



AFW Company Response: AFW-FR-Appendix F PAYG and RCV run-off rates

30 August 2019

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Glossary of terms

AMP7	The 7th Asset Management Plan, for the period April 2020 to March 2025
Affinity Water	Affinity Water Ltd
AICR	Adjusted Interest Coverage Ratio
CCA	Current Cost Accounting
DD	The PR19 Draft Determination
FD	The PR19 Final Determination
FFO	Funds From Operations
FFO / Net Debt	“Funds from operations / net debt (Ofwat) – Appointee” as defined by Ofwat’s financial model, “Analysis_Appointee” tab, row 25
HCA	Historical Cost Accounting
Moody’s May 2018 guidance	“Regulator’s proposals undermine the stability and predictability of the regime, Regulated Water Utilities – UK”, Moody’s, May 2018
NBV	Net Book Value
PR14	The PR14 price control, set for the period April 2015 to March 2020
Representation	Affinity Water’s representation on its draft determination
UU	United Utilities plc
WIA91	Water industry Act 1991, as amended

Section 1

Introduction

A Purpose of this document

- 1.1 An important part of our role is to ensure that we can manage and mitigate risks on behalf of our customers – including those that might otherwise result in a sudden price shock for customers.¹ To the extent that such risks are encountered during the next AMP, we will need to have access to commensurate financial resources in order to manage them and mitigate the impact of them on our customers. This, in turn, requires that the PR19 Final Determination (“FD”) allows us the efficient cost of managing those risks.
- 1.2 The most important mechanisms in ensuring that we can raise the finance we might need to protect our customers in practice are the allowed PAYG rate and RCV run-off rates that drive the financeability assessment. We are concerned, however, that the combination of the PAYG rate and RCV run-off assumptions used in the Draft Determination (“DD”) will leave our customers bearing an undue risk. Specifically, the DD would leave Affinity Water based on Ofwat’s notional company gearing (“the notional company”) unable to finance itself to manage those risks, and with little alternative than to seek additional funding from customers. This document, therefore, explains our concerns and provides our assessment of the PAYG rate and RCV run-off rates that would enable us to protect our customers from the risks we are best placed to manage on their behalf.
- 1.3 We have been assisted in the preparation of this document by the consultants Berkeley Research Group (“BRG”).

B Protecting customers’ interests

- 1.4 For Ofwat’s FD to be in the best interests of our customers, it is important that risk is allocated appropriately. As Ofwat states, “*The allocation of risk to the party best able to manage risk helps to ensure efficient risk management and mitigation*”.² In essence, our customers buy insurance from us against the risks that we are best placed to manage efficiently on their behalf. The FD should therefore balance the cost and coverage of the “insurance policy” on behalf of customers. Guidance can be found in the statutory duties set out in the Water Industry Act 1991 (“WIA91”). In particular, this has been created to ensure that the interests of customers are properly protected, by securing:

¹ Examples include the impact of exceptional weather, unexpected increases in energy, chemical or other operating costs, etc.

² PR19 DD Aligning risk and return technical appendix, page 3.

*“that the functions of a water undertaker and of a sewerage undertaker are properly carried out as respects every area of England and Wales”;*³

*“that companies ... are able (in particular, by securing reasonable returns on their capital) to finance the proper carrying out of those functions”;*⁴ and

*“that the activities authorised by the licence of a licensed water supplier and any statutory functions imposed on it in consequence of the licence are properly carried out”.*⁵

- 1.5 For customers’ interests to be protected, therefore, we need to be in a position to manage risks that are likely to arise over the next AMP in the day to day operation of our business, without needing to go back to customers for additional funding (and without failing to protect customers from those risks). Equally, it is important that customers contribute no more than the efficient cost of providing that protection to them.

C Setting the right balance

- 1.6 For our Representation, we have determined the overall PAYG and RCV run off rates by first establishing the “natural” rates. i.e. the rates that would flow naturally from the expenditure required by the plan. To the extent that the natural rates do not of themselves result in a financeable plan, the PR19 methodology provides companies with a number of “levers” that they can use in order to ensure that the right balance is struck in terms of financeability. These include the selection of an appropriate PAYG rate and RCV run-off rates.

- 1.7 “Pulling” these levers brings money forwards in time, in essence, increasing the PAYG rate and/or RCV run-off rate. Pulling such levers has the twin advantages of making a plan more financeable by relieving pressure on credit metrics and reducing the prices paid by customers in the long-term. Off-set against these advantages, however, is that customers would face slightly higher prices in the short term. These advantages and disadvantages need to be balanced appropriately and respect the principle of intergenerational equity.

- 1.8 To secure the right balance, we have employed a number of tests to ensure financeability⁶. Conceptually, these tests ensure that:

- the notional company is able to sustain an appropriate credit rating (Moody’s Baa1) in normal circumstances – this is to ensure that the costs of financing the regulated business are secured;
- the notional company still retains an investment grade credit rating (Moody’s Baa3) in a range of P90/P10 stress testing scenarios⁷ – this is to ensure that the company could still

³ WIA91, Section 2(2A)(b)

⁴ WIA91, Section 2(2A)(c)

⁵ WIA91, Section 2(2A)(c)

⁶ As detailed in Section 3

⁷ These scenarios are: (a) an increase in Totex spend by 10% in each year; (b) incurring a financial penalty to the value of 3% of revenues annually; (c) incurring an ODI penalty to the value of 3% of RoRE for each year; (d) an increase in bad debt by 5%; (e) higher inflation of 3% CPIH and 4% RPI; (f) lower inflation of 1% CPIH and 2 % RPI; (g) an increase in cost of new debt by 2%; and (h) a combination scenario – 10% increase in Totex, financial penalty on 1% on revenue and ODI penalty of 1.5% on RoRE.

raise finance in these “stressed” scenarios in order to protect customers from those risks; and

