied the dividend yield to the previous year closing regulatory equity <sup>9</sup>
Dividends	Dividend yield	50% of real base equity return, per Ofwat guidance (App10, p48)

## 6. RR5 - TAX

Tax commentary

### Section: Tax opening balances, lines 1 - 19

#### Opening current tax liabilities (lines 1 – 6)

There have been tax losses since the year ended 31 March 2022 which are expected to continue and so opening current tax liabilities are expected to be nil.

#### Opening tax loss balance (lines 7 – 12)

The opening tax loss balance has been calculated by disclaiming capital allowances in the four years ended 31 March 2025.

#### Opening deferred tax balance (lines 13 – 18)

The opening deferred tax balance has been calculated using a deferred tax rate of 25% which is the rate enacted by Finance Act 2021.

#### Current tax liabilities (line 19)

The opening current tax liabilities are expected to be nil for the appointee.

### Section: Capital allowances, lines 20 – 43

<sup>9</sup> FM Prepost impacts line 526-527

The tax position reflected in the APR at 31 March 2023 has been rolled forward using the company's financial forecasts for the two years ending 31 March 2025. Amounts of capital expenditure have been allocated across the various tax categories to enable the capital allowance pool balances at 31 March 2025 to be projected. Allocations are estimated but reflect the company's experience averaged from the two years ended 31 March 2023.

A writing down allowance rate of 18%/6%/3% has been used for the projection of the general pool, special rate pool and structures and building allowance pool respectively. The expensing regime has been taken into account with first year allowances of 100%/50% for the general pool and special rate pool respectively being claimed.

Capital allowance disclaimers have been made for the two years ending 31 March 2025 and the two years ended 31 March 2023 have been revisited and disclaimers have been applied.

The final pool balances at 31 March 2025 have been allocated across the four price controls in proportion to RCVs (which is line with Ofwat's suggested approach).

**Section: Capital allowance rates, lines 44 – 46**

The enacted rates of 18%/6%/3% for the general pool, special rate pool and structures and building allowance pool respectively have been applied in each year.

**Section: First year allowance rates, lines 47 – 49**

The expensing regime rates of 100%/50% for the general pool and special rate pool respectively have been inserted for the year ending 31 March 2026.

**Section: New capital expenditure, lines 50 – 97**

Adjustments for the capex programme give rise to the largest tax adjustments in the company's tax computation. Accordingly, NWL has taken advice on the allocation of the AMP8 wholesale capex programme across the various tax categories. External consultants with a high level of expertise in the industry – ChandlerKBS – were engaged for this purpose. They have provided annual services to NWL for many years to analyse capex for tax purposes so have significant and relevant experience in this field.

In preparing its PR24 Business Plan NWL has continued to apply the methodology that was agreed with HMRC in 2013 in relation to water and sewage treatment works.

100% of the qualifying capital expenditure in the year ending 31 March 2026 has been allocated to the expensing regime allowances for the general pool and special rate pool.

**Section: Other tax inputs, lines 98 – 159**

a) P&L expenditure not allowable as a deduction from taxable trading profits (lines 98 – 103)

Estimates of expenditure not allowable for tax purposes have been made based on a review of the company’s recent tax returns. A disallowance has been made in respect of costs such as entertaining, legal fees, fines and penalties, car lease payments etc. The total amount has been allocated across the four price controls by reference to RCVs at 31 March 2025.

b) Other adjustments to taxable profits (lines 104 – 109)

This category includes the following items:

(i) Capitalised pension service costs

Pension service costs are split between P&L and fixed assets. Tax relief for pension costs is on a paid (or cash) basis. No relief is allowed for service costs. Capital allowances are therefore overstated to the extent eligible net capex includes an element related to service costs. An adjustment to effectively reduce capital allowances is included in this category.

(ii) Remove ‘double taxation’ of infrastructure charges

Net capex in the Ofwat model (ie gross capex less grants and contributions) is allocated across the various tax categories. This means infrastructure charges that are included in grants and contributions are effectively being taxed twice – once in lines 148 – 153, and again via capital allowances. Accordingly, an adjustment is included in these lines to remove the duplication in capital allowances.

(iii) Remove P&L diversion income not taxed on accounts basis

Diversion income that is dealt with under IFRS15 is reflected in ‘non-price control’ revenue. As the existing ‘capital’ tax treatment continues, an adjustment is necessary to remove the P&L credit from taxable income.

(iv) Pension spreading

A large contribution is expected to be made to the pension scheme in the year ending 31 March 2024. Due to the size of the contribution in comparison to the previous year the amount will be spread for tax purposes over 4 years.

The above adjustments are summarised in the table below:

£’m	2025-26	2026-27	2027-28	2028-29	2029-30
Reduction in capital allowances relating to capitalised pension service cost	0.214	0.378	0.519	0.642	0.750
Remove ‘double taxation’ of infrastructure charges	-0.168	-0.326	-0.476	-0.617	-0.751
Remove diversion income included in P&L	-1.265	-1.235	-1.205	-1.165	-1.136
Pension spreading	-40.750	-40.750	0	0	0



<b>Total</b>	<b>-41.969</b>	<b>-41.933</b>	<b>-1.162</b>	<b>-1.140</b>	<b>-1.137</b>
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c) Change in general provisions (lines 110 – 115)

At 31 March 2023 NWL had some provisions which are treated as 'general' for tax purposes (for example, obsolete stock, holiday pay and contractual pension entitlements of former employees). The accounting assumption is that the annual movement will be nil – that is, either the provision balance will remain unchanged or any additional charge in the P&L will be matched by expenditure incurred. Accordingly, there is no impact on taxable profits.

The provision for contractual pension entitlements of former employees is expected to be utilised by the year ending 31 March 2028. The total amount has been allocated across the four price controls by reference to RCVs at 31 March 2025.

d) Finance lease depreciation (lines 116 – 121)

NWL's commercial fleet is held under finance lease arrangements. The vast majority of vehicles are typically depreciated over 5 years. Tax relief is received in the form of depreciation under HMRC's SP3/91.

