



Review of our financeability test

Draft Report
Research

August 2018

© Independent Pricing and Regulatory Tribunal (2018)

With the exception of any:

- (a) coat of arms, logo, trade mark or other branding;
- (b) third party intellectual property; and
- (c) personal information such as photos of people,

this publication is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Australia Licence.



The licence terms are available at the Creative Commons website: <https://creativecommons.org/licenses/by-nc-nd/3.0/au/legalcode>

IPART requires that it be attributed as creator of the licensed material in the following manner: © Independent Pricing and Regulatory Tribunal (2018).

The use of any material from this publication in a way not permitted by the above licence or otherwise allowed under the *Copyright Act 1968* (Cth) may be an infringement of copyright. Where you wish to use the material in a way that is not permitted, you must lodge a request for further authorisation with IPART.

Disclaimer

IPART does not guarantee or warrant, and accepts no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained in this publication.

Information in this publication is provided as general information only and is not intended as a substitute for advice from a qualified professional. IPART recommends that users exercise care and use their own skill and judgement in using information from this publication and that users carefully evaluate the accuracy, currency, completeness and relevance of such information. Users should take steps to independently verify the information in this publication and, where appropriate, seek professional advice.

Nothing in this publication should be taken to indicate IPART's or the NSW Government's commitment to a particular course of action.

ISBN 978-1-76049-246-5

The Independent Pricing and Regulatory Tribunal (IPART)

IPART provides independent regulatory decisions and advice to protect the ongoing interests of the consumers, taxpayers and citizens of NSW. IPART's independence is underpinned by an Act of Parliament. Further information on IPART can be obtained from IPART's website: <https://www.ipart.nsw.gov.au/Home>.

Tribunal Members

The Tribunal members for this review are:

Dr Peter J Boxall AO, Chair

Mr Ed Willett

Ms Deborah Cope

Enquiries regarding this document should be directed to a staff member:

Anthony Rush (02) 9113 7790

Eva McBride (02) 9113 7705

Mariyan James (02) 9113 7791

Invitation for submissions

IPART invites written comment on this document and encourages all interested parties to provide submissions addressing the matters discussed.

Submissions are due by 7 September 2018

We would prefer to receive them electronically via our online submission form <www.ipart.nsw.gov.au/Home/Consumer_Information/Lodge_a_submission>.

You can also send comments by mail to:

Review of our financeability test

Independent Pricing and Regulatory Tribunal

PO Box K35

Haymarket Post Shop NSW 1240

Late submissions may not be accepted at the discretion of the Tribunal. Our normal practice is to make submissions publicly available on our website <www.ipart.nsw.gov.au> as soon as possible after the closing date for submissions. If you wish to view copies of submissions but do not have access to the website, you can make alternative arrangements by telephoning one of the staff members listed on the previous page.

We may choose not to publish a submission—for example, if it contains confidential or commercially sensitive information. If your submission contains information that you do not wish to be publicly disclosed, please indicate this clearly at the time of making the submission. IPART will then make every effort to protect that information, but it could be disclosed under the *Government Information (Public Access) Act 2009* (NSW) or the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW), or where otherwise required by law.

If you would like further information on making a submission, IPART's submission policy is available on our website.

Contents

1	Executive summary	1
1.1	Overview of our proposed changes	2
1.2	Structure of this report	4
1.3	How you can have your say	5
1.4	List of draft decisions	5
2	Context and proposed approach	8
2.1	Who the review affects	8
2.2	Our 2013 test	9
2.3	Scope of this review	11
2.4	Our objectives for this review	11
3	The financeability test framework	12
3.1	We would continue to conduct financeability tests	12
3.2	Our objectives would consider both the benchmark and actual business	16
3.3	Continue to use the 2013 criteria when we decide which businesses to test	17
3.4	Continue to focus on quantitative data	19
4	Implementing the test	21
4.1	We would conduct separate benchmark and actual tests	21
4.2	Cost of debt and gearing	25
4.3	The tax expense	28
4.4	Adjust actual financial inputs for operating lease expense, superannuation net liability and inflation accretion	29
4.5	Test the regulated portion of the business	31
4.6	Focus the financeability test to the upcoming regulatory period	32
5	Financeability assessment	33
5.1	Our target credit rating is BBB	33
5.2	The financial ratios we would calculate	34
5.3	The target ratios	44
5.4	Assessing financeability	47
6	Addressing a financeability concern	51
6.1	The sources of a financeability concern	51
6.2	The remedies and the process to address a financeability concern	53
	Appendices	59
A	Relationship between the building block approach and the financial ratios in the benchmark financeability test	61
B	Comparison with other regulators' approaches to financeability	64



1 Executive summary

The Independent Pricing and Regulatory Tribunal of NSW (IPART) is reviewing the financeability test we use as part of our price regulation process. When making our price determinations for regulated businesses, we use a financeability test to assess how our pricing decisions are likely to affect the business's financial sustainability and ability to raise funds to manage its activities, over the regulatory period.

We last updated the financeability test in 2013¹ (the 2013 test) and made small changes in early 2015.² In our view, our current financeability test is working well. The test acts as a check on our regulatory decisions and provides us with information to assess the financial sustainability of regulated businesses. Stakeholders can replicate our calculations and financeability test, which contributes to the transparency of our regime for regulated businesses and other stakeholders. We also consider that how we implement our test supports efficient and prudent financing decisions by regulated businesses.

Nevertheless, we may be able to improve the test to better assess the impact of our pricing decisions on financial sustainability. We will make improvements that are feasible and likely to deliver a clear net benefit.

This report outlines our draft decisions, explains how and why we made those decisions and seeks submissions from stakeholders. We will consider all submissions before making our final decisions by November 2018. Our revised financeability test will apply to pricing decisions that take effect **on or after 1 July 2019**.³

¹ IPART, *Financeability tests in price regulation – Final Decision*, December 2013.

² IPART, *Fact Sheet, Final Decision – Financeability ratios*, April 2015.

³ We would consult on applying our revised test in the course of future price reviews. Our revised test **will not apply** to any determination currently in effect.

1.1 Overview of our proposed changes

The feedback we have received from stakeholders confirms our view that, overall, our 2013 financeability test is working well.⁴ Stakeholders also supported our review, with Sydney Desalination Plant (SDP) submitting that this review is “important in ensuring that IPART’s approaches to regulation remain fit for purpose over time, reflect evolving regulatory best practice, and are well understood by all stakeholders.”⁵

As such, our draft decisions maintain a number of elements of our 2013 method. We propose to continue to:

- ▼ conduct a quantitative assessment of financeability
- ▼ use the criteria in the 2013 test and conduct a financeability test if:
 - the prices we regulate determine the revenues of the business, and
 - the business has, or is part of an entity with, a distinct capital structure
- ▼ conduct the test on the regulated portion of the business, as a default, and
- ▼ retain a BBB⁶ target credit rating.

Our key changes are summarised in turn.

1.1.1 Conduct separate tests on the benchmark and actual business

Our draft decision is to conduct separate tests using financial inputs for both a benchmark efficient business, and the business’s actual financial inputs.

Conducting both tests would meet the objectives we have set for our financeability test, which are to:

- ▼ ensure our pricing decisions would allow an efficient investment-grade rated business to raise finance and remain financeable during the regulatory period (benchmark test), and
- ▼ assess whether the actual business would be financeable during the regulatory period (actual test).

Our approach would also maximise the value of the test. This is because:

- ▼ conducting the test on the benchmark business would identify any estimation and cash flow impacts arising from our building block approach, and
- ▼ conducting the test on an actual business would indicate whether the business might face a financeability concern.

Undertaking both tests would also assist in identifying the source of a financeability concern, and in tailoring our response to the source of the concern.

⁴ See submissions to IPART Issues Paper, June 2018, from SDP, p 1; Hunter Water, p 4; Sydney Water, p 1; Essential Energy, p 1.

⁵ SDP submission to IPART Issues Paper, June 2018, p 1.

⁶ An S&P Global credit rating of BBB is equivalent to a Moody’s Baa2 credit rating. Note that we use a BBB credit rating when setting the Weighted Average Cost of Capital (WACC).

1.1.2 Establish a single target ratio for each financial metric

As part of our 2013 review, we established 'benchmark' values for the financial metrics that we use to assess the business's financeability. These are a range for each financial metric for a number of different credit ratings. In our Issues Paper, we noted these ratios had a wide range and significant overlap across individual credit ratings, which made it difficult to clearly assess what credit rating a business would meet with a given set of financial ratios.

To increase the simplicity of our approach and eliminate the overlap of our ratios, our draft decision is to set a threshold (ie, a minimum or maximum) value for each ratio that a BBB-rated business would meet under our building block approach. We note that a business would not need to meet every ratio in each year of the regulatory period.

1.1.3 Assume a real cost of debt in the financeability test

When we calculate our financial ratios, we have retained our preliminary decision to use a real cost of debt. This is because our real WACC framework compensates a business for inflation over future periods by adding an inflation adjustment to the Regulatory Asset Base (RAB). Our decision would ensure that:

- ▼ We do not overstate the financeability concerns of the business.
- ▼ We adopt a consistent approach to assess financeability across different businesses. In practice, businesses operate with a wide variety of financing strategies, and their interest expense may include a blend of nominal and real debt.
- ▼ The actual financing strategy of the business does not influence our pricing decisions and therefore customer bills.

In making this decision, we also note that Moody's preferred interest coverage ratio for regulated water utilities assumes a real cost of debt.⁷ However, given that businesses may not have real debt funding, we would also calculate financial ratios using the business's actual interest expense for the actual test, as a diagnostic tool to estimate the impact of issuing nominal bonds on the business's financeability.

1.1.4 Refine our financial ratios

For the benchmark and actual tests, our draft decision is to calculate the Adjusted Interest Coverage Ratio (AICR) and retain the Funds From Operations (FFO) over Debt and debt gearing ratios. We would rank these ratios to place more emphasis on the AICR and FFO over debt ratio, and place less emphasis on the debt gearing ratio.

⁷ Moody's Investors Service, *Rating methodology – Regulated Water Utilities*, June 2018, p 18.

1.1.5 Adopt a clearer process for identifying a financeability concern

Our current financeability test does not have a clear step-by-step process or decision rule for assessing whether a financeability concern exists. This means it might not be clear in what circumstances we would conclude a financeability concern would exist, and implies the assessment of a financeability concern is guided by discretion and judgement. With that said, stakeholders generally agreed that the process for identifying a financeability concern should not be too prescriptive and that IPART should retain a degree of discretion.

We have refined the process we established in our 2013 test to assess the business's financeability. This process would provide more guidance about how we use the trends in the financial metrics to assess the business's financeability and to highlight where (and how) in this assessment we would apply judgement.

1.1.6 Tailor the remedy for a financeability concern to its source

Conducting separate tests for a benchmark efficient business and the actual business would assist in identifying the source of a financeability concern. In turn, our draft decision is that the remedy to a concern should depend on the source we have identified.

In particular, we would consider an NPV-neutral pricing adjustment only in the case where the source of a concern is a temporary cash flow problem. If we consider such an adjustment is appropriate, our preference would be to limit this adjustment to a single regulatory period. However, we agree with stakeholder feedback that in some cases this adjustment would need to take place over multiple periods to manage price volatility. Under our draft decision the Tribunal could consider two options to implement this adjustment over a longer period.

1.2 Structure of this report

The rest of this report discusses the review in more detail and sets out our analysis and draft decisions:

- ▼ **Chapter 2** outlines the context of and our approach to this review.
- ▼ **Chapter 3** discusses the objectives of the financeability test, and our draft decision to use quantitative data.
- ▼ **Chapter 4** focuses on how we implement the test, including the inputs we would use in the benchmark and actual tests; the appropriate time horizon for our analysis; and whether we restrict our analysis to the regulated portion of the business.
- ▼ **Chapter 5** explores how we assess financeability, including which financial metrics we should use and the target ratios for those metrics.
- ▼ **Chapter 6** looks at how we address a financeability concern; in particular, the process we use to identify a concern and the remedies we could consider.

Each chapter outlines our analysis, the changes we propose, our draft decisions, including reasons why we formed that decision.

1.3 How you can have your say

For this review, we are conducting public consultation as well as undertaking our own analysis. To date, we have:

- ▼ Released an Issues Paper in May 2018, which set out our approach, proposed principles for the review and key issues on which we sought feedback. We received seven submissions.
- ▼ Held a public round table in May 2018 to provide stakeholders with an opportunity to discuss our Issues Paper, share their views, propose changes and raise further issues.
- ▼ Considered all submissions to the Issues Paper, feedback from the public round table and conducted our own analysis and research to inform our draft decisions.

We are now seeking submissions on our draft decisions and invite comments from interested parties by **Friday 7 September**. You can find details of how to make a submission on page iii of this Draft Report.

We have included a list of our draft decisions in section 1.4 below. We seek comment from stakeholders on whether they agree with our draft decisions, and invite feedback from stakeholders on these decisions and any other related issues. We will take stakeholder submissions into account in making our final decisions in November 2018.

1.4 List of draft decisions

For convenience, a complete list of our draft decisions is provided below.