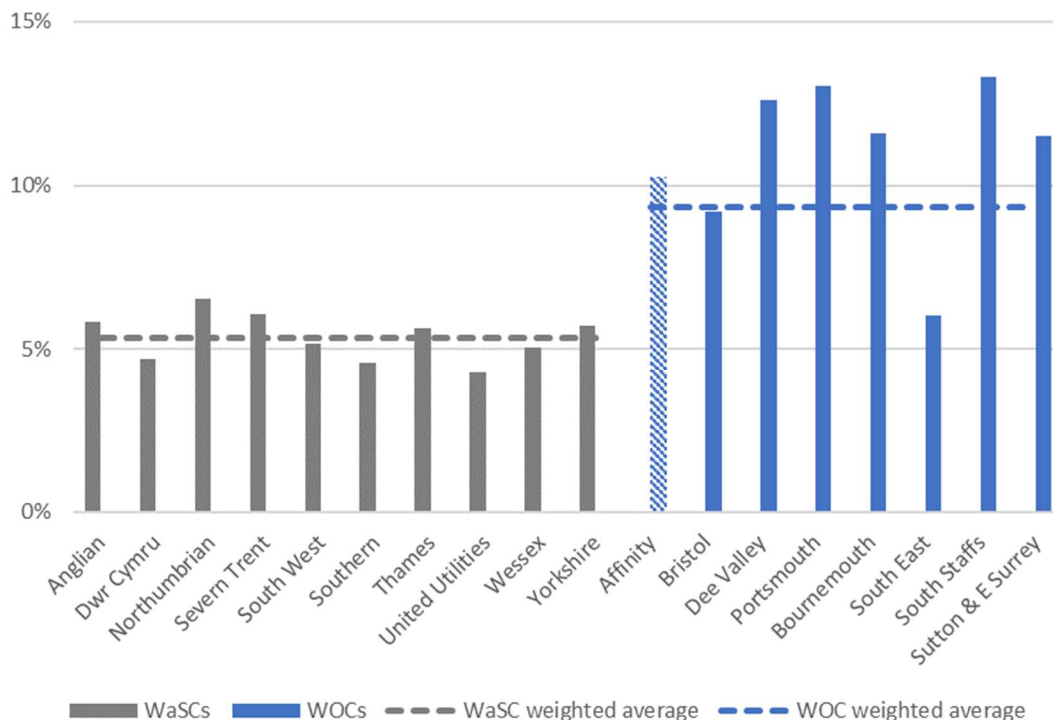
- Affinity Water based on its actual gearing (“the actual company”) remains financeable on the basis of PAYG and RCV run-off rates derived from consideration of the notional company alone.

D Influence of the scale of opex relative to RCV on financeability adjustments

1.9 Financial shocks are typically operationally driven, leading to overspends of opex relative to those implicit in the totex allowance. The capex element of the totex allowance (i.e. the RCV run-off rate and returns on the RCV) tends to provide a more stable cushion which can often absorb much of the impact of opex overspends. However, this cushion is less effective for companies whose opex is large relative to the capex element of the totex allowance – or, since the capex element is driven by the level of the RCV, companies whose opex is large relative to their RCVs.

1.10 Opex as a proportion of RCV for both WaSCs and WOCs is shown in the graph below. It can be seen that WOCs tend to have much higher opex to RCV ratios than WaSCs, and that our ratio is similar to, and in fact slightly above the average of, WOCs.

Figure 1: Opex as a percentage of RCV for WaSCs and WOCs



Source: Affinity Water analysis of PR14 FD data (average of 5 years from 2015/16 to 2019/20)

1.11 Like other WOCs:

- we have high levels of opex relative to our RCV;
- our RCV-based financial cushion is therefore less effective;

- our natural PAYG and run-off rates are therefore less likely to secure adequate financial ratios in a stress test scenario related to an increase in opex; and
- we are therefore more likely to require increases above those natural rates in order to secure financeability.

E Structure of this document

1.12 The rest of this document is structured as follows:

- Section 2 explains our approach to calculating the natural PAYG rate and natural RCV run-off rate;
- Section 3 explains the criteria we have used to establish the minimum PAYG rate to secure financeability;
- Section 4 sets out our calculation of the minimum PAYG rate to secure financeability;
- Section 5 compares the natural PAYG rate with the minimum necessary to secure financeability and considers whether an increase above the natural rate is required; and
- Section 6 provides a comparison of the PAYG rates in our Representation with both those of our March 2019 plan and those in the DD, and summarises our key conclusions.

Section 2

The natural PAYG rate and RCV Run-off rates

A Introduction

2.1 In this section we explain our approach to calculating the natural PAYG rate and RCV run-off rate and tabulate those calculations for ease of reference.

Structure of this section

2.2 This section is structured as follows:

- Subsection B confirms the approach we have adopted to deriving the natural PAYG rate;
- Subsection C sets out the calculation of the natural PAYG rate for each price control;
- Subsection D sets out the approach we have adopted to deriving the natural RCV run-off rate; and
- Subsection E sets out the calculation of the natural RCV runoff rate for each price control.

B Approach to deriving the natural PAYG rate

2.3 We welcome the feedback that Ofwat provided in our DD. In particular, we note that Ofwat stated:

*“Affinity Water’s initial approach for PAYG rates is to recover in each year an amount equivalent to operating costs and infrastructure renewals expenditure (IRE) within totex. We accept the company’s initial approach ...”.*⁸

2.4 As Ofwat has confirmed that it accepts this approach, we have, therefore, adopted it. We note that this is a common approach, which Ofwat has accepted or intervened to secure for a significant number of companies (including Bristol Water,⁹ South East Water,¹⁰ South West Water,¹¹ Southern Water,¹² Wessex Water,¹³ and Yorkshire Water¹⁴).

2.5 In addition, based on the feedback from our DD and further analysis, we have refined total costs and their allocation to operating costs, capital maintenance and capital expenditure in our plan.

⁸ PR19 DD. Affinity Water – Aligning risk and return actions and interventions, page 3.

⁹ PR19 DD. Bristol Water – Aligning risk and return actions and interventions, page 7.

¹⁰ PR19 DD. South East Water – Aligning risk and return actions and interventions, page 4.

¹¹ PR19 DD. South West Water – Aligning risk and return actions and interventions, page 2.

¹² PR19 DD. Southern Water – Aligning risk and return actions and interventions, page 2.

¹³ PR19 DD. Wessex Water – Aligning risk and return actions and interventions, page 3.

¹⁴ PR19 DD. Yorkshire Water – Aligning risk and return actions and interventions, page 3.

We have reflected these more up to date costs in our PAYG rate and RCV run-off rate calculations. The changes to our costs mainly reflect:

- our reduced claim for leakage costs;
- not representing on some of the enhancement challenges in the DD;
- the adoption of Ofwat’s modelled Botex costs;
- reallocating the expected study costs of the strategic supply solutions from capitalised expenditure to operating costs (as the costs of any scheme that does not proceed to delivery will need to be expensed); and
- setting the profile of expenditure in line with our previous submission, which differs from the allocation Ofwat set in its DD.¹⁵

C Calculation of the natural PAYG rate for each price control

2.6 The natural PAYG rate for each year and price control is summarised below:

Table 1: Natural PAYG rates for each price control

Price control	2020/21	2021/22	2022/23	2023/24	2024/25	Average
Water resources	36.2%	30.1%	32.2%	32.0%	44.8%	34.6%
Water network	58.0%	58.8%	60.0%	68.8%	69.2%	62.8%
Aggregate	54.4%	53.0%	54.5%	59.9%	64.8%	57.2%

Source: Data Tables WR4 & WN4; Affinity Water analysis

D Approach to deriving the natural RCV run-off rate

2.7 Ofwat asks companies to set out their approach to setting the starting point for RCV run-off rates (before applying any adjustment, for example to smooth bills or address a financeability constraint on the notional capital structure).¹⁶

2.8 We note that companies have tended to use one of two approaches to calculating the natural RCV run off rate:

- calculating the rate using Historical Cost Accounting (“HCA”) depreciation as a percentage of HCA Net Book Value (“NBV”); and
- calculating the rate using Current Cost Accounting (“CCA”) depreciation as a percentage of RCV.