Depreciation included in these lines comprises amounts in respect of brought forward capex and new capex in AMP8 identified in "new capital expenditure, lines 50 – 97". Total deductions due under SP3/91 have been allocated across the price controls by reference to RCVs at 31 March 2025.

e) P&L expenditure relating to renewals not allowable as a deduction from taxable trading profits (lines 122 – 127)

No adjustments have been made for the disallowance of any renewals costs included in the P&L. This reflects the treatment adopted in recent tax computations.

f) Tax cashflow initial balance (lines 128 – 133)

Due to tax losses there is no initial tax liability and therefore these lines are nil.

g) Tax loss allowance, statutory corporation tax rate and adjustment to tax payment (lines 134 – 141)

All of the £5m tax loss allowance has been allocated to NWL. The enacted tax rate of 25% has been reflect. No adjustments to tax payment are made.

h) Charge for DB schemes – residential retail (lines 142 – 147)

The DB scheme service costs for residential retail are estimated to be £0.250m per year. The total amount has been allocated across the four price controls by reference to RCVs at 31 March 2025.

i) Other taxable income – Amortisation on grants and contributions (lines 148 – 153)

Some grants and contributions (ie infrastructure charges) are taxed on an accounts amortisation basis following an agreement made between HMRC and the industry in 2011. The amounts in these lines are estimates of the amortisation

for the 2025-30 period and reflect brought forward and new grants and contributions. Total amortisation has been allocated across the relevant price controls by reference to RCVs at 31 March 2025.

j) Other taxable income – Grants and contributions taxable on receipt (lines 154 – 159)

NWL has no amounts which are taxable on receipt. Diversion and similar income is subject to a new accounting treatment under IFRS15 with effect from 1 April 2018. However, the company took tax advice which confirmed the previous tax treatment should not change. Such amounts will be credited to P&L in the company’s statutory accounts on receipt, but will not be taxed on that basis. They will continue to be taxed via capital allowances by being netted off the cost of the related assets.

As the Ofwat model nets off grants and contributions (including diversions) against gross capex, the tax treatment described above is broadly achieved, although in reality the majority of receipts will be dealt with via the long life pool. However, a further adjustment is required to ensure P&L income is not taxed (see (b)(iii) above).

**Section: Capitalised revenue, lines 160 – 165**

**Allowable depreciation on capitalised revenue (lines 160 – 165)**

Tax relief for capitalised revenue expenditure is given on a depreciation basis in accordance with HMRC’s deferred revenue expenditure principles. Depreciation included in these lines comprises amounts in respect of brought forward capex and new capex in AMP8.

The approach to claiming deductions for brought forward capex has been established since 2015/16 and involves applying appropriate asset lives to expenditure in respect of underground and above ground assets. This approach is embedded in the company’s tax returns and has been extended for the 2025-30 period. New capex falling into this category has been identified using the approach in section: New capital expenditure, lines 50 – 97 above and appropriate asset lives have been used to calculate the deductions due.

The total amount has been allocated across the four price controls by reference to RCVs at 31 March 2025.

**7. RR6 - POST FINANCEABILITY ADJUSTMENTS INPUTS**

All data is taken from the revenue feeder model, outputs, lines 252-267. We have smoothed the adjustments over 2025-30 so we use the figures in columns S to W. All data is consistent with Table PD12.

**8. RR7 – RESIDENTIAL RETAIL**

<b>Data Block</b>	<b>Source</b>	<b>Note</b>
Opening Retained profits	Retail balance sheet	Set to match retail net assets
Cost to serve £/customer	Ret1 £m / customers	Set to match retail costs in Ret1
Households connected	SUP1A	Taken from Table SUP1A

Retail debtor & creditor days	Based on 22/23 retail balances	Advanced receipts reduce over time as customer move to measured direct debits
Measured income accrual rate	Based on 22/23 retail balances	Measured income accruals increase as the proportion of customers on measured tariffs increase
Residential retail expenditure	Ret1 Table split by customer type	Calculated as cost to serve * customer numbers, total matched Ret1.
Residential retail working capital	Opening balance sheet	Retailer has no other debtor/creditor balances HH Retailer pays wholesaler with no delay
Opening retained cash balance	Zero	Retail share of opening debt
Retail net margin	1% margin	As per guidance
Charge proportions	Charge proportions based on 22/23 levels as projected	Starting proportions reconciles to Table 21 of 2023 APR. Projections are driven by changes in forecast customer numbers by category (eg unmeasured decline) Totals with RR8 business retail add up to 100%
Retail depreciation	Ret1	Depreciation post 2015
Retail dividends	Nil	We have assumed no retail dividends
Interest rate retail	RR24.29	Nominal cost of new debt from Table RR24

## 9. RR8 – BUSINESS RETAIL

As we have no business retail activity, we have only completed the lines required for the financial model: RR8.22 to 31. The proportions are based on Table 21 of APR 2023, with changes based on the property forecasts.

For all years, the sum of RR7.37-41, RR744-47, RR8.22-25, RR8.28-31 add to a 100% allocation for each service.

## 10. RR9 – MISCELLANEOUS INPUTS

Data Block	Source	Note
Retirement benefit obligation balance	Opening balance sheet projections	Allocated to controls by RCV proportions
Discount rate for reprofiling	Set at the nominal wholesale WACC	The guidance refers to 'notional', we assume this is 'nominal'
Opening Balances	Opening balance sheet projections	Intangibles, provisions, other liabilities, retained earnings, inventories, capex creditors  Note – opening retained earnings are inputs to more than 3 dps to ensure the balance sheet balances post notional gearing adjustment.
Other debtors retail	None	

**Reprofiling revenue** – we have used reprofiling revenue to smooth the annual bill increase to ensure broadly equal real terms annual increases for NWL combined and ESW water bills<sup>10</sup>. This means annual real Northumbrian bill increases of

<sup>10</sup> Similar to the approach taken by the CMA for PR19 – keeping annual increases broadly the same

3-4% pa, with ESW bill increases of 2-3% pa in real terms. To keep the net present value of revenue the same, we adjusted the revenue annually while keeping the NPV Financial Model checks (Reprofiling tab, lines 184-189) at zero. We have used more than 3 decimal places for 2029-30 to ensure the Financial Model does not generate an error message.