The financeability test framework

- | | | |
|---|--|----|
| 1 | That we would continue to conduct financeability tests. | 12 |
| 2 | That the objectives of the 2018 financeability test are to: | 16 |
| | – ensure our pricing decisions would allow an efficient investment-grade rated business to raise finance and remain financeable during the regulatory period (benchmark test), and | 16 |
| | – assess whether the actual business would be financeable during the regulatory period (actual test). | 16 |
| 3 | That we would continue to use the criteria in the 2013 test and conduct a financeability test if: | 17 |
| | – the prices we regulate determine the revenues of the service provider, and | 17 |
| | – the provider is established as, or part of, an entity with a distinct capital structure. | 17 |
| 4 | That we would continue to use quantitative data to assess a business's financeability. | 19 |

Implementing the test

- | | | |
|----|---|----|
| 5 | That we would conduct separate financeability tests, using the inputs for a benchmark efficient business and for the actual business. | 21 |
| 6 | For the benchmark test, we would use the real cost of debt and gearing ratio in the WACC and include the allowance for inflation indexation over the regulatory period. | 25 |
| 7 | For the actual test, as a default we would use the business's current debt outstanding, forecast interest expense and dividend payments. If the business's interest expense is on a nominal basis, we would not include the inflation indexation component in the interest expense. | 25 |
| 8 | That we would use the tax allowance from the building block as the tax expense for the benchmark test. | 28 |
| 9 | That we would calculate the tax expense for the actual test using the process outlined in Table 4.3. | 28 |
| 10 | That we would make adjustments for operating lease expense, superannuation net liabilities and inflation accretion in the actual test only. | 29 |
| 11 | That, as a default, we would conduct both financeability tests on the portion of the business for which we are setting prices. | 31 |
| 12 | That we would consider on a case-by-case basis whether to conduct the actual test using financial data for the whole business. | 31 |
| 13 | That we would assess a business's financeability over the upcoming regulatory period unless a financeability concern arises. | 32 |

Financeability assessment

- | | | |
|----|--|----|
| 14 | That we would continue to use a BBB target credit rating across all industries. | 33 |
| 15 | That we would calculate the following ratios for the benchmark and actual tests: | 34 |
| | – The Adjusted Interest Coverage Ratio (AICR). | 34 |
| | – An adjusted Funds From Operations (FFO) divided by Debt ratio. | 34 |
| | – The Debt divided by RAB, or Gearing, ratio (which is fixed for the benchmark test). | 34 |
| 16 | That we would calculate the Interest Coverage Ratio (ICR) and the (unadjusted) FFO/Debt for the actual test as a diagnostic tool only. | 34 |
| 17 | That we would rank the financial metrics to place more weight on the AICR and adjusted FFO/Debt ratios, and to place less emphasis on the Gearing ratio. | 34 |

18	That we would adopt the following target ratios:	44
	– An Adjusted Interest Coverage Ratio and an Interest Coverage Ratio of greater than 1.8 times.	44
	– A FFO over debt ratio greater than 6%.	44
	– A debt to RAB gearing ratio less than 70%.	44
19	That we would adopt the process in Figure 5.1 to identify whether a financeability concern exists.	47

Addressing a financeability concern

20	That, if we identify a financeability concern, we would separately test whether this concern is due to:	51
	– setting the regulatory allowance too low	51
	– the business is taking imprudent or inefficient decisions, and/or	51
	– the timing of cash flows.	51
21	That, if the source of a concern is due to regulatory error, we would correct the regulatory error by reassessing our pricing decision.	53
22	That, if the source of a concern is due to imprudent or inefficient business decisions, we would alert the business's owners to the potential need to inject more equity, accept a lower rate of return on equity, or both.	53
23	That, if the source of a concern is due to temporary cash flow problems, the Tribunal could consider an NPV-neutral adjustment to prices.	53
24	That, if the Tribunal considers an NPV-neutral adjustment is appropriate:	53
	– First, it would consider whether it is appropriate to implement this adjustment over the regulatory period under review.	53
	– Second, if it does not consider this adjustment should be restricted to the regulatory period under review, it could consider:	54
	○ whether it is appropriate to implement an adjustment by allowing a higher depreciation allowance in the period under review in order to increase prices in the next regulatory period, or	54
	○ an explicit adjustment to the pricing path over the next regulatory period. If it made such an adjustment, we would publish the value of this adjustment in present value terms. This would allow a future Tribunal to consider this adjustment in a future regulatory period.	54

2 Context and proposed approach

In our view our 2013 financeability test is working well. We consider that the test supports regulated businesses to make prudent and efficient financing decisions, and effectively assesses the impact of our pricing decisions on the short-term financeability of regulated businesses.

The aim of this review is to identify opportunities to make improvements to the financeability test that are consistent with the objectives of the test and provide a clear net benefit over the 2013 test.

In this chapter we:

- ▼ discuss who this review affects
- ▼ summarise how we conduct our 2013 test, and
- ▼ outline the scope and objectives for this review.

2.1 Who the review affects

The businesses most affected by this review are those whose prices are set using our ‘building block’ approach. This is because we generally use the financeability test when determining prices for these regulated businesses. These businesses include water utilities such as WaterNSW, the Sydney Desalination Plant, Sydney Water and Hunter Water.

This review may also affect other businesses for which we make pricing decisions, such as the Port Authority of NSW’s cruise ship business.⁸

Table 3.1 in Section 3.3 lists all the price reviews IPART has conducted since 2013 with or without a financeability test.

The results of the test assist us in making regulatory decisions, and to determine what response we should take if financeability concerns arise. Additionally, only in specific circumstances would we make changes that affect prices. As such, the financeability test would not normally have a major impact on the customers of our regulated businesses.

⁸ IPART, *Maximum fees and charges for cruise ships - Sydney Harbour – Final Report*, November 2016.

2.2 Our 2013 test

We last reviewed our financeability test in 2013 and fine-tuned how we calculate our financial ratios in 2015. Box 2.1 summarises our previous reviews of the test, starting in 2011.

Box 2.1 Changes to our financeability test

We conducted the [first review](#) of our financeability test in January 2011. In that review, we decided that if we identified a financeability concern that could not be addressed by the business's managers and shareholders, we would set the WACC above its midpoint or include an additional allowance in the annual revenue requirement.

In December 2013, we conducted our [most recent comprehensive review](#). It established the financial metrics we would consider, how to calculate those metrics (including adjustments) and the benchmarks for comparing those financial ratios. As a key change, we decided that if we identified a financeability concern, we would consider making a neutral net present value (NPV) adjustment to our pricing decision.

In April 2015, we released a [fact sheet](#) detailing relatively minor updates to how we calculate the financial ratios.

Source: IPART, *Financeability tests and their role in price regulation – Final Decision*, January 2011; IPART, *Financeability tests in price regulation – Final Decision*, December 2013; IPART, *Fact Sheet, Final Decision – Financeability ratios*, April 2015.

Box 2.2 summarises our 2013 test, while Appendix B compares our test to other regulators and Moody's credit rating methodology for regulated water utilities. To see how our current financeability test is performed in practice, please refer to our current online model.⁹

⁹ Our model is available at: <https://www.ipart.nsw.gov.au/Home/Industries/Special-Reviews/Regulatory-policy/IPART-cost-building-block-and-pricing-model>

Box 2.2 The review and subsequent 2013 test

Objectives of the review

The objectives of the 2013 review were to:

...assess the short-term financial sustainability of the utility ... whether the utility will be able to raise finance, consistent with an investment grade-rated business, during the regulatory period.

The subsequent 2013 test

1. We assess a business's financeability by first calculating three financial ratios:
 - a) **Funds from operations (FFO) interest cover:** This is calculated as FFO plus interest expense divided by interest expense. This ratio measures a business's ability to service interest payments on debt.
 - b) **Debt gearing (regulatory value):** This is calculated as debt divided by the regulatory value of fixed assets. It measures a business's leverage.
 - c) **FFO divided by debt:** This is a more dynamic measure of leverage than debt gearing because it measures a business's ability to generate cash flows to service and repay debt.
2. We rank the three measures, focusing on the ratios that are most relevant in assessing the likely financial sustainability of a business.
3. We check whether our calculated financial ratios are consistent with our **benchmarks** for the three ratios. We use a credit rating of a Baa2 for our benchmark ratios.
4. We assess whether the business faces potential financial concerns over the regulatory period. We do not expect a business to meet every ratio in every year of a determination period.
5. If we identify a financeability issue, we may extend our analysis to include two to three years before and after a regulatory period, if the business has provided sufficiently robust data for the forecasts. We also review the business's financial statements, particularly its cash flow statement, to assess its ability to fund capital expenditure and dividends.
6. If a financeability concern exists, we identify the likely reasons and options available to the business and its owners to manage those concerns.
7. We assess whether we should make an explicit regulatory adjustment to address financeability concerns in the form of an NPV-neutral adjustment.

As the test was designed to assess a business's ability to finance its operations during a regulatory period, we do not issue a notional credit rating for the business as part of the test.

What inputs do we use for the test?

- ▼ We use the business's forecast cash flows as determined for the review, and its actual gearing ratio and forecast cost of debt.
- ▼ We adjust for operating lease expense and pension benefits, based on data supplied by the business. The adjustments are based on Moody's published methodology at the time of the 2013 review.^a

^a Moody's Investors Service, *Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations*, December 2010.

Source: IPART, *Financeability tests in price regulation – Final Decision*, December 2013.

2.3 Scope of this review

The review focuses on the broader framework of assessing a business's financeability, as well as the inputs and the process which we use to implement the financeability test. In this review we have considered the objectives of the financeability test and what changes we should make to better meet these objectives by considering:

- ▼ the **inputs** we use to conduct our test; in particular, whether we should use inputs that represent a benchmark efficient business and/or the regulated business's actual inputs
- ▼ potential improvements to our financial **metrics** and financial ratio benchmarks, and
- ▼ the process and framework for **identifying** and **addressing** a financeability concern.

We are not considering broader policy issues relating to how we conduct our building block approach as part of this review; for example, the approach of setting a real weighted average cost of capital (WACC) and indexing the asset base for inflation as these are outside the scope of this review.

2.4 Our objectives for this review

In making our decisions for this review, we aim to meet the following objectives:

1. To ensure the financeability test effectively assesses the impact of our pricing decisions on the short-term financial sustainability of the regulated business.
2. That our process for identifying and addressing a potential financeability concern supports efficient and prudent investment decisions by regulated businesses, and supports the long-term interests of consumers.

The financial sustainability of regulated businesses is necessary for continuing to provide services that are in the interests of consumers. At the same time, it is important that our decisions do not support imprudent and inefficient decisions by those businesses.

Threshold for changing the financeability test as a result of this review

Overall, we consider that the 2013 test is working well; however, in our view there are opportunities for improvements. We consider that the changes we have proposed in this report would:

1. better address our objectives for the test
2. increase transparency
3. avoid unnecessarily adding to the regulatory burden on the regulated business, and/or
4. avoid unnecessarily creating windfall gains or losses.

In particular, the changes we have proposed do not impose requirements on regulated businesses to supply additional data so we can calculate the financial metrics.

3 The financeability test framework

In this chapter we consider the objectives of the test, and given these objectives, what businesses should we conduct financeability tests for and the type of information we should consider in the test.

We discuss our draft decisions to:

- ▼ continue to conduct a financeability test
- ▼ maintain two objectives for our financeability test, which are to ensure our pricing decisions would allow a benchmark efficient business to remain financeable, and assess the financial impact of our decisions on the actual business
- ▼ continue to use the criteria in our 2013 test to decide for which business we conduct a financeability test, and
- ▼ use quantitative data in the financeability test.

3.1 We would continue to conduct financeability tests

Draft decision

- 1 That we would continue to conduct financeability tests.

In our Issues Paper, we asked stakeholders whether they agreed with our preliminary position that we should continue to conduct financeability tests, given that conducting the test has benefits and costs.

3.1.1 Stakeholders agreed that we should conduct financeability tests

All stakeholders agreed that we should continue to conduct financeability tests. For example, PIAC agreed with the benefits of conducting the test that we identified in our Issues Paper, and supports “continuing to use financeability test as a check of the output of the price determination process and not as an input in setting the allowed prices and/or rate of return for a regulated business.”¹⁰

¹⁰ PIAC submission to IPART Issues Paper, May 2018, p 1.

3.1.2 The benefits of the financeability test outweigh the costs

Our draft decision is to continue to conduct financeability tests, as stakeholder feedback and our analysis both support this decision.

Our view is that our financeability test is effective, and the potential cost of a regulated business failing is very high compared to the relatively small regulatory cost of conducting the test.

The benefits of the financeability test are significant

In our view the test has the following benefits:

1. When the test is based on financial inputs for a benchmark business, we can assess whether our pricing decision would enable an efficient business to raise finance consistent with an investment grade-rated business.
2. When the test is based on financial inputs from the actual business, we can assess whether the business can raise finance consistent with an investment grade-rated business.
3. If we identify a financeability concern, it helps us decide what actions could be taken to address the concern.

In Chapter 4, we outline the differences between the benchmark and actual inputs we propose to use in the test. To summarise:

- ▼ In the benchmark test, we would use inputs from the Notional Revenue Requirement (NRR), including the benchmark gearing ratio and cost of debt we use to set the WACC.
- ▼ In the actual test, we would use the business's actual debt outstanding and forecast cost of debt, in addition to other inputs from the NRR (such as forecast revenues).