2.9 We evaluated these approaches against the following criteria:

- whether the implied depreciation was consistent with the planned AMP7 capex;
- whether adopting the approach was consistent with PR14;
- whether adopting the approach would avoid a material price change for customers; and

¹⁵ For further details see AFW Representation – Appendix AFW-FR: Financing and Resilience, Section 4.4.2

¹⁶ PR19 DD Aligning risk and return technical appendix, page 37.

- whether adopting this approach would result in the notional company being financeable.

2.10 The results of this evaluation are shown in the table below.

Table 2: Analysis of options for RCV run-off

Criteria	HCA depreciation / HCA NBV	CCA depreciation / RCV
Consistency with AMP7 capex	Yes	No
Consistency with PR14	Yes	No
Avoid price shock for customers	Yes	No
Notional company financeable	Yes	Yes

Source: Affinity Water

2.11 We have, therefore, adopted the first approach and used the ratio of HCA depreciation to HCA Net Book Value.

E Calculation of the natural RCV run-off rate for each price control

2.12 The natural RCV run off rates for the wholesale price controls are set out in the table below.

Table 3: Natural RCV Run off rates for each price control

Price control	2020/21	2021/22	2022/23	2023/24	2024/25	Average
Water resources	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%
Water network	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%
Aggregate	4.3%	4.4%	4.4%	4.5%	4.5%	4.4%

Source: Affinity Water Data Tables WR4 & WN4; Affinity Water analysis

2.13 Ofwat has provided a graphical comparison of average RCV run-off rates as a proportion of regulatory capital value that it set in the DDs.¹⁷ This shows a range from approximately 3.3% to just over 7%. Our figure of 4.4% falls within this range.

¹⁷ PR19 DD Aligning risk and return technical appendix, page 38, Figure 5.5.

Section 3

Criteria for a financeable plan

A Introduction

- 3.1 This section sets out the relevant criteria that a plan would need to satisfy in order to meet the financeability requirements set out in the PR19 methodology – in other words, the criteria our plan needs to meet to ensure that we can protect our customers from the risks we are best placed to manage on their behalf.
- 3.2 To establish these relevant criteria and refine the approach adopted to financeability in our March 2019 plan, we have drawn upon Ofwat’s PR19 guidance and DD, the best practice approach adopted by Ofwat’s fast track companies and UU in particular, and cross-checked to confirm that the right balance of risk is struck for our customers.

Structure of this section

- 3.3 This section is structured as follows:
- Subsection B sets out our target credit ratings;
 - Subsection C sets out our target financial ratios; and
 - Subsection D sets out our conclusions.

B Target credit ratings

- 3.4 We have used credit ratings as our benchmark for our ability to manage risks from our own resources, and so protect customers. Credit ratings are an indicator of the risk of being unable to finance activities from within a company’s resources. They are, therefore, strongly linked to the risk that a company would need additional financing from customers. The focus on credit ratings matches Ofwat’s own focus in its assessment of financeability in the DDs.¹⁸

Investment grade with headroom to absorb cost shocks

- 3.5 Ofwat has stated that target credit ratings should allow sufficient headroom for a company to absorb potential cost shocks and still retain investment grade:

“Under the conditions of their licences, most companies¹⁹ are required to maintain an investment grade credit rating ... However, we also consider that an

¹⁸ PR19 DD: Aligning risk and return technical appendix, Section 6.

¹⁹ South West Water’s and Hafren Dyfrdwy’s licence provisions do not require the companies to maintain a credit rating. However each company is required to certify, in the opinion of the Board, its key financial ratios are consistent with an issuer credit rating which is an investment grade rating.

appropriate credit rating target should include sufficient headroom ... to protect against falling to a sub-investment grade credit rating following a deterioration in credit risk or potential cost shocks.²⁰

3.6 If companies are to meet this expectation, they need to:

- target an investment grade credit rating for the notional company’s “central case” forecast cashflows that exceeds the minimum investment grade credit rating, so as to provide the headroom that Ofwat requires; and
- assess whether that headroom is adequate to meet the purpose set by Ofwat, by testing whether the notional company would maintain an investment grade credit rating following potential cost shocks to the central case forecast, under a “downside” scenario.

3.7 This allows an explicit and objective assessment of the adequacy of headroom and the credit rating targeted for the central case forecast using a specified and justified downside scenario. This is particularly important in our case, and in the case of WOCs more generally, which as explained above have disproportionately high levels of opex relative to RCV and are therefore more likely to have company-specific headroom requirements.

3.8 We have therefore:

- targeted a credit rating for the central case which allows a headroom above minimum investment grade based on rules of thumb as a “sighting shot”, subject to revision; and
- targeted a credit rating for our combined downside scenario²¹ (“the downside scenario”) of minimum investment grade, which must be met, leading to revision of the central case credit rating if necessary.

3.9 We note that this approach mirrors that adopted by United Utilities (“UU”), a Fast Track company. UU applied a clear test which incorporated an explicit ability to absorb shocks, comparing both:

- central case ratios against a target credit rating with headroom above minimum investment grade; and
- downside scenario ratios against a target credit rating close to minimum investment grade.

3.10 UU concluded that the natural PAYG rate would result in ratios below the threshold for the central case target credit rating, and “*to the precipice of the minimum investment grade credit rating*” for the downside scenario.²²

3.11 This analysis demonstrated that UU required a 1.9% increase in PAYG rates above their natural level, which brought ratios up to the target level for the central case, and increased the headroom above minimum investment grade for the downside scenario.²³

3.12 Ofwat accepted UU’s approach, subject to the flow through consequences of an amended dividend yield, stating:

²⁰ DD Aligning Risk and Return technical appendix, Section 6.4.

²¹ Comprising a 10% increase in Totex, a financial penalty on 1% on revenue and an ODI penalty of 1.5% on RoRE.