**Defined Benefit PDRC per IN13/17** – we used the PDRC values per the CMA PR19 FM<sup>11</sup> throughout (uplifted to 22/23 prices)

**Direct procurement** – we are not proposing any direct procurement schemes for AMP8<sup>12</sup>.

**Third Party Revenue & Costs**

We have ensured that third party revenue covers the costs of providing the service, to protect the principal service customer base. We have ensured this for water and wastewater, price control and non price control. All costs are net of efficiency adjustments per SUP11.

We set the reconciliations out below:

Third Party							
Water - Price Control	Data line	2025-26	2026-27	2027-28	2028-29	2029-30	AMP8
Water network+	RR9.215 & RR9.197	27.062	26.854	26.709	26.709	26.725	
Total Revenue	R total	<b>27.062</b>	<b>26.854</b>	<b>26.709</b>	<b>26.709</b>	<b>26.725</b>	<b>134.060</b>
Total third party water service costs ~ price control (operating expenditure)	CW11.15 less eff	10.482	11.466	11.754	12.054	13.038	
Total third party water service costs ~ price control (capital expenditure)	CW11.26 less eff	69.260	1.389	1.382	1.382	1.383	
Total Costs	C total	<b>79.742</b>	<b>12.855</b>	<b>13.136</b>	<b>13.435</b>	<b>14.421</b>	<b>133.589</b>
<b>Water - Price Control</b>	R - C	<b>-52.679</b>	<b>13.999</b>	<b>13.573</b>	<b>13.274</b>	<b>12.305</b>	<b>0.471</b>

The water third party other price control is dominated by the non-potable supply network on Teesside. We are currently forecasting a large increase in demand from new customers<sup>13</sup>, which will require a large capital investment in the network in 25/26 to supply these new customers. We forecast the additional income will ensure that the non potable business is self-financing over AMP8. This is an area of considerable uncertainty for both revenue and costs, so we would welcome the inclusion of the revenues and costs in a PR29 third party reconciliation model.

We follow the guidance in the Ofwat email 25-7-23: *For the **non potable** revenue and costs - these should be classed as 'third party' in line with RAG4 appendix 1. Where there are payments from developers/customers in respect of capital contributions to the non-potable network, then these should be classed as 'revenues' rather than 'grants and contributions'.*

<sup>11</sup> [https://www.ofwat.gov.uk/wp-content/uploads/2021/06/Financial-model\\_NES\\_CMA-FD\\_POST\\_FINAL.xlsb](https://www.ofwat.gov.uk/wp-content/uploads/2021/06/Financial-model_NES_CMA-FD_POST_FINAL.xlsb), Exec Summary, lines 189, 213, 237, 261

<sup>12</sup> See Chapter A6

<sup>13</sup> For example, <https://www.bp.com/en/global/corporate/news-and-insights/reimagining-energy/net-zero-teesside-project.html>

The other three reconciliations are lower value and simpler to reconcile.

<b>Third Party</b>							
<b>Water - Non Price Control</b>	<b>Data line</b>	<b>2025-26</b>	<b>2026-27</b>	<b>2027-28</b>	<b>2028-29</b>	<b>2029-30</b>	<b>AMP8</b>
Non-price control income - third party services - other non-price control third party services - real (WN)	RR9.179	2.690	2.669	2.654	2.654	2.656	
Non-price control income - third party services - Bulk supplies - contract not qualifying for water trading incentives - signed before 1 April 2020 - real (WN)	RR9.185	4.762	4.913	4.998	5.095	5.194	
<b>Total Revenue</b>		<b>7.451</b>	<b>7.582</b>	<b>7.653</b>	<b>7.749</b>	<b>7.850</b>	<b>38.285</b>
Total third party water service costs ~ non price control (operating expenditure)	CW11.15 less eff	3.139	3.302	3.397	3.493	3.591	
Total third party water service costs ~ non price control (capital expenditure)	CW11.30 less eff	-	-	-	-	-	
<b>Total Costs</b>		<b>3.139</b>	<b>3.302</b>	<b>3.397</b>	<b>3.493</b>	<b>3.591</b>	<b>16.922</b>
<b>Water - Non Price Control</b>	Rev-Costs	<b>4.312</b>	<b>4.279</b>	<b>4.256</b>	<b>4.256</b>	<b>4.259</b>	<b>21.363</b>

As bulk supplies are priced to cover both current operating and existing capital costs, we would expect there to be a material operating profit for these lines.

For wastewater, we project revenues to match costs throughout AMP8.

<b>Third Party</b>							
<b>Waste - Price Control</b>	<b>Data line</b>	<b>2025-26</b>	<b>2026-27</b>	<b>2027-28</b>	<b>2028-29</b>	<b>2029-30</b>	<b>AMP8</b>
Wastewater network+	RR9.216	0.256	0.254	0.253	0.253	0.253	
Bioresources	RR9.217	0.000	0.000	0.000	0.000	0.000	
<b>Total Revenue</b>		<b>0.256</b>	<b>0.254</b>	<b>0.253</b>	<b>0.253</b>	<b>0.253</b>	<b>1.268</b>
Total third party wastewater service costs ~ price control (operating expenditure)	CWW11.7 less eff	0.179	0.178	0.177	0.177	0.177	
Total third party wastewater service costs ~ price control (capital expenditure)	CWW11.20 less eff	0.076	0.076	0.075	0.075	0.076	
<b>Total Costs</b>		<b>0.256</b>	<b>0.254</b>	<b>0.253</b>	<b>0.253</b>	<b>0.253</b>	<b>1.268</b>
<b>Water - Other Price Control</b>	Rev-Costs	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

<b>Third Party</b>							
<b>Waste - Non Price control</b>	<b>Data line</b>	<b>2025-26</b>	<b>2026-27</b>	<b>2027-28</b>	<b>2028-29</b>	<b>2029-30</b>	<b>AMP8</b>
Wastewater network+	RR9.180	0.143	0.142	0.141	0.141	0.142	
Bioresources	RR9.181	-	-	-	-	-	
<b>Total Revenue</b>		<b>0.143</b>	<b>0.142</b>	<b>0.141</b>	<b>0.141</b>	<b>0.142</b>	<b>0.710</b>
Total third party wastewater service costs ~ non price control (operating expenditure)	CWW11.13 less eff	0.000	0.000	0.000	0.000	0.000	
Total third party wastewater service costs ~ non price control (capital expenditure)	CWW11.26 less eff	0.143	0.142	0.141	0.141	0.142	
<b>Total Costs</b>		<b>0.143</b>	<b>0.142</b>	<b>0.141</b>	<b>0.141</b>	<b>0.142</b>	<b>0.710</b>

Water - Other Price Control	Rev-Costs	0.000	0.000	0.000	0.000	0.000	-
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**11. RR10, RR11,RR12, RR13 AND RR15 – FINANCIAL MODEL TABLES**

All table data is taken from the Notional Financial Model Outputs, apart from:

**RR12.1-3:** Closing RCV at 31 March 2025 pre midnight adjustments. Values are taken from Table **PD11.1-3**, inflated from 17-18 FYA to 22-23 FYA prices.