Because the benchmark test only uses inputs from the NRR, a standalone test only using these inputs may not be particularly useful. The Australian Energy Regulator (AER) recently made this argument in reviewing its rate of return guideline.¹¹ Box 3.1 outlines the overlap in using benchmark inputs for the financeability test.

¹¹ For further information, see AER, *Financial performance measures: Discussion paper*, February 2018, pp 29-30.

Box 3.1 The benchmark financeability test

Our cost building block structure mimics a standard profit and loss (P&L) statement. The NRR may be expressed as follows:

$$\nabla \quad \text{NRR} = \text{opex} + (\text{regulatory}) \text{ depreciation} + \text{tax} + \text{return on debt} + \text{return on equity} \quad [1]$$

To run the calculation in equation [1], we estimate these costs for a benchmark efficient business.

To calculate the financial metrics under our current financeability method, we rearrange equation [1] to create a P&L using the allowances from the NRR.^a

We calculate the return on equity (ie, profit after tax) as follows:

$$\nabla \quad \text{Profit} = \text{NRR} - \text{opex} - (\text{regulatory}) \text{ depreciation} - \text{interest expense}^b - \text{tax} \quad [2]$$

This highlights that if we only use benchmark inputs for the financeability test (based on equation [2]), the test may not provide much additional information on whether our regulatory allowance is sufficient for a benchmark efficient business. This suggests the financeability test may have limited use in assessing the NRR or the WACC set by IPART for a regulated business.

a As outlined in Section 4.3, we currently use the real return on debt in equation [1], but the 2013 test assumes a nominal interest expense in equation [2]. If we continued to use a nominal cost of debt as a benchmark input to equation [2], the benchmark test would highlight the impact of indexing inflation into the regulatory asset base.

b In the benchmark test, the interest expense in equation [2] is equal to the return on debt in equation [1].

A test using benchmark inputs could, however, suggest that a business is not financeable if the allowed capital expenditure over the coming regulatory period is very high relative to the current regulatory asset base. In essence, if planned capital expenditure is very high relative to current revenue, the benchmark business's current cash flows may not be able to finance this investment in the short term. In this instance, the test reveals a mismatch in the regulated business's cash flows, although this shortfall is not expected to persist over time.

Overall, it is our view that if the weighted average asset life, return on assets allowance and the depreciation allowance are set appropriately, a benchmark business should be financeable.¹² This is explored further in Appendix A, where we show the relationship between weighted average assets lives, return on equity and the FFO over Debt financial credit ratio.

We consider the benchmark test is most useful when combined with an actual test, because it helps diagnose the source of potential financeability concerns.

¹² Ofgem also made this observation in Ofgem, *Regulating energy networks for the future: RPI-X@20—Current thinking working paper—Financeability*, May 2010, p 10.

The cost of the test is small

The financeability test requires a number of forecasts for the regulated business, in addition to the information required to determine the NRR in the building block approach. These inputs are the business's:

- ▼ forecast cost of debt
- ▼ current debt outstanding
- ▼ forecast dividend payments
- ▼ forecast superannuation liability, and
- ▼ forecast operating lease expense.

We consider that the cost of attaining these inputs is small given the benefits of the test in assessing the financial impact of our pricing decisions on the business, and potentially identifying and addressing a financeability concern before it occurs. In addition, our draft decisions would increase the information provided by the financeability test, without increasing the inputs we require from the business.

3.1.3 How has our financeability test performed?

While it is difficult to assess the performance of our financeability test, recent history suggests the 2013 test is functioning as intended.

The 2013 test (which uses actual inputs) did not identify an issue for most of the regulated businesses we have set prices for. However, we did use this test to identify a potential financeability concern in our 2014 price review of Essential Energy's water and sewerage services (Essential Water) in Broken Hill.¹³ The test allowed us to show that Essential Water's actual gearing was substantially higher than our benchmark (55 per cent), and that it would not be financially sustainable over the regulatory period unless it adopted a lower gearing ratio.¹⁴

¹³ IPART, *Essential Energy's water and sewerage services in Broken Hill – Review of prices from 1 July 2014 to 30 June 2018 – Final Report*, June 2014, pp 141-142.

¹⁴ IPART, *Essential Energy's water and sewerage services in Broken Hill – Review of prices from 1 July 2014 to 30 June 2018 – Final Report*, June 2014, pp 144.

3.2 Our objectives would consider both the benchmark and actual business

Draft decision

2 That the objectives of the 2018 financeability test are to:

- ensure our pricing decisions would allow an efficient investment-grade rated business to raise finance and remain financeable during the regulatory period (benchmark test), and
- assess whether the actual business would be financeable during the regulatory period (actual test).

Our draft decision is to broadly maintain the objectives proposed in our Issues Paper. However, as explained below, we have slightly modified the wording of our draft decision to improve clarity in response to stakeholder feedback.

Our view is that the financeability test should consider the impact of our pricing decisions on both the benchmark efficient business and the actual business. This is because:

- ▼ conducting the test on the benchmark business would identify any estimation and cash flow impacts arising from our building block approach, and
- ▼ conducting the test on an actual business would generate a warning that the actual business might face a financeability concern in advance of the regulatory period.

Undertaking both tests would also assist in identifying the source of a financeability concern.

3.2.1 Stakeholders broadly agreed with our objectives for the test

In our Issues Paper, we proposed that the objectives of the 2018 financeability test are to:

- ensure our pricing decisions would allow an efficient investment-grade rated business to raise finance during the regulatory period (benchmark test), and
- assess whether the utility would meet this benchmark (actual test) during the regulatory period.¹⁵

Stakeholders broadly agreed with these objectives, and to apply the financeability test to both a benchmark efficient business and the actual business. Most stakeholders suggested that the primary focus of the financeability test should be to assess the impact of our pricing decisions on the benchmark business.¹⁶

¹⁵ IPART, *Review of our financeability test – Issues Paper*, May 2018, p 16.

¹⁶ For example, see submissions to IPART Issues Paper, June 2018 from NSW Treasury p 1; SDP pp 3-4; Sydney Water pp 7-8.

Stakeholders suggested that the two objectives should be reframed slightly.

- ▼ SDP submitted that we could rephrase our first objective to emphasise that the financeability test should assess whether a benchmark efficient business would maintain an investment grade rating during the regulatory period. This is because the benchmark test should focus on whether a benchmark business can raise finance on reasonable terms (and in doing so promote the long-term interests of consumers).¹⁷
- ▼ Hunter Water submitted that it is unclear what benchmark is being referred to in the second objective.¹⁸

3.2.2 We would maintain our objectives

Given broad agreement from stakeholders, our draft decision is to maintain the two objectives for the 2018 financeability test. In response to stakeholder feedback, we have slightly redrafted these two objectives to emphasise that the test should focus on whether a benchmark, or actual, business would remain financeable during the regulatory period. In other words, whether our pricing decisions are consistent with a business maintaining at least an investment grade credit rating.

Chapter 4 discusses how we propose to implement both the benchmark and actual tests in further detail.

3.3 We would continue to use the 2013 criteria when we decide which businesses to test

Draft decision

- 3 That we would continue to use the criteria in the 2013 test and conduct a financeability test if:
- the prices we regulate determine the revenues of the service provider, and
 - the provider is established as, or part of, an entity with a distinct capital structure.

In the 2013 financeability review, we decided to conduct a financeability test if the prices we regulate determine the revenues of the business, and if the business has, or is part of an entity with, a distinct capital structure.

Since then, we have conducted a financeability test for most price reviews for regulated water utilities and for some businesses in the transport industry where we have used a building block approach to set revenues based on a regulatory asset base. Table 3.1 lists the price reviews where we have, and have not, conducted a financeability test since the 2013 financeability review.

¹⁷ SDP submission to IPART Issues Paper, June 2018, p 3.

¹⁸ Hunter Water submission to IPART Issues Paper, June 2018, p 7.

Table 3.1 Pricing reviews since December 2013

Price reviews - building block approach and a Regulatory Asset Base	
Financeability test conducted	No financeability test conducted
▼ 2017 Sydney Desalination Plant price review	▼ 2018 review of rural and regional bus services
▼ 2017 WaterNSW (Rural) price review	▼ 2018 review of private ferries fares
▼ 2016 Sydney Water price review	▼ Annual review of fares for private ferries (Pre-2018)
▼ 2016 Hunter Water price review	▼ 2016 review of public transport fares in Sydney and surrounds
▼ 2016 WaterNSW (Greater Sydney) price review	▼ 2016 review of prices for the Water Administration Ministerial corporation
▼ 2016 review of fees and site occupation charges for cruise ships in Sydney Harbour	▼ 2014 review of fares for metropolitan and outer metropolitan bus services
▼ 2014 Essential Energy's Broken Hill water and sewerage price review	▼ 2014 review of prices for land valuation services provided by the Valuer-General to councils
Price reviews – no building block approach and no financeability test	
▼ Annual review of solar feed-in tariffs	
▼ Local government special variations	
▼ Annual update to net rates of return for domestic waterfront tenancies	
▼ Annual review of taxi fares in areas of NSW outside Sydney (Pre-2018)	
▼ Annual review of taxi fares and licences in Sydney (Pre-2018)	
▼ 2018 review of taxi fares and licences	
▼ 2016 review of the price for wholesale ethanol in NSW	
Special reviews – no financeability test	
▼ 2017 review of rent models for social and affordable housing	
▼ 2014 review of fees for NSW Trustee and Guardian	
▼ 2014 review of tow truck fees and licensing in NSW (for accident and recovery towing services)	
▼ 2014 review of rental arrangements for communication towers on Crown Lands	

Source: IPART.

In our Issues Paper, we asked stakeholders whether:

- ▼ they agreed with the criteria we used in the 2013 test to decide whether to conduct a financeability test for a specific businesses, and
- ▼ we have applied the financeability test to the appropriate price reviews since the 2013 review.

3.3.1 Stakeholder's supported our proposed criteria

Almost all stakeholders supported the criteria in the 2013 test that we have used to decide whether to conduct a financeability test, and generally agreed that we have applied the test to the appropriate price reviews.

For example, WaterNSW submitted that it is “appropriate, as part of good regulatory practice, to undertake financeability tests as part of the price reviews for regulated water utilities” but, it can be difficult to apply a credit rating based financeability test where a regulated business does not have a regulated asset base and a notional capital structure.¹⁹

3.3.2 We would continue to apply our 2013 criteria

Similar to the 2013 test, our draft decision is to conduct a financeability test if:

- ▼ the prices we regulate determine the revenues of the service provider, and
- ▼ the service provider is established as, or part of, an entity with a distinct capital structure.

3.4 We would continue to focus on quantitative data

Draft decision

4 That we would continue to use quantitative data to assess a business's financeability.

In our Issues Paper, we expressed a preliminary view that we should continue with a solely quantitative assessment of financeability, as this approach is more transparent for stakeholders and more compatible with our objectives for the financeability test. It is also consistent with the approach in the 2013 test.

3.4.1 Stakeholders had mixed views on the inclusion of qualitative factors

Stakeholders provided mixed feedback to our preliminary view.

On the one hand, Sydney Water and Hunter Water considered that IPART should include the qualitative factors used by credit rating agencies (such as Moody's) in our assessment of financeability, on the basis that:

- ▼ This would align our approach more closely to that taken by credit rating agencies. Hunter Water noted that the qualitative assessment of a water utility's business profile and financial policy has a 60% weighting in Moody's overall credit rating, and therefore IPART should have at least some regard to these elements.
- ▼ The majority of Moody's business and financial profile factors are factually based and do not require subjective judgements.²⁰

¹⁹ WaterNSW submission to IPART Issues Paper, June 2018, p 5.

²⁰ See submissions to IPART Issues Paper, June 2018, from Hunter Water, p 9; Sydney Water, pp 19-20.

On the other hand, SDP, WaterNSW, NSW Treasury and Essential Energy supported our view to continue with a solely quantitative assessment of financeability, citing the following reasons:

- ▼ The qualitative factors considered by ratings agencies are inherently subjective and involve considerable judgement, and for example, could involve IPART making assessments about the transparency and predictability of the regulatory environment.
- ▼ Including the qualitative aspects could reduce the transparency of our process, and make it more difficult for stakeholders to replicate our analysis.
- ▼ Other regulators that conduct financeability tests do not consider qualitative factors in their assessments.
- ▼ The role of the test is not to assess qualitative factors. WaterNSW submitted that:

The role of the financeability test should be as a check by the regulator to ensure, prior to making a pricing determination, that the revenue being provided to the regulated utility will leave it with sufficient financial strength, as measured through appropriate financial ratios, to obtain financing over the course of the regulatory period in question.²¹

3.4.2 The objectives of the financeability test are best achieved by quantitative metrics

Our draft decision is to continue to focus on quantitative information in assessing financeability. We agree with the analysis presented by stakeholders supporting only a quantitative assessment of financeability.

The objectives of the financeability test are to assess the financial impact of our pricing decisions on the benchmark and actual business. In our view, this objective is achieved by solely focusing on quantitative financial metrics, because:

- ▼ Our pricing decisions only directly impact on the financial health of the business over the regulatory period under review. This, in turn, is reflected through changes in the financial ratios calculated for the business over this period.
- ▼ Our pricing decisions do not directly affect qualitative factors, such as the business's ownership structure and quality of management. One of the key qualitative factors affecting our regulated businesses is their ownership. For government-owned regulated businesses, if we were to take this into account in our financeability assessment, we may introduce an unwarranted form of competitive non-neutrality.