²² United Utilities September 2018 Business Plan, Chapter 9, Sections 9.5 and 9.6.

²³ United Utilities September 2018 Business Plan, Chapter 9, Section 9.5.4.

“We accept the evidence provided in relation to the financeability constraint and apply the revised PAYG adjustment proposed”.²⁴

Central case for the notional capital structure

3.13 Ofwat states that:

“an appropriate credit rating target should include sufficient headroom (i.e. be higher than BBB-/Baa3/BBB-) to protect against falling to a sub-investment grade credit rating following a deterioration in credit risk or potential cost shocks. We set out, in our initial assessment of business plans, that we apply a higher evidential bar in assessing whether a company demonstrates that the target credit rating is sustainable for long-term financeability and financial resilience where a credit rating of Baa2/BBB has been targeted for either the notional and the actual structures, given the lower levels of headroom to cost shocks”.²⁵

3.14 This means that companies should (for the central case) target a credit rating incorporating a headroom above the minimum investment grade of Baa3, and that a single notch to Baa2 is likely to require special scrutiny. This suggests that the target for the central case needs to be (at least) Baa1, two notches above minimum investment grade, in order to avoid the need for such special scrutiny. Ofwat has noted that all companies have targeted such a rating for the notional company in their revised business plans.²⁶ We have, therefore, targeted Baa1 under the central case, subject to assessment of the adequacy of headroom under a downside scenario.

3.15 We note that UU, a Fast Track company which adopted a similar approach to that which we propose here, also targeted a credit rating of Baa1 for its central case.²⁷ We take this as additional evidence in support of our target.

Downside scenario for the notional capital structure

3.16 We target Baa3, the minimum investment grade, under the downside scenario, in line with Ofwat’s guidance.

3.17 We note that UU targeted a higher credit rating of Baa2 (S&P BBB) for its combined downside scenario, arguing that the minimum investment grade credit rating (of Baa3/BBB-) *“has material impacts for the ongoing financial resilience and future cost of debt for the company. It would leave us extremely vulnerable to further downgrade, e.g. from the various external factors that also affect credit ratings”*.²⁸ Whilst we agree that UU’s argument has significant merit, we recognise that the combined downside scenario is intended to be a relatively severe scenario, suggesting limited need for additional headroom for an even worse outcome. We have therefore retained our target of Baa3 under the combined downside scenario, rather than seeking to target the higher Baa2 rating that UU adopted.

²⁴ PR19 DD: United Utilities – Aligning risk and return actions and interventions.

²⁵ DD Aligning Risk and Return technical appendix, Section 6.4.

²⁶ DD Aligning Risk and Return technical appendix, Section 6.4.

²⁷ United Utilities September 2018 Business Plan, Chapter 9, Sections 9.5 and 9.6.

²⁸ United Utilities September 2018 Business Plan, Chapter 9, Sections 9.5 and 9.6.

C Target financial ratios

3.18 Ofwat’s PR19 financial model incorporates a suite of financial metrics used to assess financeability, including debt ratios, equity ratios and other return metrics.²⁹ Relevant metrics are included in rows 22 to 31 of the “Analysis_Appointee” tab, as follows:

- “Cash interest cover – Appointee”;
- “Adjusted cash interest cover ratio (Ofwat) – Appointee”;
- “Adjusted cash interest cover ratio - Appointee (Alternative)”;
- “Funds from operations / net debt (Ofwat) – Appointee”;
- “Funds from operations / net debt - Appointee (Alternative)”;
- “Retained cash flow / debt – Appointee”;
- “Dividend cover – Appointee”;
- “Regulatory equity / regulated earnings for the regulated company – Appointee”;
- “RCV / EBITDA – Appointee”; and
- “RCF to capex – Appointee”.

3.19 These metrics are all important to some degree, although we note that each credit agency adopts a different approach and may calculate metrics in different ways, and Ofwat’s model does not follow the precise approach of any credit rating agency.

3.20 We also note that each company is different, and that in any given case, there are often one or two metrics that are critical to a rating.

Ratios considered

3.21 We have tested the financeability of the notional company against this range of financial ratios. Our testing indicated that the two financial ratios that are most at risk of not meeting financeability targets, and therefore the key financeability constraints for the notional company, are:

- “*Adjusted cash interest cover ratio (Ofwat) – Appointee*” as defined by Ofwat in the PR19 financial model;³⁰ and
- “*Funds from operations / net debt (Ofwat) - Appointee*” as defined by Ofwat in the PR19 financial model, which we refer to as “FFO / Net Debt”.³¹

3.22 As a cross-check, we note that Ofwat focused on these ratios in its DDs,³² and that UU targeted the same two ratios in its business plan.³³ We have, therefore, focused on these two ratios in our assessment.

²⁹ “Delivering Water 2020: Our final methodology for the 2019 price review”, Ofwat, December 2019, Page 196.

³⁰ Ofwat PR19 Financial model, “Analysis_Appointee” tab, Row 23.

³¹ Ofwat PR19 Financial model, “Analysis_Appointee” tab, Row 25.

³² PR19 DD: United Utilities – Aligning risk and return actions and interventions, Table 6.4.

³³ United Utilities September 2018 Business Plan, Chapter 9, Section 9.6.

Adjusted Cash Interest Cover

- 3.23 As noted above, we target minimum levels of Adjusted Cash Interest Cover, as defined by Ofwat in the PR19 financial model.³⁴
- 3.24 The target ratios used in our March 2019 plan were based on the most recent Moody’s guidance available to us at that time, from June 2018.³⁵ However, we now understand that this set out a global methodology, and that the more relevant guidance for the UK water sector was from a slightly older but UK-specific paper from May 2018 (“Moody’s May 2018 guidance”).³⁶ We have, therefore, based our targets on the Moody’s May 2018 guidance.
- 3.25 Moody’s May 2018 guidance specifies the following minimum Adjusted Interest Coverage Ratios (“AICRs”):

Table 4: Moody’s May 2018 AICR guidance

Rating	Minimum AICR
A2	2.0x
A3	1.7x
Baa1	1.5x
Baa2	1.3x

Source: Exhibit 5, Regulator’s proposals undermine the stability and predictability of the regime, Regulated Water Utilities – UK, Moody’s, May 2018

- 3.26 Moody’s states that these ratios apply only to large WaSCs, and that “because of their smaller size and the associated risks in relation to cash flow stability, we would expect smaller companies, such as the water-only companies, to exhibit a stronger AICR”.³⁷ Elsewhere in the same document, Moody’s explicitly identifies us as one of the “smaller water-only companies”.³⁸ In line with Moody’s expectations for this, we have tested our plan assuming the need for an additional one notch up on AICR ratios, with the result that:
- for a Baa1 credit rating, we adopt a target of a minimum Adjusted Cash Interest Cover of 1.7x (A3 from Moody’s guidance); and
 - for a Baa3 credit rating, we adopt a target of a minimum Adjusted Cash Interest Cover of 1.3x (Baa2 from Moody’s guidance).
- 3.27 Our targets are based on the definition of Adjusted Cash Interest Cover incorporated in Ofwat’s PR19 financial model, which does not match the definition of AICR used by Moody’s. In particular, we understand that whereas Ofwat’s Adjusted Cash Interest Cover includes the IRE component of the natural PAYG rate, and any increases above the natural PAYG rate, Moody’s AICR

³⁴ Ofwat PR19 Financial model, “Analysys_Appointee” tab, Row 23.