**12. RR14 – BILL PROFILE FOR 2025-30 BEFORE INFLATION**

Whilst RR14.1 is taken from the notional financial model ('Bill Module' line 240), we believe it is a flawed value as it does not represent either our Northern Operating Area (Combined service) or Essex & Suffolk (Water only). The bill figure in RR14.1 is an amalgam of the two bills and so does not represent either sets of customers.

We are comfortable that the increases in average bill implied by RR14.1 do reflect the overall balance of charges increases for the total of all Northumbrian Water customers, but the bill values themselves do not reflect either of our customer regions.

We have thus used rows RR14.2 for Essex & Suffolk and RR14.3 for Northumbrian North combined bills.

For 23/24 bills, we used Discover Water bills delated to 22/23 FYA prices.

For 24/25 bills, we forecast outturn 24/25 bills using a combination of November 2023 CPIH (PD1.34) and the 24/25 K factors in the in period adjustment model we submitted on 19<sup>th</sup> July 2023. We deflated this to 22/23 FYA prices.

For 25/26 onwards, we used the financial model bill changes in 'Bill Module' lines 233-239 to allocate them separately to water only and combined service customers. We applied the percentage uplifts from the Bill Modules to the opening 24/25 bills.

The only further adjustment we made was to reallocate some of the water service increase from NWL North Water to ESW to reflect a large ESW specific investment in water resources. We did this by extracting the annual bill impact of the Suffolk Water Resource Schemes and applying matching value adjustments upwards to ESW bills and downwards to NWL bills. We ensured the total water revenue change was zero, this was simply an adjustment to reflect a specific part of the water enhancements that applied to one region only.

**Bill Adjustment for ESW Water Resource Schemes**

Water Bills only	Value £m	£/bill
ESW Customer	9.577	£12.03
North Customers	(9.577)	-£8.07

Note – the bill impact is different as there are more water customers in the North than ESW

**13. RR16 – FINANCIAL RATIOS – NOTIONAL AND ACTUAL STRUCTURE**

For our assessment of Financeability, see the Risk & Reward appendix ([NES06](#)).

We have added two additional Fitch PMICR metrics for both Notional and Actual metrics.

**Notional capital structure**

We have used the values from the Notional Financial model – RR16.1-12. We have set a credit rating target of Baa1/BBB+, as per Ofwat guidance.

All values for the notional capital structure are shown pre-financeability adjustments.

**Actual capital structure & Other financial model values**

The values calculated in RR24-34 are post financeability adjustments, which are included in line RR16.55.

The calculations are automatic, based on the other financial model values input in RR16.47-53. Those values are all taken from the Actual Gearing Financial Model, Output RR16. Many of these lines are pre financeability adjustments, so require further correction in the adjustments in the lines below.

**Adjustments for actual structure metrics**

We have made adjustments to the actual structure metrics to ensure the resulting metrics match the post financeability financial model outputs (actual gearing):

<b>Actual Capital Structures</b>	Ref	Inputs are set to match FM reference: PrePost impacts line
Gearing - Actual capital structure	RR16.24	528
Interest cover - Actual capital structure	RR16.25	536
Adjusted cash interest cover - Actual capital structure	RR16.26	546
Adjusted cash interest cover (alternative calculation) - Actual capital structure	RR16.27	556
FFO/Net Debt - Actual capital structure	RR16.28	563
FFO/Net Debt (alternative calculation) - Actual capital structure	RR16.29	571
Dividend cover - Actual capital structure	RR16.30	578
RCF/Net Debt - Actual capital structure	RR16.31	586

With the inputs taken from the financial model, the following adjustments were necessary to add post financeability adjustments which make the ratios match in the table above.

<b>Adjustment</b>	<b>Ref</b>	
Further adjustments to FFO	RR15.56	FM Prepostimpacts line 555 Ensures FFO is corrected for ratios calculations
Further adjustments to interest	RR16.63	Ensures RR16.64 matches FM PrePostimpacts lines 550 less 555 The model values from RR24.46 include accretion but exclude interest from cash balances so require adjustment
Further adjustments to net debt	RR16.69	FM Prepostimpacts line 499

Note – all these changes were effectively to align the calculations in RR16 to the post financeability financial model. We have not challenged any of the underlying calculation formulas.

We have made no 'further adjustments' for our actual structure in the table. The only additional inputs are:

<b>Data line</b>	<b>Ref</b>	<b>Source</b>
Profit after tax	RR16.77	FM PrePostimpacts lines 576 & 577
Dividends	RR16.78	RR18.15
Capex	RR16.79	RR2.1-4
EBIT less tax charge	RR16.80	RR18.4 & 18.12

#### **14. RR17 - FINANCIAL METRICS BY SCENARIO – ACTUAL STRUCTURE**

All scenarios are applied to the actual capital structure. We target Baa2/BBB for the actual structure.

We have revolving credit facilities covenants per below. The Baa2/BBB thresholds are in the range from lockup to default, so are a reasonable proxy for a stress test target. Our only other covenant is an EIB debt trigger should one credit rating fall to BBB-/Baa3.

<b>Event / Metric</b>	<b>Gearing</b>	<b>Cash Interest Cover</b>
Lockup	>77.5%	<2.4x
Default	>85%	<2.1x
BBB/Baa2 threshold	>80%	n/a

All metrics are calculated as variances from the post financeability adjustments central ratios as shown in Table RR16, Block B.

In the table submitted, we have shown the financial metrics **pre mitigation**. Many of them thus fail the rating targets at that stage. We also show the headroom and level of stretch **pre mitigation**.