By focusing only on quantitative factors, we can ensure that qualitative factors such as the business's ownership structure or management performance would not affect customer prices.

²¹ WaterNSW submission to IPART Issues Paper, June 2018, p 7.

4 Implementing the test

In this chapter, we present our draft decisions on the inputs we propose to use to implement these two tests. We discuss our draft decisions to:

- ▼ Use building block values for the gearing ratio, cost of debt and inflation indexation in the benchmark test.
- ▼ Use the business's current gearing ratio, forecast cost of debt and dividend payments in the actual test. If the business's interest expense is on a nominal basis, we would not include the inflation indexation component in the interest expense.
- ▼ Use the building block allowance for tax expense in the benchmark test, but to calculate the tax expense in the actual test.
- ▼ Make adjustments for operating lease expense and superannuation net liabilities in the actual financeability test only.
- ▼ Test the regulated portion of the business, as a default, in both tests.
- ▼ Focus the financeability assessment on the upcoming regulatory period.

The following sections present our draft decisions on each of these issues. In Chapter 5, we discuss our draft decision regarding the financial ratios we would use and our draft decision to analyse the business's financeability based on a real cost of debt.

4.1 We would conduct separate benchmark and actual tests

Draft decision

- 5 That we would conduct separate financeability tests, using the inputs for a benchmark efficient business and for the actual business.

In our Issues Paper, our preliminary view was that we should conduct separate financeability tests, using:

- ▼ benchmark inputs to test whether our pricing decisions would allow an efficient business to remain financially sustainable, and
- ▼ the actual inputs to assess the impact of our pricing decisions on the actual business.

Our preliminary analysis suggested conducting both tests would maximise the usefulness of a financeability assessment and help highlight the source of a financeability concern for a business. For example, if a benchmark business passed the test but the actual business did not, it would indicate that the financeability concern for the business is not likely to be due to a cash flow timing issue arising from our regulatory decisions.

Our draft decision is to conduct separate financeability tests using benchmark and actual inputs. The inputs in the benchmark test would be set consistent with the parameters in the building block approach, while a number of the inputs in the actual test would be based on the business's actual financial inputs.

4.1.1 Stakeholders agreed that we should conduct separate financeability tests

Stakeholders agreed that we should conduct separate financeability tests, and were generally of the view that IPART should focus on the benchmark test.²² Specifically, NSW Treasury said:

We would expect the shareholders / rating agencies to be performing their own analysis ongoing on the actual inputs, however, we are not opposed to IPART using actual inputs as long as they do a separate test on the benchmark business.²³

4.1.2 We would use benchmark inputs for the benchmark test and actual inputs for the actual test

To conduct the financeability test, we require a range of financial inputs. To conduct the:

- ▼ **benchmark test**, we would set the inputs consistent with the parameters in the building block approach, including the tax allowance and an allowance for inflation indexation, as well as use the benchmark real cost of debt and gearing ratio.
- ▼ **actual test**, we would set some of these inputs using building block components (eg, operating expenditure and forecast revenues), but for others we would request financial data from the business that may be different to the inputs used to calculate our WACC. Overall, our approach for our actual financeability test would be similar to the 2013 test.

Table 4.1 outlines the inputs used for the benchmark and actual tests and we discuss each of the key inputs further in the sections below.

Table 4.1 Inputs for the benchmark and actual tests

	Benchmark test	Actual test
Revenue	Building block target revenue ^a	Building block target revenue ^b
Operating expenditure	Building block allowance	Building block allowance
Depreciation	Building block allowance	Building block allowance
Interest expense	Calculated using WACC real cost of debt and gearing	Calculated using forecast actual cost of debt and gearing
Tax expense	Building block allowance	Calculated tax expense ^c
Dividends	Calculated to maintain a constant benchmark gearing ratio	Forecast dividend payments
Inflation	Building block allowance	Zero, if debt is nominal

^a Often this is similar to NRR as it is usually a smoothed NRR and includes additional revenue shared with customers.


^b Same as for the benchmark test but adds revenue not shared with customers and profit/loss from the sale of assets.

^c We discuss the tax expense calculation in Section 4.3.

IPART would be the only regulator actively conducting both the benchmark and actual tests. Many regulators do not conduct a financeability test. In Australia, the Essential Services Commission (ESC) in Victoria does undertake a financeability test and bases it on inputs for the actual business. In the United Kingdom, Ofgem and Ofwat base their financeability tests on inputs for a benchmark efficient business. For further information on these different approaches, see Appendix B.

²² For example, see submissions to IPART Issues Paper, June 2018, from WaterNSW p 5; Hunter Water p 6.

²³ NSW Treasury submission to IPART Issues Paper, June 2018, p 1.



Our draft decision is to conduct both tests, as we believe that it maximises the usefulness of a financeability assessment. We consider that conducting the benchmark test is useful as a check that our regulatory decisions are robust and additionally may identify cash flow timing issues. Conducting both tests provides us with diagnostic information that can help identify the source of a financeability concern, enabling us to tailor a remedy specific to that concern.

To conduct our financeability test, we would calculate the credit metrics for the benchmark and actual tests. To do this, we would prepare three regulatory financial statements for both the benchmark and actual business:

1. Profit and Loss Statement
2. Balance Sheet Statement, and
3. Cash Flow Statement.

We would base these statements on the inputs as set out in Table 4.1 above. As a result, there would be a direct link between the building block approach and the regulatory financial statements, particularly for the benchmark test. Box 4.1 details how we would prepare these regulatory financial statements.

Box 4.1 The link between the building block approach and the regulatory financial statements

When making our price determinations for regulated businesses, we often use a building block approach to determine the Notional Revenue Requirement (NRR) for the business. The NRR is the sum of:

- ▼ Regulatory operating expenditure (Opex)
- ▼ Regulatory Depreciation (Dep'n)
- ▼ Return on Assets (RoA) = WACC x RAB = Return on debt (RoD) + Return on equity (RoE)
- ▼ Return on Working Capital (RoWC) (this typically represents less than 1% of NRR), and
- ▼ Tax Allowance (TA).

In other words, if we omit the return on working capital (because it is small):

$$\text{NRR} = \text{Opex} + \text{Dep'n} + (\text{RoD} + \text{RoE}) + \text{TA}$$

Also, note that RoD is equivalent to the interest expense in the benchmark test and that:

$$\text{RoD} = \text{real cost of debt} \times \text{RAB} \times \text{gearing}, \text{ and}$$

$$\text{RoE} = \text{real cost of equity} \times \text{RAB} \times (1 - \text{gearing})$$

Regulatory Profit and Loss Statement

The above components are used to prepare the Profit and Loss for the benchmark test as follows:

Revenue ^a (ie NRR)	<i>less</i>	Opex
= EBITDA	<i>less</i>	Dep'n
= EBIT	<i>less</i>	Interest expense (RoD)
= Profit Before Tax	<i>less</i>	TA
= Profit after tax	<i>equals</i>	Return on equity (RoE)

The Profit and Loss statement for the actual test is similar to that for the benchmark test until the EBIT line, and then can be quite different thereafter, depending on the cost of debt used and the tax calculation.

Regulatory Balance Sheet Statement

The Balance Sheet we prepare is high level, focusing predominantly on the debt profile (which is different for the benchmark and actual tests) and the indexed RAB over the financeability assessment period (which is the same for both tests). We discuss this further in Section 4.2.

Regulatory Cash Flow Statement

Similarly, the Cash Flow Statement we prepare is mainly to obtain Funds from Operations (FFO), which is required to calculate the financial ratios for both tests. The Cash Flow Statement is different between the benchmark and actual test, due to the different assumptions for cost of debt, gearing and tax expense.

For the benchmark test, because it is based on the building block components and WACC inputs, we can show that:

$$\text{FFO} = \text{Dep'n} + \text{RoE}$$

We demonstrate the above relationship in Appendix A.

^a This is target revenue which is usually a smoothed NRR.

4.2 Cost of debt and gearing

Draft decision

- 6 For the benchmark test, we would use the real cost of debt and gearing ratio in the WACC and include the allowance for inflation indexation over the regulatory period.
- 7 For the actual test, as a default we would use the business's current debt outstanding, forecast interest expense and dividend payments. If the business's interest expense is on a nominal basis, we would not include the inflation indexation component in the interest expense.

In this section we discuss our draft decisions on how we would calculate the business's interest expense and gearing ratio in the two tests.

In Section 5.2, we discuss our draft decision to calculate our financial ratios on the assumption that the business is financed using a real cost of debt. In the Issues Paper we noted that because we use a real WACC in our building block approach, the impact of inflation on the nominal value of an asset is capitalised into the RAB. As such, we only need to compensate businesses for the real cost of debt and equity in revenues. In other words, the cash flow the business needs to generate to remain financeable should be based on a real cost of debt, and it is on this basis that we would calculate the financial ratios. However, before setting a cost of debt, we need to establish the business's benchmark and actual debt profile, which we discuss below.

4.2.1 Most stakeholder's disagreed with our position to conduct the financeability tests using a real cost of debt

Most stakeholders disagreed with our preliminary position to calculate a financeability test using a real cost of debt. SDP, NSW Treasury, Sydney Water and Hunter Water all stated that the financeability test should use a nominal cost of debt because nominal bond debt funding is the most common and liquid source of debt in Australia.²⁴ Further, SDP said

Since a benchmark efficient business in SDP's circumstances cannot feasibly manage cash flow risk arising from delayed recovery of compensation for inflation, SDP considers that the financeability test should allow for the identification of financeability problems that are created by the way IPART compensates businesses for inflation.²⁵

WaterNSW held a different opinion to its peers, stating that regulated "...businesses can manage the inflation compensation timing mismatch ... through the use of financial instruments such as inflation swaps and low-coupon bonds".²⁶

Competition Economists Group (CEG), on behalf of Sydney Water, points out that there is no NPV difference between nominal and inflation-linked bonds over the life of the bond.²⁷

²⁴ See submission to IPART Issues Paper, June 2018, from SDP, p 6; NSW Treasury, p 2; Sydney Water, p 2; Hunter Water, p 9.

²⁵ SDP submission to IPART Issues Paper, June 2018, p 6.

²⁶ WaterNSW submission to IPART Issues Paper, June 2018, p 6.

²⁷ Competition Economists Group, report on *IPART review of financeability test*, June 2018, p 14.

Our draft decision to assume a real cost of debt in our financial ratios is discussed further in Section 5.2.

4.2.2 The regulated business's debt profile

To conduct a financeability test, we need to combine our regulatory decisions with assumptions about how the business finances itself, to construct a debt profile over the next regulatory period. We then use this debt profile, combined with a set of regulatory financial statements, to calculate our financial ratios.

To construct the benchmark and actual tests, we need to answer the following questions:

1. What is the starting value of debt in each test?
2. How do we extrapolate debt over the regulatory period?
3. What is the business's interest rate to apply to the outstanding debt in each year?

Table 4.2 below summarises our draft decisions on the debt profile we use in the benchmark and actual tests.

Table 4.2 Calculating the debt profile for the benchmark and actual tests

	Benchmark test	Actual test
Starting value of debt	Benchmark gearing ratio \times RAB	The business's current debt outstanding
Debt profile over the regulatory period	<ul style="list-style-type: none"> ▼ The benchmark gearing ratio is maintained ▼ Dividends are paid out to maintain the benchmark gearing ratio ▼ Allowance for inflation included separately 	<ul style="list-style-type: none"> ▼ The business's projected dividends are used as a default ▼ The value of debt is calculated as a result ▼ Allowance for inflation not included if interest expense is nominal
Interest rate	Real cost of debt	Actual cost of debt

The starting value of debt in each test

We propose calculating the starting value of debt as follows:

- ▼ For the benchmark test, we would assume that the benchmark business gears itself at the benchmark gearing ratio (eg, 60% of the RAB).
- ▼ For the actual test, we would use the business's current debt outstanding.

Note that the value of the RAB is a regulatory decision, and would be the same in the two tests.

For the benchmark test, we would assume a zero opening cash balance. For the actual test, we would assume that cash is used in the initial period to pay down debt (in effect, the actual test is calculated on a net debt basis).

The business's debt profile over the regulatory period for each test

We need to construct a profile of debt over each year of the next regulatory period. To do this, we estimate equation (1):

$$D_{t+1} = D_t + r_t + \varepsilon_t + inf_t + exp_t - NRR_t + adj_t \quad (1)$$

where:

- t is the time period
- D is debt
- r is the real return on debt
- ε is the real return on equity
- inf is inflation, which can be split into a component which is capitalised into the future value of debt ($inf(d)$) and equity ($inf(\varepsilon)$), ie, $inf = inf(d) + inf(\varepsilon)$
- exp is cash expenses (operating costs, capital expenditure and the tax allowance)
- NRR is the business's revenue requirement in the year, and
- adj is any adjustments that we need to make to the data.

In words, equation (1) says that the value of debt in the next year of a regulatory period is the value of debt in the previous year, plus the expenses the business incurs less the revenue it receives over the year.

For the benchmark test, we propose that a benchmark business would hold its gearing ratio at the benchmark level through the regulatory period. If we make this assumption, it means that the level of all variables in equation (1) except for the return on equity (ε) is set. The implication is that the only way to make equation (1) balance is to calculate the profits that are not reinvested (i.e. the dividends paid) as a residual. All dividends are assumed to be paid out (or in) as required to maintain a constant benchmark gearing ratio.