³⁵ Regulated Water Utilities Rating Methodology, Moody’s, June 2018.

³⁶ Regulator’s proposals undermine the stability and predictability of the regime, Regulated Water Utilities – UK, Moody’s, May 2018.

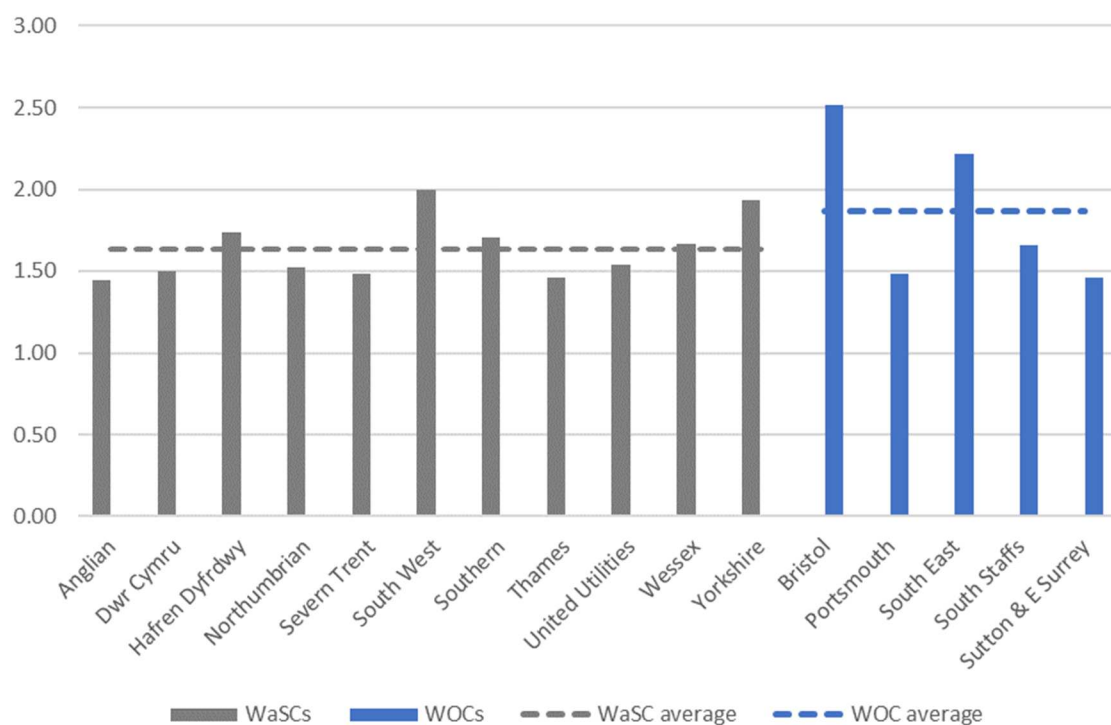
³⁷ Regulator’s proposals undermine the stability and predictability of the regime, Regulated Water Utilities – UK, Moody’s, May 2018, Exhibit 5.

³⁸ Regulator’s proposals undermine the stability and predictability of the regime, Regulated Water Utilities – UK, Moody’s, May 2018, Page 3.

excludes both components. Therefore, our use of Adjusted Cash Interest Cover ratios based on Moody's AICR guidance levels will tend to overstate the financeability of the notional company on the basis of interest cover ratios. It is arguable, therefore, that we should adopt higher targets for Adjusted Cash Interest Cover to compensate for this. However, any such compensation would not be perfect to the extent it caused a larger increase above the natural PAYG rate, as that impact would not be reflected in AICR; nevertheless, it would recognise the fact that AICR is a more testing ratio than Adjusted Cash Interest Cover.

3.28 Ofwat sets out the Adjusted Cash Interest Cover ratios for companies other than Affinity Water in its DD, as shown in the graph below.

Figure 2: Adjusted Cash Interest Cover ratios from the DD, central case



Source: PR19 DDs Aligning Risk and Return technical appendix, page 63, Table 6.4

3.29 The (unweighted) average of the Adjusted Cash Interest Cover ratios for the central case for all other WOCs (the relevant comparator group) at the DD was 1.87x, and for all other companies was 1.71x. Our target of 1.70x for the Baa1 rating in the central case is below both averages.

FFO / Net Debt

3.30 We target minimum levels of FFO / Net Debt.

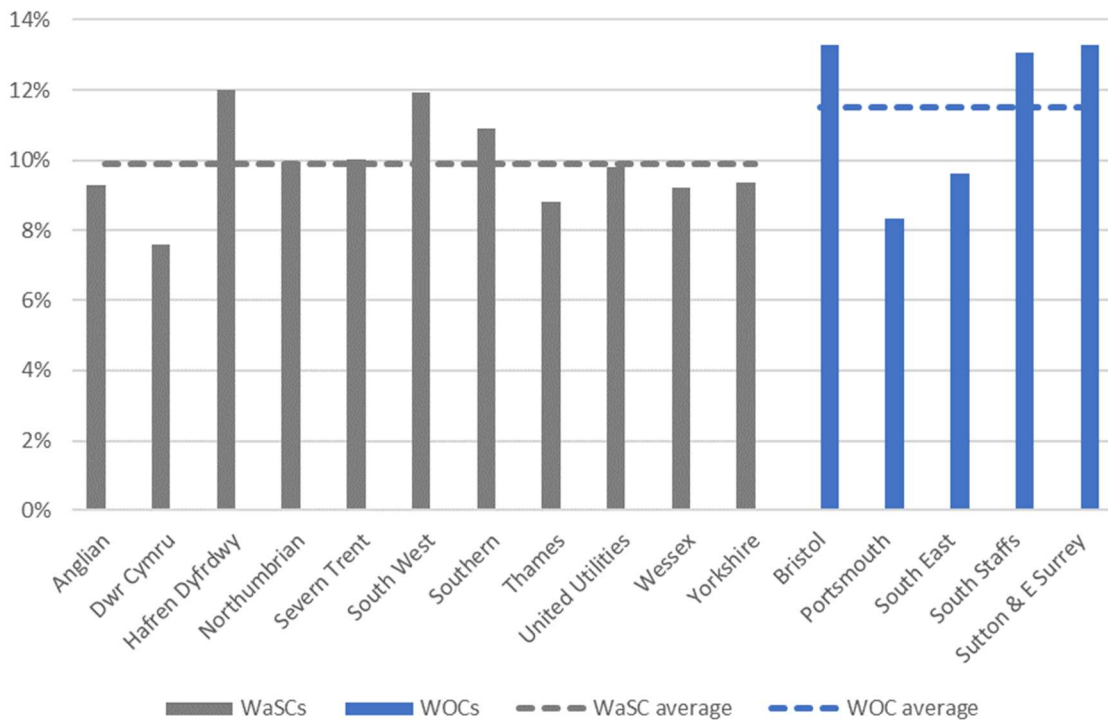
3.31 Moody's May 2018 guidance does not disclose FFO / Net Debt target ratios, so we base our targets on the best information available to us, its June 2018 guidance. This gives a target FFO / Net Debt ratio range of 10% to 15% to retain a Baa rating.³⁹