For a transparent objective assessment tool, we have classed a stress test fail as having more than one metric failing for more than one year. The reality of rating assessment is more complex and subjective in practice.



**NWL Additional Stress Tests:**

<b>NWL Additional stress tests</b>	<b>Scenario (to be applied in each year of AMP8)</b>	<b>Commentary/rationale</b>
<b>Stress Test I - Totex</b>	20% overspend	We test Totex at 20% rather than Ofwat's prescribed 10% scenario, pre-cost sharing rates. This reflects observed performance in AMP7 (which supports a higher range of performance outcomes than AMP6). It also recognises the changes in the scale of the capital programme and the nature of the expenditure, which will include a much larger proportion of enhancement costs than base expenditure, and the fact that NWL will have less flexibility over enhancement expenditure with Price Control Deliverables applied and that this expenditure is construction expenditure. We include retail costs, which also carry the risk of cost inflation being higher than forecast.
<b>Stress Test J - ODIs</b>	2% of RoRE annually	We test ODI penalties at 2% RoRE <b>in each year</b> of AMP8 reflecting both current performance of some companies but also the introduction of more high-powered incentives in AMP 8..
<b>Combined I &amp; J scenarios</b>	5% Totex & 2% ODIs = 5% RORE	We test a combination scenario of a 5% totex overspend and 2% ODI penalty, a 5% reduction in RORE overall.  This assumes some covariance across scenarios (it is unlikely that P10s on all scenarios would happen at the same time). It also reflects a p10 industry RORE performance of -5.5% of RORE for totex and ODIs for AMP7 to date.

We have further supplied a separate financeability appendix<sup>14</sup> showing the mitigation factors, and how they are all addressed.

The first mitigation is to vary the dividends, as would happen under our dividend policy, which links dividends to performance and resilience. Some scenarios then pass our rating target.

The second set of mitigations include injection of further equity and application of regulatory mechanisms such as interim determinations.

<b>Scenario</b>	<b>RR17 Scenario</b>	<b>Pre mitigation</b>	<b>Post mitigation: Vary dividends</b>	<b>Post mitigation (others)</b>
Totex underperformance (10% of totex) over 5 years.	A	Fail	Fail	Pass
ODI underperformance payment (3% RoRE) in one year	B	Fail	Pass	N/a

<sup>14</sup> See Appendix A, Chapter A5

Inflation 2% below the base case in the business plan in each year of the price review	C	Pass	N/a	N/a
Deflation of -1% for 2 years, followed by a return to the long term inflation target.	D	Fail	Pass	N/a
10% spike in inflation with a 2% increase in wedge between RPI and CPIH, followed by two years at 5% and a 1% increase in wedge.	E	Pass	N/a	N/a
Increase in the level of bad debt (20%) over current bad debt levels.	F	Pass	N/a	N/a
Debt refinanced as it matures, with new debt financed at 2% above the forward projections.	G	Fail	Fail	Pass
Financial penalty – equivalent to 6% of one year of Appointee turnover	H	Fail	Pass	N/a
20% totex overspend	I	Fail	Fail	Pass
2% ODI penalty each year	J	Fail	Fail	Pass
5% totex and 2% ODI penalty	K	Fail	Fail	Pass

**RR17.12 - Headroom for reverse stress test against base case**

For all scenarios, we have assumed this is a measure of the headroom in the varying factor (eg totex) post stress test but pre mitigation. As such, if a stress test fails pre mitigation, we have assumed there is a negative headroom. This applies to the majority scenarios per above.

**RR17.13 - Extent of stretch required to reach limit**

For all scenarios, we have measured this as the extent of the varying factor that can be applied before the scenario fails pre mitigation. As we start the base case as financeable for the actual structure, all these values are positive, but many have adjustments that are less than the stress test assumptions. For example, the totex overspend can reach 7% before the stress test fails (pre mitigation).

**15. RR18 TO RR20 – FINANCIAL STATEMENTS – APPOINTEE, ACTUAL GEARING, NOMINAL**

All values for 2025-30 are taken from the Actual Gearing Financial Model, 'Fin Stat Appointee', Lines 8-86. These values are in outturn so they feed directly into the tables.

The values for 22-23 are from the 2023 APR, and the 23/24 and 24/25 values are from our Medium Term Plan budgets.

**16. RR21 – NET DEBT ANALYSIS**

Table RR21 matches our Table 1E of our APR23 submission post query changes.

## **17. RR22 - ANALYSIS OF DEBT**

Table RR22 matches our Table 4B of our APR23 submission post query changes.

The rows as above included some corrections to the following fields as a result of Ofwat's review and responses to queries:

- i. Issue Date (Col. J);
- ii. Issue Price (Col. K)

All other rows RR22.01 to RR22.11 remain unchanged from APR23 Table4B

## **18. RR23 - FINANCIAL DERIVATIVES**

Table RR23 matches our Table 4I of our APR23 submission post query changes.

The rows as above included some corrections to the following fields as a result of Ofwat's review and responses to queries:

- i. Maturity Type (Col. E);

All other rows RR22.203 remain unchanged from APR23 Table 4B

## **19. RR24 - DEBT BALANCES AND INTEREST COSTS – ACTUAL GEARING, NOMINAL**

### **Issuance of Index linked debt**

We have assumed CPIH issuance to maintain ILD proportion of total debt of 50% over 2025-30, as per our treasury policy.

This requires CPIH debt issuance using the following approaches:

### **Issuing CPI-H index linked debt:**

NWL may raise CPI-linked debt by four means depending on the investor demand and pricing considerations that arise outside of our intended flight path and headroom for increasing our CPIH-linked debt composition of gross debt. There are no CPIH linked gilts that trade, so the routes to market involve swaps whether launching the 'Direct' and 'Synthetic' offerings via the Public or Private markets:

#### Public offerings:

We could go the 'Direct' route, and raise a new £300-£400m CPIH-bond or smaller sizes of £50-£100m transactions to 'Tap' an existing bond in future to be CPIH. Both of which would price from IL-Gilts and include a RPI/CPIH wedge pricing components, derived from the current levels of the swap market's implied forecasts of the wedges for RPI > CPI > CPIH. Alternatively the 'Synthetic' route could offer up to £400m (or pay a premium above this) which would overlay a Fixed/CPIH basis swap derivative which is priced as an additional spread to the underlying coupons, implied as the fair value price of converting the fixed coupons against the latest IL-Gilt curve (UKTI) and CPI/CPIH swap market.