- ▼ A positive dividend payout ratio implies that the indexation and growth in the RAB is greater than the growth in the debt profile, and
- ▼ A negative dividend payout ratio implies the business requires equity injections to maintain a constant benchmark gearing level, because the debt profile is growing at a greater rate than the indexation and growth in the RAB.

For the actual test, we have three options to calculate debt outstanding:

1. Use the business's forecast dividend payments, and calculate debt in the following period endogenously.
2. Hold the business's debt gearing constant at its current level, similar to the benchmark test.
3. Make an assumption about the level of dividend payouts (for example, the 2013 test assumes a 70% payout ratio), and given this, to calculate debt endogenously.

For the Draft Report, we adopt option 1 as a default, because it is more consistent with testing the impact of our decisions on the actual business (and how it intends to finance its operations). However, options 2 and 3 could inform our response to any financeability issue that arises due to dividend forecasts. If we were to consider option 3, we could use the business's historical payout ratio, or liaise with the owner of the business (such as NSW Treasury) to form an alternative assumption about dividend payouts.

The business's interest rate for each test

To construct the debt profile over the next regulatory period, we need to decide what interest rate to apply to the outstanding debt in each year. We propose:

- ▼ For the benchmark test we use the real cost of debt in the WACC.
- ▼ For actual test we use the business's forecast cost of debt. Depending on whether the forecast cost of debt is on a nominal or real basis, we would then adjust equation (1) to ensure that the impact of inflation is only accounted for once.²⁸

4.3 The tax expense

Draft decision

- 8 That we would use the tax allowance from the building block as the tax expense for the benchmark test.
- 9 That we would calculate the tax expense for the actual test using the process outlined in Table 4.3.

In the Issues Paper, our preliminary position was to calculate the tax expense for both the benchmark and actual tests using the same calculation, which is different to how we calculate the tax allowance in the building block approach.

After considering the objective of the benchmark financeability test, we decided to change our preliminary position and use the tax allowance from the building block approach as the tax expense in the benchmark test. There is no change to our position for the actual test.

4.3.1 Stakeholders had limited feedback on the tax expense

CEG (on behalf of Sydney Water) commented that tax payments should include the best estimates of tax paid on taxable income given benchmark assumptions.²⁹ WaterNSW raised concerns with our preliminary position, stating that the approach should be consistent with the assumptions of the test being applied. In particular, for the benchmark test, we should utilise the same assumptions for the tax allowance as we would for the NRR.³⁰

²⁸ In other words, if the forecast cost of debt is on a nominal basis, we would set $\inf(d)$ to zero when we estimate the business's debt profile.

²⁹ Competition Economists Group, report on *IPART review of financeability test*, June 2018, p19.

³⁰ WaterNSW submission to IPART Issues Paper, June 2018, p 6.

4.3.2 We would calculate the tax allowance consistently with the assumptions of the test

We agree that the tax expense should be calculated using assumptions consistent with the relevant financeability test. Therefore we have changed our decision to use the tax allowance for the tax expense in the benchmark test, as this is consistent with the assumptions of the building block approach. Under the building block approach the tax allowance included in the NRR is the tax expense for the benchmark efficient business.

For the actual test we observe that we cannot use the business's forecast tax, because our pricing decisions directly affect the tax expense and could be different from the proposal put forward by the business. Therefore, we would estimate the tax expense taking into account actual factors such as the business's gearing and cost of debt as well as income from other sources such as asset sales and unregulated income.

Table 4.3 outlines our proposed method for calculating tax for both the benchmark test (which is how we calculate the tax allowance in the building block approach) and the actual test.

Table 4.3 Calculating the tax expense in the financeability tests

	Benchmark test	Actual test
Taxable income		
Regulatory revenue	Target revenue (usually smoothed NRR)	Target revenue (usually smoothed NRR) plus regulatory revenue not shared with customers
Cash capital contributions	Included	Included
In-kind capital contributions	Included	Included
Profit/loss from asset sales	Proportion shared with customers (usually 0%)	Total profit/loss
Deductible costs		
Operating costs	Forecast regulatory opex	Forecast regulatory opex
Depreciation	Tax depreciation	Tax depreciation ^a
Net interest payments	Based on benchmark gearing ratio and the nominal cost of debt in the WACC	Based on actual gearing ratio and cost of debt

^a The 2013 test uses RAB depreciation when estimating tax payments; however, we propose to move to using tax depreciation. Please note that the IPART *cost building block and pricing model* on our website currently uses RAB depreciation.

4.4 Adjust actual financial inputs for operating lease expense, superannuation net liability and inflation accretion

Draft decision

- That we would make adjustments for operating lease expense, superannuation net liabilities and inflation accretion in the actual test only.

In our Issues Paper, we outlined our preliminary position to continue to make adjustments for operating lease expense and for the forecast net liability from employees on a defined benefit scheme (the superannuation net liabilities). Our draft decision is to make these adjustments in the actual test only.

4.4.1 Stakeholders requested that the adjustments are consistent with Moody's methodology

Stakeholders supported the continuation of the adjustments we make as part of our 2013 financeability test. NSW Treasury, CEG, Hunter Water and SDP added that IPART's test should stay abreast of changes in Moody's adjustments.³¹ Hunter Water argued we should make adjustments for capitalised interest and unusual and non-recurring items,³² as done by Moody's while NSW Treasury suggested we should consider the treatment of managed service contracts, in light of the upcoming accounting changes for operating leases.³³

CEG noted that these adjustments are not required for the benchmark test and are "only necessary or sensible if the test is being performed on the actual financing strategy of the business".³⁴

4.4.2 We would only make adjustments to the actual test

We have decided not to make any adjustments to the benchmark test. This means we are assuming that a benchmark efficient business would:

- ▼ maintain a gearing ratio at the benchmark level, taking into account any operating leases, and
- ▼ not manage a defined benefit scheme on its balance sheet.

We would continue to make adjustments for the operating lease expense and superannuation net liability in the actual test.

Hunter Water also suggested that we should make an adjustment for capitalised interest.³⁵ The way we prepare our financial statements, including the way we calculate the debt profile (see equation (1)), effectively accounts for this adjustment over the regulatory period. This is because any interest expense that is not paid is capitalised into debt in the following period. Therefore, we do not need to consider any further adjustments to our financeability test for capitalised interest.

Should a regulated business have inflation-linked bonds or other similar instruments, as part of its funding structure, these are typically included as a nominal interest expense on the business's Profit and Loss statement. Depending on the interest rate provided to us by the regulated business, it may be appropriate to deduct the indexation (or inflation component) from the interest expense for the actual financeability test, as done in the Adjusted Interest Coverage Ratio. We discuss this adjustment further in Section 5.2.

³¹ See submissions to IPART Issues Paper, June 2018, NSW Treasury, p 2; Hunter Water, p 8; SDP, p 9 & p 16; and Competition Economists Group report on *IPART review of financeability test*, June 2018, p 12.

³² Hunter Water submission to IPART Issues Paper, June 2018, p 8.

³³ NSW Treasury submission to IPART Issues Paper, June 2018, p 2.

³⁴ Competition Economists Group, report on *IPART review of financeability test*, June 2018, p 11.

³⁵ Hunter Water submission to IPART Issues Paper, June 2018, p 8.

4.5 Test the regulated portion of the business

Draft decision

- 11 That, as a default, we would conduct both financeability tests on the portion of the business for which we are setting prices.
- 12 That we would consider on a case-by-case basis whether to conduct the actual test using financial data for the whole business.

We maintain our preliminary position to conduct the financeability test on only the portion of the business for which we are setting prices. In the Issues Paper, we added that we would consider on a case-by-case basis whether to conduct the actual test using financial data for the whole business.

4.5.1 Stakeholders agreed to test only the portion for which we set prices

All stakeholders agreed that we should conduct the financeability test on the portion of the business for which we set prices, particularly for the benchmark test.

WaterNSW agreed and stated that:

As a default, the financeability test should apply to only the regulated portion in question. Testing the entire business may mask financeability issues and result in cross subsidisation.³⁶

NSW Treasury also suggested that if the non-regulated part of the business is “immaterial” then we should calculate the financeability test using inputs for the whole business if it is easier to do so.³⁷

4.5.2 We may conduct the test on the whole business

As noted in the Issues Paper, the businesses that we regulate are sometimes subsidiaries of a larger entity. For example:

- ▼ Essential Water is a subsidiary of Essential Energy (regulated by the AER)
- ▼ WaterNSW has two regulatory businesses (one for Greater Sydney and the other for rural water), and
- ▼ Central Coast Council has separate funds for water and sewerage, and for services funded by council rates.

In these cases, we could conduct our financeability test using:

- ▼ the gearing ratio and the cost of debt for the portion of the business for which we are setting prices (ie, the regulated portion of the business), or
- ▼ the gearing ratio and cost of debt across the whole business.

³⁶ WaterNSW submission to IPART Issues Paper, June 2018, p 5.

³⁷ NSW Treasury submission to IPART Issues Paper, June 2018, p 1.

However, when setting prices, our focus is to promote efficiency within the regulated portion of the business. Therefore, our draft decision is to focus our assessment for both tests to the portion of the business for which we set prices.

In some cases, it may be appropriate to consider the whole business when conducting the actual test. We would do this on a case-by-case basis and in making this decision, consider evidence and analysis provided by the regulated business, as well as having regard to the views of other stakeholders.

4.6 Focus the financeability test on the upcoming regulatory period

Draft decision

- 13 That we would assess a business's financeability over the upcoming regulatory period unless a financeability concern arises.

In the Issues Paper our preliminary position was to assess a business's financeability over the upcoming regulatory period.

4.6.1 Stakeholders agreed with our focus on the upcoming regulatory period

All stakeholders that commented on this issue agreed that we should focus on the upcoming regulatory period.

4.6.2 We may extend our analysis over a longer period if we identify a financeability concern

Our position has not changed since the Issues Paper where we argued that a short-term assessment of financeability is appropriate because:

- ▼ it is difficult to accurately forecast cash flows and debt obligations beyond the upcoming regulatory period, and
- ▼ the purpose of the financeability test is to identify if the prices we set over the upcoming regulatory period are likely to provide sufficient cash flows for the business to meet its debt obligations and maintain an investment-grade credit rating.

However, if we identify a financeability concern, we would extend our time period for analysis to include two to three years before and after the upcoming regulatory period, provided robust forecasts are available.

5 Financeability assessment

This chapter presents our draft decisions on the ratios we would use for the benchmark and actual financeability tests, and the benchmark, or target, values for each ratio.

We discuss our draft decisions to:

- ▼ Retain a BBB³⁸ target credit rating.
- ▼ Calculate the Adjusted Interest Coverage Ratio, Funds From Operations over Debt ratio and gearing ratio³⁹ for both tests.
- ▼ Calculate the financial ratios for both the benchmark and actual tests on the assumption that the business incurs a real interest expense, and assess the business's financeability on this basis. In the actual test, we also calculate equivalent metrics on a nominal basis as a diagnostic tool only.
- ▼ Establish a single target ratio for each financial ratio, set with reference to the ratios for a BBB-rated business adopted by ratings agencies. Establishing a single target ratio, rather than a range across numerous credit ratings, would increase the transparency of our assessment.
- ▼ Present a clear process for how we assess the financial ratios, highlighting at what points and how we would apply judgement in our assessment.

5.1 Our target credit rating is BBB

Draft decision

- 14 That we would continue to use a BBB target credit rating across all industries.

We maintain our preliminary view to use the same target credit rating in the financeability test as used when setting the WACC. This target credit rating ensures consistency with the WACC and achieves the objectives of the financeability test to assess whether the regulatory decisions are sufficient to maintain the financeability of a benchmark efficient business.

We use the S&P Global BBB credit rating when setting the WACC. An S&P Global BBB credit rating is equivalent to a Moody's Baa2 credit rating.

5.1.1 Stakeholders agree with a BBB target credit ratio

All stakeholders agreed with using a BBB target credit ratio. Hunter Water, however, added their concern that the "financeability test's current inputs, metrics, weightings and benchmark

³⁸ We use a BBB credit rating when setting the WACC. An S&P Global BBB credit rating is equivalent to a Moody's Baa2 credit rating.

³⁹ The gearing ratio would be fixed at the gearing level used to set the WACC for the benchmark test.

ratios are not sufficiently aligned with credit rating methodology to support accurate pricing impact assessments”.⁴⁰

5.1.2 We use a BBB target credit ratio across all industries

To decide whether a regulated business passes the financeability test, we need to establish a target credit rating. We can then compare the business’s financial metrics against the benchmark ratios we establish for this target rating. Our 2013 financeability test uses a target credit rating of BBB (which is equivalent to a Baa2 Moody’s rating). A BBB credit rating is investment grade and this is consistent with the objectives of the 2018 financeability test. We also use a BBB credit rating to set the WACC.

As stated in our 2017 WACC Method Final Report, we consider the BBB credit rating is the “most appropriate because we consider that the BBB rating will, on average, provide an efficient estimate of the WACC.” We also decided to adopt a single credit rating for all industries we regulate because it is not feasible to estimate an industry credit rating for a benchmark efficient business accurately.⁴¹

We see no reason to change from this approach and would therefore continue to use a BBB target credit rating across all industries.