³⁹ Regulated Water Utilities Rating Methodology, Moody's, June 2018.

- for a Baa1 credit rating, we adopt a target of a minimum ratio of 12.5%, assuming that Baa1 will require a ratio towards the top of the Baa range; and
- for a Baa3 credit rating, we adopt a target of a minimum ratio of 10.0%, assuming that Baa3 sits at the bottom of the Baa range.

3.32 Ofwat sets out the FFO / Net Debt ratios for the central case for companies other than Affinity Water in its DD, as shown in the graph below.

Figure 3: FFO / Net Debt ratios for companies in the DD, central case



Source: PR19 DDs Aligning Risk and Return technical appendix, page 63, Table 6.4

3.33 The (unweighted) average of the FFO / Net Debt ratios for the central case for all other WOCs (the relevant comparator group) at the DD was 11.5%, and for all other companies was 10.4%. Our target of 12.5% for the Baa1 rating in the central case is slightly above the WOC average, but below the ratios for Bristol Water (13.3%), SES Water (13.3%), and South Staffs Water (13.0%).

Section 4

Minimum PAYG rate for financeability

A Introduction

- 4.1 This section examines the minimum PAYG rate for a financeable plan, using the criteria and target financial ratios established in Section 3, and assuming all other Business Plan parameters, including the natural RCV run-off rate, are held constant.
- 4.2 Since this minimum is calculated solely on the basis of financeability criteria, its level is independent of our approach to deriving the natural PAYG rate. Section 5, below, compares the two rates and considers the need for an increase above the natural PAYG rate in order to meet financeability requirements.
- 4.3 In common with other companies that have proposed adjustments for financeability purposes, and Ofwat's own interventions on financeability,⁴⁰ we have focused on adjustments to the PAYG rate rather than the RCV run-off rate, not least because adjustments designed to address an Adjusted Cash Interest Cover constraint are far more effectively achieved through the PAYG rate.⁴¹

Structure of this section

- 4.4 This section is structured as follows:
- Subsection B sets out our approach to calculating the minimum PAYG rate necessary to meet the financeability criteria;
 - Subsection C sets out the minimum PAYG rate resulting from that approach;
 - Subsection D confirms the central case financial ratios and credit rating delivered by that minimum PAYG rate;
 - Subsection E confirms the financial ratios and credit rating delivered by that minimum PAYG rate in the downside scenarios; and
 - Subsection F sets out our conclusions.

⁴⁰ PR19 DD. Aligning risk and return technical appendix, Section 6.5.1.

⁴¹ Adjustments to the RCV run-off rate have very little effect on the numerator of the Adjusted Cash Interest Cover calculation, since increased Funds From Operations are counterbalanced by an increased Capital Charge deduction. (There can be a minor second order effect from impacts on items such as Corporation Tax). No comparable counterbalancing applies to adjustments to the PAYG rate. Therefore addressing any given Adjusted Cash Interest cover constraint has a far smaller impact on bills if done via the PAYG rate.

B Approach to identifying the minimum rate

4.5 We have assessed the financial ratios generated by a range of PAYG rates, and have identified the minimum PAYG rate necessary to meet all of the following tests for the notional company in each year, as set out in Section 3C above:

- In the central case:
 - Adjusted Cash Interest Cover of at least 1.7x; and
 - FFO / Net Debt of at least 12.5%.
- In the downside scenario:
 - Adjusted Cash Interest Cover of at least 1.3x; and
 - FFO / Net Debt of at least 10.0%.

C Resulting minimum rate

4.6 Our approach results in the following minimum PAYG rates⁴²:

Table 5: Minimum PAYG rates for financeability for each price control

Price control	2020/21	2021/22	2022/23	2023/24	2024/25	Average
Water resources	39.6%	33.5%	35.6%	35.4%	48.2%	38.0%
Water network	61.4%	62.2%	63.4%	72.2%	72.6%	66.2%
Aggregate	57.8%	56.4%	57.9%	63.3%	68.2%	60.6%

Source: Affinity Water data tables WR4 and WN4; Affinity Water analysis

4.7 Ofwat has provided a graphical comparison of the “Average pay-as-you-go rates for the period 2020-25 across the wholesale controls as a proportion of totex” that it set in the DDs.⁴³ This shows a range from approximately 40% to 73%. Our figure of 60.6% falls comfortably within this range.

D Central case credit rating

Adjusted cash interest cover

4.8 The table below compares the resulting Adjusted Cash Interest Cover ratios based on the minimum PAYG rates and all other parameters from the Representation, with the minimum target ratio of 1.70, under the central case.

⁴² Although minimum rates are in principle independent from the approach taken to calculating the natural rate, in practice for the purposes of simplifying the calculation process, we estimated minimum rates by applying a uniform annual uplift to the natural rate. We do not believe that this modelling simplification has a material impact on overall PAYG rates or customer bills.

⁴³ PR19 DD Aligning risk and return technical appendix, page 34, Figure 5.2.

Table 6: Adjusted Cash Interest Cover ratios from Representation – central case

	2020/21	2021/22	2022/23	2023/24	2024/25	Average	Minimum target
Representation	2.35x	2.40x	2.37x	2.43x	2.42x	2.39x	1.70x

Source: Affinity Water, populated financial model

- 4.9 In the central case, Adjusted Cash Interest Cover ratios are above the minimum target in all five years. As noted above, however, Adjusted Cash Interest Cover under the central case is only one of four financeability constraints.