Reverse Enquiries:

Another route is via our relationship banks, who can then either proactively engage via their Dealers to investors seeking CPIH debt or liaise on Reverse Enquiries received from Private Placements investors to place in the region of £100-£150m.

Our indexation is taken from Table PD1, which in turn is based on MPC forecasts for May (see past delivery tables commentary for more detail) . For 25-26 onwards, for CPIH, we use annual indexation July-July. For RPI we assume a simple 2.9%.

	<b>Line</b>	<b>Comments</b>
RR24.1	Fixed rate debt (opening)	24-25 taken from Budgets, 25-26 per RR24.15-20
RR24.2	Floating rate debt (opening)	24-25 taken from Budgets, 25-26 per RR24.21-26
RR24.3, 24.4	Index-linked debt (RPI & CPI(H) linked) (opening)	24-25 taken from Budgets, 25-26 per RR24.10-14
RR24.5	Fixed rate debt issued	Fixed rate debt is issued to replace repaid fixed debt per RR24.9
RR24.6	Floating rate debt issued	Floating rate debt is issued to replace repaid floating debt per RR24.10
RR24.7	Index-linked debt (RPI linked) issued	RPI index linked debt is issued to replace repaid RPI ILD debt per RR24.11
RR24.8	Index-linked debt (CPI(H) linked) issued	We have assumed CPIH issuance to maintain ILD proportion of total debt of 50% actual structure over 2025-30
RR24.9	Fixed rate debt repaid	As per actual debt tenor
RR24.10	Floating rate debt repaid	As per actual debt tenor
RR24.11	RPI index linked debt repaid	As per actual debt tenor
RR24.12	CPI(H) index linked debt repaid	As per actual debt tenor
RR24.13	Indexation of index-linked loans (RPI linked)	Balance RR24.3 * RPI RR24.31
RR24.14	Indexation of index-linked loans (CPI(H) linked)	Balance RR24.4 * CPIH RR24.32
RR24.15	Interest rate for existing fixed rate debt	NWL projections, adjusted annually
RR24.16	Interest rate for new fixed rate debt	Nominal cost of new debt RR26.13
RR24.17	Interest rate for existing RPI index-linked debt	NWL projections, adjusted annually
RR24.18	Interest rate for new RPI index-linked debt	Real, RPI stripped cost of new debt per RR25.13
RR24.19	Interest rate for existing CPI(H) index-linked debt	NWL projections, adjusted annually
RR24.20	Interest rate for new CPI(H) index-linked debt	Real, CPIH stripped cost of new debt per RR25.13
RR24.21	Interest rate for existing floating rate debt	NWL projections, adjusted annually
RR24.22	Interest rate for new floating rate debt	Nominal cost of new debt RR26.13
RR24.23	Weighted interest rate for new and existing fixed rate debt	Weighted RR24.15 & RR24.16
RR24.24	Weighted interest rate for new and existing index-linked debt	Weighted RR24.17-20

RR24.25	Floating rate debt interest paid	Combined existing & new debt interest
RR24.26	Bank interest rate (receivable)	Nominal cost of new debt RR26.13 less 1% (current market margins)
RR24.27	Interest receivable (other)	Nominal cost of new debt RR26.13 less 1%
RR24.28	Bank overdraft interest rate	Nominal cost of new debt RR26.13
RR24.29	Residential retail working capital financing cost rate	Nominal cost of new debt RR26.13
RR24.30	Business retail working capital financing cost rate	Nominal cost of new debt RR26.13

**20. RR25 - ALLOWED RETURN ON CAPITAL FOR THE APPOINTEE**

We have shown the Ofwat EV adjusted WACC in real CPIH stripped values<sup>15</sup>. The rounding of unlevered beta RR25.8 to 2 decimal places makes the WACC value slightly overstated compared to the modelled values in the financial model from RR1.

In line with the Ofwat email of 8/9/23, we have updated the market data in the early view WACC without changing the calculation methodology.

WACC component	Early View WACC Real	Early View Adjusted WACC Real	Data Source
Risk free rate	0.47%	1.33%	Index Linked Debt, June 2023
Cost of new debt	3.28%	3.67%	IBOXX Debt, June 2023
Cost of embedded debt	2.34%	2.50%	Updated Embedded debt model

**1) Risk Free Rate**

We have updated the risk free rate based on 20 year index linked gilts for June 2023 as follows:

Risk-free rate calculation (%), June 2023	20 year index-linked gilts
Tenor (years)	20
Nominal	
Real RPI	1.01
Real CPIH (adjusted per wedge below)	<b>1.33</b>

Inflation expectations	RPI	CPIH
H2 2023	4.55%	3.4%
2024	3.9%	2.9%

<sup>15</sup> Appendix 11 Table 2.1

2025-2030	2.9%	2.0%
2030-	2.0%	2.0%

**2) Cost of new debt update**

We retained the Ofwat methodology, with the average nominal yields of iBoxx £ Non-Financials A 10+ and iBoxx £ Non-Financials BBB 10+

	<b>Nominal IBOXX June 2023</b>	<b>Benchmark adjustment</b>	<b>Nominal</b>	<b>Real</b>
Cost of new debt	5.89%	(0.15%)	5.74%	3.67%

**3) Cost of Embedded Debt Update**

a) At this stage the Model has been updated for market data available as at June 2023 but not 2023 APRs.

No changes have been made to the calculation methodology.

b) The Model has three categories of inputs that requires updates to reflect the latest market data:

- (1) refinancing assumption for fixed and index linked debt;
- (2) inflation assumptions used for accretion up to the end of AMP7; and
- (3) the calculation of the floating rate adjustment.

The assumptions have been updated in the following manner:

- The refinancing assumption in cell C7 on the tab has been updated based on the June average of the yields on A/BBB non-financials index less the 15bps benchmark index adjustment. The rates were sourced from Refinitiv Datastream.
- The CPI and RPI values that feed into the calculation of compound inflation used for accretion of index-linked instruments until the end of AMP7 in cells C14-E15 on the tab have been updated based on March 2023 forecasts from the Office of Budget Responsibility.
- The floating rate adjustment calculation has been updated based on base rate and SONIA rates from June 2023 and reflected in column CG of the tab. The rates were sourced from Refinitiv Datastream.

c) Updating each of these inputs to reflect a cut-off of June 2023 (and continued use of APR 2022 debt inputs) results in an increase in the cost of embedded debt from 2.34% to 2.50% (based on 'All-in' and 'Actual-notional' approaches).