5.2 The financial ratios we would calculate

Draft decision

- 15 That we would calculate the following ratios for the benchmark and actual tests:
 - The Adjusted Interest Coverage Ratio (AICR).
 - An adjusted Funds From Operations (FFO) divided by debt ratio.
 - The debt divided by RAB, or gearing, ratio (which is fixed for the benchmark test).
- 16 That we would calculate the Interest Coverage Ratio (ICR) and the (unadjusted) FFO over debt for the actual test as a diagnostic tool only.
- 17 That we would rank the financial metrics to place more weight on the AICR and adjusted FFO over debt ratios, and to place less emphasis on the gearing ratio.

In our Issues Paper, we:

- ▼ asked stakeholders what financial ratios we should calculate
- ▼ asked what benchmark ratios should we set for the financial metrics, and
- ▼ expressed a preference to use a real cost of debt in the financeability test, because using a nominal cost of debt in the financeability test would double count inflation and may exaggerate financeability concerns.

⁴⁰ Hunter Water submission to IPART Issues Paper, June 2018, p 11.

⁴¹ IPART, *Review of our WACC method*, February 2018, p 46.

For our 2013 financeability test, we calculate three financial ratios:

1. **The interest coverage ratio (ICR)** – This is calculated as Funds From Operations (FFO) plus interest expense divided by interest expense. This ratio measures a business's ability to service interest payments on debt.
2. **Debt gearing (gearing)** – This is calculated as debt divided by the regulatory value of fixed assets, ie, the RAB. It measures a business's leverage.
3. **FFO divided by debt ratio** – This is a more dynamic measure of leverage than debt gearing because it measures a business's ability to generate cash flows to service and repay debt.

Our 2013 test ranked these three measures, placing more emphasis on the first two ratios over the third.

Our draft decision is to replace the ICR ratio with the Adjusted Interest Coverage Ratio (AICR), and retain the FFO over debt and gearing ratios. For the benchmark test, the gearing ratio is fixed at the gearing level used to set the WACC.

The AICR ratio differs from the ICR in that it assumes a real cost of debt in the calculation. In addition, in calculating the adjusted FFO over debt ratio, we would assume a real interest expense, in both the benchmark and actual test. For the actual test, we would also calculate the unadjusted ICR and FFO over debt ratio (ie, assuming a nominal interest expense). Calculating these metrics on both a real and nominal basis would assist us to diagnose the source of any financeability issues and identify the impact of issuing nominal debt on the business's financeability.

In the following sections we discuss why we have assumed a real cost of debt to calculate the financial ratios, and explain our decisions on the financial ratio metrics we would calculate.

In forming our draft decisions, we considered the purpose of the financeability test, how we construct the benchmark and actual tests, what rating agencies consider in assessing financeability of businesses and stakeholder feedback.

5.2.1 Real cost of debt

When we calculate the financial ratios, we have retained our preliminary decision to use a real cost of debt. This is because our real WACC framework compensates a business for inflation over future periods through the RAB. Our decision to use a real cost of debt ensures that:

- ▼ We do not overstate the financeability concerns of the business (due to double counting of inflation).
- ▼ We adopt a consistent approach to assess financeability across different businesses. In practice, businesses operate with a wide variety of financing strategies, and their interest expense may include a blend of nominal and real debt.
- ▼ The actual financing strategy of the business does not influence our pricing decisions and therefore customer bills.

However, given that businesses may not have real debt funding, we would also calculate the financial ratios using the business's actual interest expense for the actual test (which will

incorporate the blend of nominal and real debt that the business actually holds) as a diagnostic tool. This would enable us to estimate the impact of issuing nominal bonds on the business's financeability.

Stakeholders disagreed with using a real cost of debt in the financeability test

As outlined in Section 4.2, most stakeholders disagreed with our preliminary position to calculate a financeability test using a real cost of debt and strongly argued for the use of a nominal cost of debt. In summary, the main arguments stakeholders put forward were that:

- ▼ In practice, public and private sector businesses do not manage cash flow timing differences by issuing real coupon bonds, and instead issue nominal debt.
- ▼ That it is not feasible for privately-owned businesses to issue inflation-indexed debt in Australia because there is no market for such debt at the present time.⁴²
- ▼ When Moody's provides credit ratings assessments for Australian businesses, it uses a nominal interest expense, and therefore, we should also use a nominal interest expense.

Further, SDP argued IPART should not use a real cost of debt for the financeability test:

If businesses cannot issue inflation-indexed debt to align their actual interest costs to the regulatory allowance, then it would be inappropriate for Moody's to use the real cost of debt when conducting credit rating assessments.⁴³

WaterNSW was the exception, stating that regulated businesses could manage the inflation compensation timing mismatch.⁴⁴

Our analysis supports a real cost of debt

In calculating our financial ratios, we have made a draft decision to assume a real interest expense in both the actual and benchmark tests because:

- ▼ it would be more consistent with our real WACC method, meaning that inflation is not double counted in the financeability test
- ▼ Moody's preferred interest coverage ratio for water utilities is the AICR
- ▼ it applies a consistent approach in calculating our financial ratios across regulated businesses, and
- ▼ the actual mix of real or nominal debt of the business should not influence our pricing decisions and therefore customer bills.

Further, we propose to calculate the AICR ratio conservatively, which would minimise the difference between the real and nominal cost of debt approaches.

A real cost of debt is more consistent with our real WACC method

Under our real WACC approach, we provide the business with a real return on assets, as the return for inflation is capitalised into the RAB over time. Under the benchmark test, we

⁴² SDP submission to IPART Issues Paper, June 2018, p 7.

⁴³ SDP submission to IPART Issues Paper, June 2018, p 7.

⁴⁴ WaterNSW's submission to the Issues Paper, p 6.

assume a constant gearing ratio over time, which means the impact of inflation is similarly capitalised into the value of debt.

If we use a nominal interest expense in the financeability test, we would, at least initially, overstate financeability concerns.

- ▼ The test would calculate the revenue required to account for inflation when debt is issued, because bondholders are repaid a real rate of return as well as a return for inflation in each year.
- ▼ However, we would also include an allowance for inflation in the NRR over time because we would still index inflation into the RAB. Therefore, the future revenue that the business receives includes the return for inflation accrued in previous periods.

Using a real cost of debt in the financeability test is consistent with our real WACC methodology, because it acknowledges that the business will be compensated for inflation over time.

Moody's preferred Interest Coverage Ratio for water utilities is the AICR

Moody's preferred approach is to consider the AICR ratio, for regulated water utilities where its revenue is determined using a 'building block' approach, because it recognises:

the amount of "headroom" afforded by the company's cash flows in servicing its debt burden after taking into account the cost of maintaining a stable asset base.⁴⁵

From our discussion with Moody's, Fitch Ratings and S&P Global, our understanding is that S&P Global is the only agency that does not take into account the impact of capitalising inflation into the RAB when assessing a regulated business's financeability. In contrast, Moody's and Fitch Ratings both have published documentation which outlines their approach for making this adjustment, where the adjustment is relevant and the information is available.

We would set our benchmark AICR ratio conservatively

In our 2013 test, we calculate the FFO interest coverage ratio (ICR), which assumes a nominal interest expense. The FFO interest coverage ratio is calculated as follows:

$$FFO \text{ Interest coverage}_t = \frac{FFO_t + [r_t + inf(d)_t]}{[r_t + inf(d)_t]} \quad (1)$$

where:

- t is the time period
- FFO is Funds from Operations adjusted for operating leases and superannuation liabilities
- r is the real return on debt
- $inf(d)$ is inflation which is capitalised into the future value of debt.

⁴⁵ Moody's Investors Service, *Rating methodology – Regulated Water Utilities*, June 2018, p 18.

If we assume a real cost of debt, we would effectively calculate the Adjusted Interest Coverage Ratio (AICR)⁴⁶:

$$AICR_t = \frac{FFO_t + [r_t + \inf(d)_t] - \inf(d)_t}{[r_t + \inf(d)_t] - \inf(d)_t} = \frac{FFO_t + [r_t]}{[r_t]} \quad (2)$$

In other words, the only difference in calculating the ratio when using a real cost of debt is that we remove the inflation on debt which is capitalised in the RAB in the next period.

Our AICR will always be higher than the ICR (provided that inflation is positive)

Table 5.1 presents Moody's credit ratings for the AICR and ICR ratios, and shows

- ▼ that a higher number for the two ratios gives a higher credit rating, and
- ▼ the benchmark ratio for the AICR is lower than the ICR.

Table 5.1 Moody's benchmark financial ratios

	A	Baa	Ba
AICR	2.5-4.5x	1.5-2.5x	1.2-1.5x
ICR	4.5-7x	2.5-4.5x	1.8-2.5x

Note: Moody's Baa and Ba credit ratings are equivalent to S&P Global and Fitch Ratings BBB and BB credit ratings.

Source: Moody's Investors Service, *Rating methodology – Regulated Water Utilities*, June 2018, p 21.

This means that a business's credit rating using the AICR will always be better (when inflation is positive) because:

- ▼ the calculated ratio is higher, and
- ▼ Moody's benchmark AICR is lower than the comparable ICR.

However, we consider that it is more appropriate for the benchmark ratios for the AICR and ICR to be the same, because it is a more conservative approach that minimises the differences between the two tests.

We would adopt a consistent approach across businesses

It is important to adopt a consistent approach in calculating our financial ratios. Through our consultation, we note that businesses use a range of financing arrangements. For example, WaterNSW has arranged low coupon financing to match a real cost of debt framework; Sydney Water has a mix of nominal and real debt funding; and other stakeholders indicated a reliance on nominal debt funding. In addition, using a consistent approach across all businesses by using a real cost of debt for both tests ensures that our pricing decisions are not influenced by the financing strategies of the business.

⁴⁶ Our AICR is based on the Adjusted Interest Coverage Ratio used by Moody's and differs only in that we assume Capital Charges are zero. See Moody's Investors Service, *Rating methodology – Regulated Water Utilities*, June 2018, p 19.

5.2.2 Our financial ratios

In this section we analyse our decisions to:

- ▼ calculate the AICR, ICR, FFO over debt and gearing ratios
- ▼ not calculate other ratios proposed by stakeholders, and
- ▼ rank these financial metrics to place more emphasis on the AICR and the FFO over debt ratios.

Stakeholders were supportive of keeping the ratios in the 2013 test

Stakeholders generally suggested that we retain our current ratios, ie, the Interest Coverage Ratio, gearing and FFO/Debt ratios.

However, most stakeholders suggested that we could consider additional ratios:

- ▼ Sydney Water, Hunter Water and WaterNSW suggested we also include the retained cash flow to net debt ratio (RCF over debt), to be consistent with the ratios that Moody's considers in its credit rating assessments.⁴⁷
- ▼ WaterNSW also proposed that we calculate equity ratios (such as the Return on Capital Employed, or ROCE, ratio), to check that our building block model is providing the appropriate return on equity.⁴⁸
- ▼ Treasury proposed that we include the Debt Service Coverage Ratio (DSCR).⁴⁹

SDP also proposed that stakeholders should be able to suggest additional metrics, such as the DSCR, through the pricing review process.⁵⁰

We would calculate four ratios

Table 5.2 summarises the ratios we would use for the benchmark and actual tests and the ratios used in our 2013 test, with our reasoning for including the ratios in our financeability test outlined below.

Table 5.2 Ratios used in the 2013 financeability test versus the Draft Report tests

2013 test	2018 Draft Report	
	Benchmark test	Actual test
Interest Coverage Ratio	Adjusted Interest Coverage Ratio (AICR)	Adjusted Interest Coverage Ratio (AICR) and Interest Coverage Ratio (ICR)
FFO/Debt	FFO/Debt	FFO/Debt
Debt/RAB	Gearing (Debt/RAB) (set as constant)	Gearing (Debt/RAB)

⁴⁷ See submissions to IPART Issues Paper, June 2018, Hunter Water p 11; WaterNSW p 7; and Competition Economists Group report on *IPART review of financeability test*, June 2018, p 22.

⁴⁸ WaterNSW submission to IPART Issues Paper, June 2018, p 7.

⁴⁹ NSW Treasury submission to IPART Issues Paper, June 2018, p 3.

⁵⁰ SDP submission to IPART Issues Paper, June 2018, pp 8-9.

Adjusted Interest Coverage Ratio (AICR)

From equation (2) above, this FFO based ratio would be calculated as

$$AICR_t = \frac{Adjusted\ FFO_t + [r_t]}{[r_t]} \quad (3)$$

where:

- t is the time period.
- r is the real return on debt.
- *Adjusted FFO* is FFO⁵¹ plus the inflation component of the interest expense. If the interest expense is based on a real cost of debt, the adjustment would be zero.

Our 2013 test calculates the Funds from Operations (FFO) Interest Coverage Ratio (ICR), to measure the business's ability to service interest payments on debt. The 2013 financeability test uses the ICR because it assumes a nominal interest expense in the test.

However, as outlined in Section 5.2.1, a real interest expense is more consistent with our WACC method. Therefore, we would use the AICR, which adjusts interest payments for the inflation component of debt which is capitalised into the RAB. This ratio is a more relevant measure of the business's ability to service interest payments on debt, given our WACC methodology. In addition, Moody's currently calculates this ratio when it provides credit ratings for regulated water utilities in the UK.