FFO / Net Debt

- 4.10 The table below compares FFO / Net Debt ratios based on the minimum PAYG rates and all other parameters from the Representation, with the minimum target ratio of 12.5%, under the central case.

Table 7: FFO / Net Debt ratios from Representation – central case

	2020/21	2021/22	2022/23	2023/24	2024/25	Average	Minimum target
Representation	13.5%	13.3%	13.2%	12.0%	12.9%	13.0%	12.5%

Source: Affinity Water, populated financial model

- 4.11 As indicated by the orange shading, the FFO / Net Debt ratio falls below the minimum target in 2023/24 in the central case. However, the other four years and the overall average are above target.

Credit rating

- 4.12 The minimum PAYG rates appear adequate to secure a Baa1 credit rating under the central case, based on the above Adjusted Cash Interest Cover and FFO / Net Debt ratios, with only one isolated exception of a ratio falling below target.

E Downside scenario credit rating

Adjusted cash interest cover

- 4.13 The table below compares Adjusted Cash Interest Cover ratios based on the minimum PAYG rates and all other parameters from the Representation, with the minimum target ratio of 1.30, under the downside scenario.

Table 8: Adjusted Cash Interest Cover ratios from Representation – downside scenario

	2020/21	2021/22	2022/23	2023/24	2024/25	Average	Minimum target
Representation	1.84x	1.88x	1.85x	1.85x	1.82x	1.85x	1.30x

Source: Affinity Water modelling of the impact of the downside scenario using data and calculations from the data tables and the populated financial model

- 4.14 Adjusted Cash Interest Cover ratios are above the minimum target in all five years. As noted above, however, Adjusted Cash Interest Cover under the downside scenario is only one of four financeability constraints.

FFO / Net Debt

- 4.15 The table below compares FFO / Net Debt ratios based on the minimum PAYG rates and all other parameters from the Representation, with the minimum target ratio of 10.0%, under the downside scenario.

Table 9: FFO / Net Debt ratios from Representation – downside scenario

	2020/21	2021/22	2022/23	2023/24	2024/25	Average	Minimum target
Representation	11.7%	11.4%	11.2%	9.8%	10.4%	10.9%	10.0%

Source: Affinity Water modelling of the impact of the downside scenario using data and calculations from the data tables and the populated financial model

- 4.16 The FFO / Net Debt ratio falls to marginally below the minimum target in 2023/24. However, it recovers in 2024/25 and all other years are above target.

Credit rating

- 4.17 The minimum PAYG rates appear adequate to secure a Baa3 credit rating under the downside scenario, based on the above Adjusted Cash Interest Cover and FFO / Net Debt ratios. However, the FFO / Net Debt ratio shows an overall declining trend, and falls to marginally below the minimum target in one year, suggesting that lower PAYG rates would fail to meet the minimum target and imperil the Baa3 credit rating. This would result in the notional company failing to meet Ofwat's own guidance for financeability.

F Conclusions

- 4.18 The minimum PAYG rates to deliver financeability under the criteria specified in Section 3 (Baa1 credit rating under the central case and Baa3 credit rating under the downside scenario) are shown below:

Table 10: Minimum PAYG rates for financeability for each price control

Price control	2020/21	2021/22	2022/23	2023/24	2024/25	Average
Water resources	39.6%	33.5%	35.6%	35.4%	48.2%	38.0%
Water network	61.4%	62.2%	63.4%	72.2%	72.6%	66.2%
Aggregate	57.8%	56.4%	57.9%	63.3%	68.2%	60.6%

Source: Affinity Water data tables WR4 and WN4

Section 5

Adequacy of natural PAYG rate for financeability

A Introduction

- 5.1 This section compares the natural PAYG rate derived in Section 2 with the minimum PAYG rate required for financeability derived in Section 4, and considers whether an increase above the natural rate is required to deliver financeability.
- 5.2 It is important to appreciate that the need (if any) for an increase above the natural rate is at least in part a function of the approach to deriving the natural rate. Any alternative approach to deriving the natural rate would still have to be tested against the same minimum rate for financeability, and an increase applied if necessary.
- 5.3 As noted above, this assessment assumes:
- all other parameters, including the natural RCV run-off rate, are held constant; and
 - adjustments for financeability purposes focus on increasing the PAYG rate rather than the RCV run-off rate.

Structure of this section

- 5.4 This section is structured as follows:
- Subsection B compares the natural PAYG rate with the minimum PAYG rate required for financeability and considers whether an increase above the natural PAYG rate is necessary for financeability; and
 - Subsection C sets out our conclusions.

B Comparison of natural PAYG rate with minimum PAYG rate for financeability

- 5.5 The table below compares the aggregate natural PAYG rates from Section 2 with the aggregate minimum PAYG rates required for financeability from Section 4⁴⁴:

⁴⁴ As noted above, for the purposes of simplifying the calculation process, we estimated minimum rates by applying a uniform annual uplift to the natural rate.

Table 11: Natural PAYG rates v minimum PAYG rates for financeability

	2020/21	2021/22	2022/23	2023/24	2024/25	Average
Natural	54.4%	53.0%	54.5%	59.9%	64.8%	57.2%
Minimum	57.8%	56.4%	57.9%	63.3%	68.2%	60.6%
Shortfall	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%

Source: Affinity Water analysis

5.6 It can be seen that the natural rates are 3.4% below the minimum rates. This indicates that a 3.4% increase above the natural rate is required to deliver financeability.

5.7 We note that:

- On balance, customers support paying for capital expenditure as part of their bills over a shorter rather than longer period of time, and having lower bills in the long term as a result⁴⁵. This is consistent with the general principle of an increase PAYG rate above the natural rate.
- In practice an increase of 3.4% above the natural rate for AMP7 reduces the difference between AMP7 and AMP8 bills, consistent with our customers' preferences.⁴⁶

C Conclusion

5.8 The 3.4% increase above the natural PAYG rate that we propose in our Representation is the minimum increase required to deliver financeability, given the natural PAYG rate and all other parameters in the Representation, and is consistent with customers' preferences.

⁴⁵ Affinity Water – Phase 3 Bill Profiling: Acceptability Testing, Verve, August 2019, page 7 (reference AFW-FR-Appendix 3 (Customer Research)).

⁴⁶ See AFW Representation – Appendix AFW-FR: Financing and Resilience, Section 3.

Section 6

Comparison with March 2019 and DD PAYG rates

A Introduction

6.1 This section compares the PAYG rates we propose for the Representation in Section 5 with those in our March 2019 business plan⁴⁷ and the DD.