We note that the cost of embedded debt based solely on 'All-in cost' – i.e. the appropriate basis to reflect actual financing costs – would be 2.59%

**21. RR26 - ALLOWED RETURN ON CAPITAL BY WHOLESALE PRICE CONTROL**

We have assumed the Ofwat EV adjusted WACC for all the wholesale controls. The WACC is in nominal terms as per the guidance but reconciles to RR25 once the 2% CPIH inflation forecast is stripped out.

In line with the guidance, to arrive at the Wholesale Cost of Equity of 6.43%, we adjusted the unlevered beta RR26.8 to backsolve this in the absence of a retail margin adjustment line.

**22. RR27- REVENUE ANALYSIS**

We assume this table is in 22/23 FYA prices as there is no reference to nominal prices.

For 22/23, we used Table 2l from the 2023 APR. For 23/24 and 24/25, we used income projections in PD5, allocated pro rata to 22-23 splits.

For 2025/26 onwards, the wholesale data in this table is driven by the revenue in the Financial Model PrePost impacts lines 296-299. Retail is in exec summary line 35.

The total income in RR27 excluding the third party non price control income reconciles to the Total revenue in the Financial model Exec summary line 40 and also table RR10.1.

For wastewater, we have applied pro rata splits between foul, surface water and highway drainage using the breakdown for 23/24 onwards. This is the same split as per Table 27a.5-7.

**23. RR27A – REVENUE ANALYSIS**

For lines 5-7, we used the RR27 2020-25 APR23 split which was in turn based on Table 2l splits applied to forecast revenue.

**24. RR28 – HISTORIC COST ANALYSIS OF TANGIBLE FIXED ASSETS**

For 2025-30, we took the values from the Financial model - Fixed assets tab, lines 264-292. These values are in outturn, so we deflated them to 22-23 FYA prices.

For 23-24 and 24-25, we used our budget values.

**25. RR29 – ASSET LIVES**

The asset lives presented are a weighted mix of legacy and new additions asset lives.

	Legacy lives	New Lives	Weighted average	New lives run off rate for RR1.55-58
Water resources	57	31	48	3.2%
Water Network+	50	31	47	3.2%
Wastewater Network+	58	60	59	1.7%
Bioresources	26	26	26	3.9%

**Data sources**

For legacy assets, we used the full asset lives derived from APR23 Table 2D.

For new assets for this table and for Table RR1.55-58, we carried out an analysis of the asset lives of our AMP8 capital programme by driver, then calculated a weighted average by service.

Area of Plan	Central	Asset life	Product	W Ave life	Post 2025 RCV		
<b>Water</b>					<b>Base run off rate</b>		
Base (capital maintenance)	468	20	9,360				
Civil structures	15	20	300				
Service reservoirs	30	80	2,400				
Water quality/CRI	130	72	9,341				
Statutory WINEP programme	45	20	900				
Non-statutory WINEP	3	20	60				
Water resources supply options	139	50	6,950				
Metering pre DPC	154	15	2,310				
Leakage	21	20	420				
Water efficiency	13	5	65				
Security	15	10	150				
Climate change adaptation	171	20	3,420				
Lead replacement (medium)	29	20	580				
Raw water deterioration	107	53	5,689				
Reservoir safety	47	20	940				
<b>Water Total</b>	<b>1,387</b>		<b>42,884</b>			<b>31</b>	<b>3.2%</b>
<b>Wastewater</b>							
Base (capital maintenance)	464	20	9,280				
Civil structures	65	20	1,300				
Sewer flooding	46	20	920				
Storm overflows - least cost	1,004	88	88,486				
Nutrient neutrality	44	20	880				
Other statutory (monitoring etc)	408	79	32,258				
River monitoring DPC	200	15	3,000				
Non-statutory WINEP	79	79	6,246				
Growth at wastewater treatment works	57	20	1,140				
Climate change adaptation	51	20	1,020				
<b>Wastewater Total</b>	<b>2,418</b>		<b>144,530</b>	<b>60</b>	<b>1.7%</b>		

## 26. RR30 – RORE ANALYSIS

We have supplied an accompanying spreadsheet<sup>16</sup> that shows the sources and basis of our calculations. We have also completed and supplied the Ofwat RORE chart tool.

We have not made any annual variations in our assumptions, so the average 25-30 values do represent the overall risk range. All variances are calculated post corporation tax rates of 25%. All data is in 22-23 FYA prices, including line RR30.43 (the guidance suggests nominal, we assume this is an error).

<sup>16</sup> NES RoRE analysis for Table RR30.xlsx



Our summary of the RORE ranges from Table RR30 is below:

<b>RORE Component AMP8</b>	<b>Downside (P10)</b>	<b>Upside (P90)</b>	<b>Data source</b>
NWL Base RORE	4.47%	4.47%	Real Cost of Equity
Totex (Wholesale & retail)	-8.22%	2.65%	2020-23 industry data
Outcome delivery incentives	-0.64%	0.16%	AMP8 range
Financing	-1.69%	1.43%	Inflation & new debt %
Measures of experience	-0.32%	0.34%	NWL CMEX upwards skew
Revenue & other	-0.02%	0.00%	RFI penalty
<b>Variation from Base</b>	<b>-10.89%</b>	<b>4.59%</b>	

### **Base RORE**

This is the 4.47% Early View Adjusted real cost of equity from the PR24 guidance.

### **Totex (Wholesale & Retail)**

All totex variances are calculated before the deduction of the cost sharing mechanism. The RR30 table calculations in lines RR30.62-63 applies uncertainty mechanism adjustments in RR30.58 & 59 **in addition** to the RORE ranges as set out in RR30.46-57.

Thus, to present totex variances after the application of cost sharing would 'double count' the cost sharing impact that is added in RR30.58-69.

As our only adjustments for uncertainty mechanisms are for cost sharing, those figures could be applied to the totex scenario values if required.