As shown in Appendix A, FFO is funds from operations and is calculated as cash flows from operations less interest expense. However, if the interest expense is based on a nominal cost of debt, we would need to adjust the interest payments component of FFO so that it reflects a real cost of debt. This means that we would calculate an adjusted FFO for the AICR and FFO over debt ratio which is FFO plus the inflation component of the interest expense. If the interest expense is based on a real cost of debt, the adjustment would be zero.

FFO/Debt

This ratio would be calculated as

$$FFO/Debt_t = \frac{Adjusted\ FFO_t}{Debt_t} \quad (4)$$

where:

- t is the time period
- *Adjusted FFO* is FFO plus the inflation component of the interest expense. If the interest expense is based on a real cost of debt, the adjustment would be zero.
- *Debt* is the debt outstanding adjusted for operating leases and superannuation liabilities.

This ratio calculates the cash flows available to the business, after paying interest payments, as a percentage of debt.

⁵¹ FFO is Funds from Operations adjusted for operating leases and superannuation liabilities.

We would retain this ratio in both the actual and benchmark tests because:

- ▼ it is useful in measuring the business's ability to generate cash flow to service and repay debt (and to measure its resilience to changes in debt costs), and
- ▼ Moody's, S&P Global and Fitch Ratings currently use this ratio in assigning credit ratings for regulated utilities.

For the benchmark and actual tests, we would calculate the interest payments component of FFO on a real basis. However, for the actual test, we would also calculate the FFO over debt ratio on a nominal basis (ie, including the inflation component of the interest expense) as a diagnostic tool.

Gearing (Debt/RAB)

This ratio would be calculated as:

$$\text{Gearing ratio}_t = \frac{\text{Debt}_t}{\text{RAB}_t} \quad (5)$$

where:

- t is the time period.
- Debt is the debt outstanding adjusted for operating leases and superannuation liabilities.
- RAB is the nominal Regulatory Asset Base.

We would, in effect, calculate this ratio for the actual test only. In the actual test, we would use the business's forecast dividend payments and its opening debt balance. This means that the gearing ratio can provide useful information about the business's financeability by assessing its leverage over the determination period. In addition, credit rating agencies and other regulators also use the gearing ratio in their financeability tests.

For the benchmark test, the gearing ratio is fixed at the gearing level in the WACC, ie, for a benchmark efficient business (eg, at 60%) over the regulatory period.

Interest coverage ratio (ICR)

This ratio would be calculated as

$$\text{FFO Interest coverage}_t = \frac{\text{FFO}_t + [r_t + \text{inf}(d)_t]}{[r_t + \text{inf}(d)_t]} \quad (6)$$

where:

- t is the time period
- FFO is Funds from Operations adjusted for operating leases and superannuation liabilities
- r is the real return on debt
- $\text{inf}(d)$ is inflation which is capitalised into the future value of debt.

For the actual test, we would retain the ICR as a diagnostic tool. Stakeholders supported including this ratio, and Moody's, S&P Global and Fitch Ratings use the ICR in their credit rating assessment.

When calculating the ICR, we would calculate the interest payments component of FFO on a nominal basis, including the inflation component of the interest expense.

We do not support including other ratios proposed by stakeholders

In Table 5.3 we explain why we do not support including additional ratios proposed by stakeholders. To summarise, the ratios we have considered, particularly the AICR and the FFO over debt ratios, are dynamic ratios that focus on the cash flows of the business. Our view is that these are sufficient to assess the impact of our pricing decisions on the business's financeability. The objective of the financeability test is to assess whether there are sufficient cash flows for the regulated business to remain financially sustainable. Whether the regulated business then decides to use the cash flows generated by our pricing decisions to fund dividend payments, pay down debt or build capital reserves, is outside the scope of the financeability test.

Furthermore, because most of these ratios are not included by credit ratings agencies in their methodologies, it would be more difficult to establish a target ratio that a BBB-rated business would need to meet.

Table 5.3 Financial ratios suggested by stakeholders for the financeability test

Financial ratio	Calculation	Reason to not include in the test
Retained Cash flow / Debt	(Adjusted FFO less dividends) / Adjusted net debt	We calculate dividends as a residual in the benchmark test. This means an increase or decrease in cash flow (ie, FFO) will be reflected in a proportionate increase or decrease in dividend payments.
Return on Capital Employed (ROCE)	Profit after tax / RAB	It is difficult to establish a benchmark, or target, ratio for the ROCE ratio (in part, because it is not used by ratings agencies).
Return on regulated equity (RORE)	(EBIT - tax - (cost of debt x net debt)) / Equity component of the RAB	It is less straightforward to interpret than other ratios, and it is difficult to establish benchmark, or target, RORE ratio (because it is not used by ratings agencies).
Debt Service Coverage Ratio (DSCR)	EBIT for the year / Total debt service due within the year The DCSR ratio measures the cash flow available to pay current debt obligations including principal repayments.	We do not have the information to calculate a target ratio. In practice, the depreciation allowance in the building block approach should provide an allowance that meets principal repayments.

5.2.3 We would rank our financial metrics

Our draft decision is that we would rank the financial metrics in order of importance, rather than adopt a strict weighting to these metrics.

Stakeholders had mixed views on the ranking of the ratios

Stakeholders had mixed views about how we should combine these ratios in our test. For example, WaterNSW agreed with our preliminary view that a *fixed weighting* is not appropriate,⁵² whereas CEG (on behalf of Sydney Water) and Hunter Water preferred a fixed weighting of the ratios to be consistent with Moody's methodology.⁵³

While SDP and WaterNSW supported a *ranking* of financial metrics, they both considered that we should place more weight on the interest coverage ratio and FFO over debt ratios, and less weight on debt gearing.⁵⁴

We have refined our current ranking in response to stakeholder feedback

In response to stakeholder feedback, we have refined our ranking of the financial metrics to place less emphasis on the gearing ratio.

We would place more emphasis on the AICR and the FFO over Debt ratios, for both the benchmark and actual tests.

These ratios are both measures of whether the business generates sufficient cash flows to remain financeable. Our view is that focusing on the cash flows of the business is the most important element of assessing its financeability.

We would also consider the gearing ratio in the actual financeability test, but with a lower ranking than our two measures of cash flow. Placing less emphasis on the gearing ratio is consistent with Moody's methodology to the extent that they place a lower weight on the gearing ratio than cash flow ratios.⁵⁵

We maintain the preliminary view we expressed in our Issues Paper that we should not give a weighting to the financial ratios because:

- ▼ we are not aiming to assign an overall credit rating
- ▼ in our view the outcome of each financial ratio in each year relative to its target, as well as the trend of that ratio over time, provides insight that would be lost in a combined result, and
- ▼ a binary result based on a weighting scheme may imply greater precision in the overall test than actually exists, and ignores the element of judgement that we apply.

⁵² WaterNSW submission to IPART Issues Paper, June 2018, p 7.

⁵³ Competition Economists Group, report on *IPART review of financeability test*, June 2018, p 24 and Hunter Water submission to IPART Issues Paper, June 2018, p 12.

⁵⁴ SDP submission to IPART Issues Paper, June 2018, p 10 and WaterNSW submission to IPART Issues Paper, June 2018, p 8.

⁵⁵ Moody's Investors Service, *Rating methodology – Regulated Water Utilities*, June 2018, p 4.

5.3 The target ratios

Draft decision

18 That we would adopt the following target ratios:

- An Adjusted Interest Coverage Ratio and an Interest Coverage Ratio of greater than 1.8 times.
- A FFO over debt ratio greater than 6%.
- A debt to RAB gearing ratio less than 70%.

In our Issues Paper, we noted that the benchmark ratios in the 2013 test had a wide range, and significant overlap. Our draft decision is to establish a single target ratio for each credit metric by considering the most up-to-date ratios from credit ratings agencies, stakeholder feedback and conducting further analysis. The target ratio would be set with reference to a BBB credit rating, rather than a range for each ratio, across a number of credit rating grades. This approach would maximise the transparency and simplicity of our financeability test.

5.3.1 Stakeholders agreed our credit metric benchmark should be updated but had different views on how to set the benchmark ratios

Stakeholders agreed that our credit metric benchmarks require updating. WaterNSW, Sydney Water and Hunter Water supported IPART closely following Moody's benchmark ratios, while SDP argued that Moody's benchmark ratios have limited relevance to regulated businesses in Australia.⁵⁶

5.3.2 We would set a single target ratio for each metric

In this section, we outline in turn:

- ▼ why our draft decision is to set a single target ratio for each metric, rather than a range across multiple credit ratings, and
- ▼ how we developed our target ratios, and how they compare against the ratios used by credit rating agencies.

We have set a threshold for a BBB-rated business rather than setting ranges

In our 2013 test we developed a benchmark range for each financial metric, across a number of different credit ratings, including the BBB benchmark. These ratios had significant overlap, which made it difficult to clearly assess what credit rating a business would meet with a given set of financial ratios.

To increase the simplicity of our approach and minimise the overlap of our ratios, we have instead set a threshold (ie, a minimum or maximum) value for each ratio that **a BBB-rated business would meet under our building block approach**. We note that a business would not need to meet every ratio in each year of the regulatory period.

⁵⁶ SDP submission to IPART Issues Paper, June 2018, p 11.

Our draft decision is to set a single target ratio for each metric because:

- ▼ First, there is only value in establishing a target ratio for the BBB credit rating. The role of the financeability test is not to assign a credit rating to a business.
- ▼ Second, adopting a band for the target ratio provides little additional value, because it is the bottom (or top) of that band that is the true threshold. Instead, adopting a band may introduce the scope to apply judgement in the assessment of a business. However, our view is that it is more transparent for IPART to explicitly apply judgement in our process for assessing the business's financeability, rather than applying this judgement through setting target bands.
- ▼ Third, by setting a single target value, we do not have a problem of overlapping ratios across different credit rating grades.

A single target value makes our analysis of the business's financeability a pure quantitative assessment. In response to this analysis, the Tribunal could then consider qualitative factors.

How we developed our target ratios

Table 5.4 outlines our target ratios and how they compare against the credit rating agencies.

Table 5.4 Comparison of target metrics vs 2013 metrics used by IPART and credit rating agencies

	Adjusted interest coverage ratio	FFO interest coverage	FFO / debt	Debt / RAB
	<i>Higher is better</i>	<i>Higher is better</i>	<i>Higher is better</i>	<i>Lower is better</i>
IPART (Draft decision)	>1.8x	>1.8x	>6%	<70%
IPART (2013) ^a	NA	1.4-2.9x	5-10%	60-100%
Moody's (Baa) – Water ^b	1.5-2.5x	2.5-4.5x	10-15%	55-70%
Moody's (Ba) – Water ^b	1.2-1.5x	1.8-2.5x	6-10%	70-85%
Moody's (Baa) – Energy networks ^c	1.4-2x	2.8-4x	11-18%	60-75%
S&P Global (Significant) ^d	NA	2-3x	9-13%	NA
S&P Global (Aggressive) ^d	NA	1.5-2x	6-9%	NA
Fitch Ratings (BBB) ^e	NA	1.5x	5.5%	70%

a IPART, *Financeability tests in price regulation – Final Decision*, December 2013, p 10.

b Moody's Investors Service, *Rating methodology – Regulated Water Utilities*, June 2018, p 21.

c Moody's Investors Service, *Rating methodology – Regulated Electric and Gas Networks*, March 2017, p 19.

d S&P Global Ratings RatingsDirect, *Corporate Methodology*, November 2013, p 35. The credit rating that S&P Global Ratings assigns a business is dependent on their financial metrics and their risk profile. The 'Significant' and 'Aggressive' ratios in this table correspond to a BBB benchmark.

e FitchRatings Australian *Regulated Network Utilities: Ratings Navigator Companion* April 2018, pp 9 & 11.

When deciding at what level we should set the target ratios, we had regard to our recent updates to the cost of debt in the WACC. We believe that these updates should represent a material reduction in interest rate risk for the regulated businesses which means that we can set the cash flow target ratios at a lower level.

Further, as we are setting a threshold, rather than a range, it holds that the target ratio we set should be at the lower end, rather than the midpoint, of the ranges used by credit rating agencies.

The Adjusted Interest Coverage Ratio and FFO Interest Coverage Ratio

We developed our target value for the AICR and ICR with reference to the AICR for Moody's and the FFO Interest Coverage Ratio for S&P Global and Fitch Ratings. This is because, as outlined in Section 5.2.1, we think the same value should be set for the two ratios.

In setting the target value for the AICR, we compared the AICR and ICR value for a BBB rated business used by the credit rating agencies. The average of these ratios suggests a target ratio of around 2x. Given the principles outlined above, of setting the target ratio at a lower (threshold) level, we consider that a 1.8x target ratio is appropriate. We note that a coverage ratio of 1.8x is still within the range set by Moody's, Fitch Ratings and S&P Global.

The FFO over debt ratio

The FFO over debt ratio varies quite widely across credit rating agencies, with Moody's adopting a more conservative benchmark (10-15%) than S&P Global (6-13%) or Fitch Ratings (5.5%). Again, based on the principles above, we consider a target ratio towards the lower end of this range, of 6%, is appropriate.

Debt to RAB gearing ratio

In many building block price reviews, we adopt a benchmark gearing ratio of 60%. This implies that a benchmark efficient business would maintain a 60% gearing ratio, on average, over time. In practice, a business's gearing ratio will fluctuate between years, and our view is that a 10% variation is appropriate, and have selected a target ratio of 70%. We also note that a 70% target ratio is also consistent with the ranges considered by credit rating agencies.