Structure of this section

6.2 This section is structured as follows:

- Subsection B compares the PAYG rate proposed in Section 5 with those in our March 2019 business plan and Ofwat’s July 2019 DD;
- Subsection C compares the central case financial ratios and credit rating delivered by those rates;
- Subsection D compares the downside scenario financial ratios and credit rating delivered by those rates; and
- Subsection E sets out our conclusions.

B Comparison of PAYG rates

6.3 This table below compares the PAYG rates proposed for our Representation in Section 5 with those in our March 2019 business plan and the DD.

Table 12: Overall PAYG rates from March 2019 Business Plan, DD, and Representation

	2020/21	2021/22	2022/23	2023/24	2024/25	Average
March 2019	56.8%	55.4%	56.6%	61.6%	65.8%	59.1%
DD	50.4%	48.2%	48.9%	53.1%	58.4%	51.6%
Representation	57.8%	56.4%	57.9%	63.3%	68.2%	60.6%

Source: Affinity Water, data tables WR4 and WN4, DD and March 2019 submission

6.4 It can be seen from the table that proposed PAYG rates are slightly above those in our March 2019 Business Plan (which was prepared using a different approach to assessing financeability from that set out above) and remain higher than those in our DD.

⁴⁷ Note, all figures in this section show March 2019 plan figures before post-financeability adjustments; they do not, therefore, always match the figures in the March 2019 Business Plan submissions, some of which reflected post-financeability adjustments.

C Central case credit ratings

Adjusted cash interest cover

- 6.5 The table below compares Adjusted Cash Interest Cover ratios from all three plans, based on PAYG rates and all other parameters from those plans, with the minimum Baa1 target ratio of 1.70, under the central case.

Table 13: Adjusted Cash Interest Cover ratios from March 2019 Business Plan, DD, and Representation – central case

	2020/21	2021/22	2022/23	2023/24	2024/25	Average	Minimum target
March 2019	2.25x	2.28x	2.30x	2.31x	2.32x	2.29x	1.70x
DD	1.55x	1.51x	1.48x	1.48x	1.50x	1.50x	1.70x
Representation	2.35x	2.40x	2.37x	2.43x	2.42x	2.39x	1.70x

Source: Affinity Water March 2019 plan, DD and populated Financial model

- 6.6 It can be seen from the table that the DD PAYG rates do not meet the minimum target ratios in any year, and therefore under the framework described above, are too low to deliver financeability for the notional company. As noted above, our March 2019 plan was prepared using a different approach to assessing financeability from that set out above, and so reflected different ratio targets.

FFO / Net Debt

- 6.7 The table below compares FFO / Net Debt ratios from all three plans, based on PAYG rates and all other parameters from those plans, with the minimum target ratio of 12.5%, under the central case.

Table 14: FFO / Net Debt ratios from March 2019 Business Plan, DD, and Representation – central case

	2020/21	2021/22	2022/23	2023/24	2024/25	Average	Minimum target
March 2019	13.4%	13.4%	13.5%	13.3%	14.2%	13.6%	12.5%
DD	8.9%	9.0%	9.4%	10.0%	10.8%	9.6%	12.5%
Representation	13.5%	13.3%	13.2%	12.0%	12.9%	13.0%	12.5%

Source: Affinity Water March 2019 plan, DD and populated Financial model

- 6.8 It can be seen from the table that the DD PAYG rates do not meet the minimum target ratios for Baa1 in any year, and therefore under the framework described above, are too low to deliver financeability for the notional company. We note that for three of the five years, the DD PAYG rates deliver ratios that are below the minimum target of Baa3, and therefore suggest the notional company that would not be able to achieve a minimum investment grade credit rating, even under the central case.

D Downside scenario credit ratings

Adjusted cash interest cover

6.9 The table below compares Adjusted Cash Interest Cover ratios from all three plans, based on PAYG rates and all other parameters from those plans, with the minimum Baa3 target ratio of 1.30, under the downside scenario.

Table 15: Adjusted Cash Interest Cover ratios from March 2019 Business Plan, DD, and Representation – downside scenario

	2020/21	2021/22	2022/23	2023/24	2024/25	Average	Minimum target
March 2019	1.81x	1.84x	1.88x	1.91x	1.93x	1.87x	1.30x
DD	1.05x	1.02x	1.03x	1.06x	1.09x	1.05x	1.30x
Representation	1.84x	1.88x	1.85x	1.85x	1.82x	1.85x	1.30x

Source: Affinity Water modelling of the impact of the downside scenario using data and calculations from the March 2019 and Representation data tables, the DD, and the populated financial model

6.10 It can be seen from the table that the DD PAYG rates do not meet the minimum target ratios in any year, and therefore under the framework described above, are too low to deliver financeability for the notional company. They suggest that under the downside scenario, the notional company would not be able to achieve a minimum Baa3 investment grade credit rating in any year.

FFO / Net Debt

6.11 The table below compares FFO / Net Debt ratios from all three plans, based on PAYG rates and all other parameters from those plans, with the minimum target ratio of 10.0%, under the downside scenario.

Table 16: FFO / Net Debt ratios from March 2019 Business Plan, DD, and Representation – downside scenario

	2020/21	2021/22	2022/23	2023/24	2024/25	Average	Minimum target
March 2019	11.7%	11.6%	11.6%	11.3%	12.1%	11.7%	10.0%
DD	7.1%	7.3%	7.6%	8.2%	8.9%	7.8%	10.0%
Representation	11.7%	11.4%	11.2%	9.8%	10.4%	10.9%	10.0%

Source: Affinity Water modelling of the impact of the downside scenario using data and calculations from the March 2019 and Representation data tables, the DD, and the populated financial model

6.12 It can be seen from the table that the DD PAYG rates do not meet the minimum target ratios in any year, and therefore under the framework described above, are too low to deliver financeability for the notional company. They suggest that under the downside scenario, the notional company would not be able to achieve a minimum Baa3 investment grade credit rating in any year.

E Conclusion

- 6.13 The 3.4% increase above the natural PAYG rate we propose in our Representation is the minimum increase required to deliver financeability, given the natural PAYG rate and all other parameters in the Representation.
- 6.14 By contrast, the DD PAYG rates deliver financial ratios that appear incompatible with Ofwat's own guidance, as set out in Section 3, that target credit ratings should allow sufficient headroom for a company to absorb potential cost shocks and still retain an investment grade credit rating, since they indicate:
- the notional company would not be able to achieve a Baa1 credit rating (or even, in some years, a minimum investment grade Baa3 credit rating) under the central case; and
 - the notional company would not be able to achieve a minimum investment grade Baa3 credit rating in any year under the downside scenario.