### **Calculation of the High/Low Scenarios**

For Totex RORE, we used the same approach as Ofwat took in PR24 Appendix 10 (p15) by using the P10/P90 ranges of industry totex against FD. However, we used the more recent industry totex performance data over 2020-23, which is strongly skewed to the overspend downside. We mitigated the bioresources downside case to zero on the basis of our own leading efficiency position.

Industry Pre Cost Sharing	Downside	Upside
<b>Totex over/(under) spends %</b>	P10	P90
WR	37%	-16%
WN	21%	-
WWN	27%	-10%

BIO	23%	-60%
Retail	48%	-4%

All Wholesale Data is taken from industry APR23 Table 4C, using price control period to date. We used total variances of **all** totex – modelled, unmodelled and totex not subject to cost recovery. We then applied a 10<sup>th</sup> & 90<sup>th</sup> percentile to the totex variances for all companies. We took the same approach for retail, using Table 2C variances to date.

**Outcome Delivery Incentives**

Full analysis of the **Outcome Delivery Incentives** P10/P90 range is in Section A4. The results are asymmetric to the downside.

Re tax RORE ranges:

NWL assessed P10	Monte Carlo	NWL assessed P90	Monte Carlo	P50
-2.78%	-0.85%	0.91%	0.21%	-0.28%

Owat outlines within its methodology that it expects the value at stake across the whole ODI package to be between plus or minus 1% to 3% of regulated equity<sup>17</sup> (RORE).

In Appendix 4, Outcomes, we detail our analysis on the package of measures and ODIs across a series of Monte Carlo Simulations.

However, as the value at stake is largely a function of the ODI rates (provided by Ofwat) and the likely performance range for each metric, the scope to make adjustments to the range is limited.

To determine the likely RoRE range associated with our package of common measures, targets (note where applicable enhanced targets were used as opposed to base) and proposed ODI rates, we modelled maximum upside and downside (ODI) performance and the probability of different financial outcomes (ODI RORE) from our package using a scenario analysis, in this instance a Monte Carlo analysis. In determining our expected P10 and P90 performance, we undertook an assessment across the business to understand the levels of performance at the 10<sup>th</sup> and 90<sup>th</sup> percentile, reviewed these against the expect PCLs.

In our assessment, we included the core common measures within the package. However, given time constraints, the timing of methodological guidance and availability of data such as ODI rates from Ofwat, we were unable to include a number of measures within the Monte Carlo; these included: biodiversity (no ODI rate), operational greenhouse gases (no ODI rate),

<sup>17</sup> Ofwat Methodology – Appendix 8 Outcome Delivery Incentives, page 57. [https://www.ofwat.gov.uk/wp-content/uploads/2022/12/PR24\\_final\\_methodology\\_Appendix\\_8\\_Outcome\\_delivery\\_incentives.pdf](https://www.ofwat.gov.uk/wp-content/uploads/2022/12/PR24_final_methodology_Appendix_8_Outcome_delivery_incentives.pdf)

business demand and river water quality. We indicate the P10 and P90 performance scenarios and associated financial ODIs over page.

These values were applied in our Monte Carlo model simulation four – details of which are found in Appendix 3, Outcomes.

**Financing Scenarios**

For Financing RORE, we included both the risks on embedded debt and new debt. For embedded debt, we calculated the risks of variances in inflation compared to the level implicit in nominal fixed debt. The RORE ranges were broadly symmetrical, with our inflation forecast over 2025-30 being close to the 2% value that we assume is implicit in fixed debt costs, and we assume an equal likelihood of inflation rising or falling.

For new debt, we calculated the risks of a variance in the balance of new and embedded debt compared to the WACC assumption in the cost of debt. As the current EV WACC uses a mix of 83% embedded, we can foresee no scenario where this would be higher, but we assumed the mix could fall to 50% for our p10 low scenario. This creates downside risk as the cost of new debt is more than embedded, although we expect this risk to be mitigated once Ofwat recalibrates the embedded mix for the Determinations. We assumed the debt indexation model mitigated the risks of variances in interest rates for new debt.

Whilst we are proposing indexation of the risk free rate in our plan, this would not mitigate these financing risks, which relate to debt, not equity.

**Measures of Experience & Revenue**

For Measures of experience, we used a symmetrical incentive range for CMEX, halving the downside due to our leading position in recent years.

For DMEX, we assumed Option 3<sup>18</sup> is chosen – a RORE range of -0.2% to +0.1%.

We assumed the proposed range for BRMex<sup>19</sup>.

Measures of experience	Low	High	P10	P90
CMEX as a % of Retail Costs	-18.00%	18.00%	-7.2%	14.4%
DMEX RORE Range	-0.20%	0.10%	-0.17%	0.07%
BRMEX as a % of business revenue	-1.00%	0.50%	-0.85%	0.35%

P10, P90 are 10<sup>th</sup> & 90<sup>th</sup> percentile of the full range

Our range is similar to Ofwat’s, but slightly skewed on the downside as DMEX and BRMEX are downside skewed.

<sup>18</sup> <https://www.ofwat.gov.uk/consultation/consultation-measures-of-experience-performance-commitments-at-pr24/>, page 48

<sup>19</sup> Outcome Delivery Incentives, Appendix 8, p54

For revenue, we applied the RFI forecasting penalty, to get an asymmetric range similar to Ofwat's. The revenue controls themselves mitigate revenue risk materially.

**Line RR30.43: Notional Regulated Equity**

The guidance for RR30.43 refers to the **nominal** Average RCV value taken from the financial model. We assume this means **notional**.

The guidance page 118 (33.4) later states that the figures reported in this table should be in presented in the base year prices of 2022-23 financial year average.

As all the RORE scenario values in RR30 are in 22-23 prices, **we have presented the values in RR30.43 in 22-23 price terms**, so the RORE % allocations in lines RR30.46 to RR30.57 are in the same price base.

Average Regulatory Capital Value (RCV) - financial model output	RR30.43	Source: Financial Model RORE tab, lines 17-20, deflated to 22/23 prices
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**Impact of proposed uncertainty mechanisms: RR30.58-59**

The values for these are taken from the impact of totex cost sharing. We used the cost sharing ranges implicit in Table 4C (company shares).