5.4 Assessing financeability

Draft decision

- 19 That we would adopt the process in Figure 5.1 to identify whether a financeability concern exists.

In our Issues Paper, we noted that our current financeability test does not have a published step-by-step process or decision rule for assessing whether a financeability concern exists. This means the circumstances in which we would conclude that a financeability concern exists are unclear and implies that the assessment of a financeability concern is guided by discretion and judgement.

The 2013 test

For the Draft Report we have refined the process we established in our 2013 test to assess the business's financeability. To summarise, the approach in our 2013 test is to:

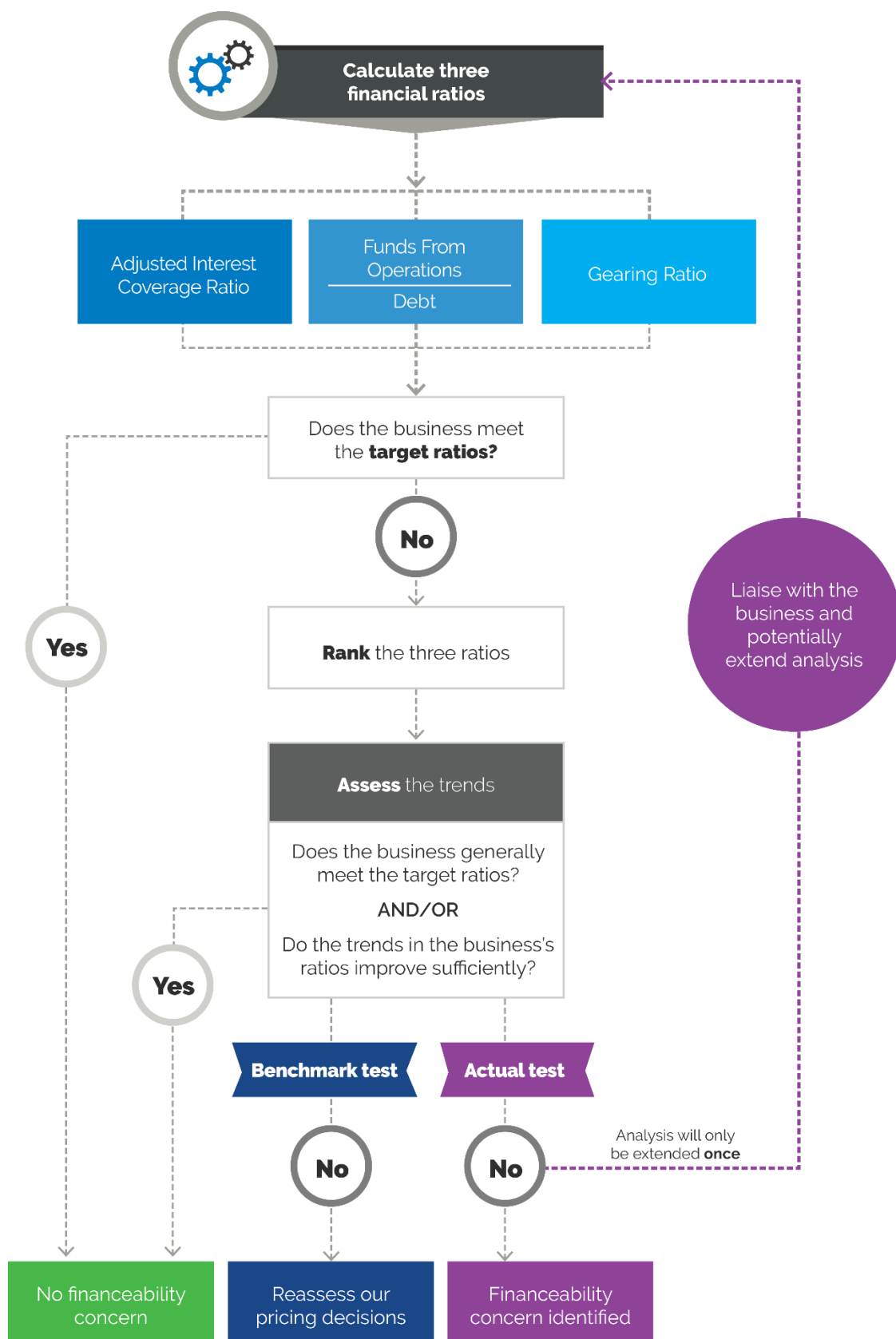
1. Calculate three financial ratios (FFO interest coverage, gearing and FFO divided by debt), measured using the business's actual financial inputs.
2. Rank the three measures, placing more weight on the FFO interest coverage and gearing ratios.
3. Compare our calculated financial ratios against the benchmarks for the three ratios (set with reference to a credit rating of Baa2).
4. Assess whether the business faces potential financial concerns over the regulatory period.

For the Draft Report, we have set out a clear process to identify whether a financeability concern exists. We believe that this process (as depicted in Figure 5.1) provides clear information to stakeholders about how we make our decision, as well as highlighting where (and how) in this process we apply judgement, if needed.

5.4.2 Stakeholders requested a clear process for identifying a financeability concern

Almost all stakeholders requested that we provide a transparent and clear process for identifying a financeability concern in our Draft Report. With that said, stakeholders generally agreed that the process for identifying whether a financeability concern exists should not be too prescriptive and that IPART should retain a degree of discretion.

Figure 5.1 Our process for identifying a financeability concern for the benchmark and actual tests



5.4.3 The process for identifying a financeability concern

Under our draft decision:

1. We would apply the process in Figure 5.1 for the benchmark and actual business separately.
2. We would calculate the following financial ratios
 - a) For the benchmark test, we would calculate the AICR, adjusted FFO divided by debt and gearing⁵⁷ ratios.
 - b) For the actual test, we would calculate the AICR, adjusted FFO divided by debt and gearing ratios (assuming a real cost of debt). We would also calculate the FFO interest coverage ratio (which assumes a nominal interest expense), but this would not influence our initial assessment of the business's financeability.
3. If the business meets all the target ratios in all years of the regulatory period, we would conclude that the business does not have any financeability concerns.
4. If the business does not meet the target ratios in all years of the regulatory period, we would analyse these ratios more closely.
 - a) First, we would rank the ratios, placing more weight on the AICR and adjusted FFO divided by debt ratio.
 - b) Second, we would assess the trends in the financial ratios over the regulatory period, and decide whether the business faces a potential financeability concern, applying judgement where appropriate. We discuss this assessment further below.
 - c) Third, if we judged that the benchmark business faced a financeability concern, we would reassess our pricing decisions and adjust our regulatory settings.
 - d) Fourth, if the actual business faced a potential financeability concern, we would then liaise with the business to:
 - ▼ confirm the validity of the data we have used
 - ▼ seek further data from the business to extend the period of analysis to two or three years before and after the regulatory period, to check for evidence of a potential persistent financeability concern, and
 - ▼ consider whether it is appropriate to include any other idiosyncratic factors into our analysis.

If this process identifies a financeability concern, we would then identify the source and a potential remedy.

Assessing trends over the next regulatory period

In assessing the business's ratios over the regulatory period, we would consider:

- ▼ whether the business generally meets the target ratios over the period, and/or
- ▼ if the trend in the ratios suggests that the business's finances are improving or deteriorating.

⁵⁷ Although in practice the gearing ratio would be fixed at the gearing level used to set the WACC.

Does the business generally meet the ratios?

We do not expect that a business will necessarily meet every ratio in each year of a determination period. If we assessed that the business generally met the financial ratios, we would make it clear that we made this judgement in our decision.

However, there is no strict rule to dictate in which cases the business would generally meet the ratios. This is because it is both the frequency and the extent to which the business does not meet the target ratios that indicates whether there is a financeability concern.

Does the trend in the ratios suggest sufficient improvement?

We would analyse the trend in each ratio over the regulatory period, as these trends provide insight into a business's future financial sustainability. If the trends show a significant improvement, then we would assess that the business may not have a financeability concern.

Again, we have not developed a strict rule to assess these trends, as how far the business is from the target ratios, and how quickly these ratios improve over time, both influence whether there has been a sufficient improvement over the period.

We also consider that assessing trends for the benchmark business is valuable before we proceed to re-assess our pricing decisions. For example, where we assessed that a large capital expenditure during the middle of a regulatory period was prudent and efficient the benchmark business might not meet the target ratios in that single year. However, the business might still remain financeable over the regulatory period by managing its cash flows, without the need for IPART to allow higher revenues in that year.

6 Addressing a financeability concern

In this chapter we discuss the remedies we propose to consider in addressing a financeability concern. In the 2013 financeability test, we considered NPV-neutral adjustments to prices if we identified a financeability concern. In our 2018 test, we propose to:

- ▼ Separately test for three potential sources for a financeability concern.
- ▼ Adopt a remedy that depends on the source we identify. In particular, we would only consider NPV-neutral adjustments to prices to address temporary cash flow problems, but not to address imprudent or inefficient investment decisions made by a business.

6.1 The sources of a financeability concern

Draft decision

- 20 That, if we identify a financeability concern, we would separately test whether this concern is due to:
- setting the regulatory allowance too low
 - the business is taking imprudent or inefficient decisions, and/or
 - the timing of cash flows.

The source of a financeability concern would dictate the remedy we would take to address it. Therefore, it is important to identify the source of a concern accurately in order to decide the most suitable remedy and who should implement it.

6.1.1 Our draft decision is to continue with the sources stated in our Issues Paper

In our Issues Paper, we identified three potential sources of a financeability concern:

1. Regulated prices are set too low for even a benchmark efficient business to maintain an investment-grade credit rating over the regulatory period.
2. Regulated prices are sufficient for a benchmark efficient business but insufficient for the actual regulated business to maintain an investment-grade credit rating, because the business's owners have previously made imprudent or inefficient decisions. For example, the business may have previously engaged in inefficient spending which led to a higher gearing ratio and/or interest payments.
3. Regulated prices are sufficient for the actual regulated business to maintain an investment-grade credit rating on average, but the timing of cash flows might create short-term financial problems from time to time.

Our draft decision is to continue to use these three sources of financeability concerns in our 2018 financeability method.

6.1.2 Stakeholders largely supported our preliminary views on identifying the source

All stakeholders fully or partly agreed with the three sources of financeability concerns we stated in our Issues Paper. Below we discuss some of the stakeholder feedback that suggested changes or expressed a difference in opinion, and our views on their suggestions.

SDP stated that:

...the actual and benchmark tests proposed by IPART will not capture every possible source of financeability problems. IPART should consider (during individual price reviews), submissions from businesses on financeability concerns arising as a result of IPART's regulatory decisions that are not identified by its benchmark or actual tests.⁵⁸

IPART would consider any issues raised in a submission made by a regulated business (or any other stakeholder) during its price review.

WaterNSW suggested that regulated prices could be:

...set too low for even a benchmark efficient business to maintain an investment-grade credit rating over time (ie, insufficient for both the actual business and benchmark business). This could arise from an external shock applied to the business which is outside the control of management.⁵⁹

There are existing mechanisms available to take into account external shocks beyond the business's control, including making an adjustment at the next price review. To the extent that the time delay between the shock and the next price review is significant and the business cannot overcome any resulting cash flow problems, the option to make an NPV neutral adjustment to prices would be available at the next review. Furthermore, if we identify specific, and significant external shocks are likely to occur during the period, we would have regard to this as part of our price review process.

Water NSW also suggested a fourth source where:

Regulated prices are set sufficiently for the actual business but insufficient for the benchmark business, because the business's owners have adjusted the business's gearing ratio downwards to avoid a financeability issue that would otherwise arise at the benchmark gearing ratio.⁶⁰

We do not consider that a separate source is needed for instances where the owners of a business have adjusted the gearing levels to avoid a financeability concern. This is because this issue would be captured in the first source discussed, ie, if we set the regulatory allowance too low.

CEG (on behalf of Sydney Water) stated that:

A financeability problem is, by definition, a signal that the regulatory allowance is too low – whether or not this is characterised as due to a 'timing of cash flows' problem. ...the primary focus on the test should be on the benchmark notional business.⁶¹

We disagree with Sydney Water's submission that any financeability concern is by definition a signal that prices are too low. Imprudent business decisions have the potential to create

⁵⁸ SDP submission to IPART Issues Paper, June 2018, p 17.

⁵⁹ WaterNSW submission to IPART Issues Paper, June 2018, p 8.

⁶⁰ WaterNSW submission to IPART Issues Paper, June 2018, p 9.

⁶¹ Competition Economists Group, report on *IPART review of financeability test*, June 2018, p 25.

financeability concerns that a prudently run business that is otherwise in the same situation would not experience. Imprudent decisions by management are a matter for the business owners to resolve, perhaps by accepting a lower return on equity for a period. It would be inappropriate to increase prices to customers in such a situation.

Hunter Water stated that:

A robust financeability assessment should identify whether a problem is one-off in nature or likely to re-occur. Such an assessment would inform the choice of remedy. For instance, if the source of a problem is likely to reoccur (e.g. high levels of prudent capital expenditure and associated debt levels), a remedy that addresses the issue overtime and avoids undue revenue volatility would be preferable.⁶²

Hunter Water further suggested that:

...it would be useful if IPART's Draft Report was to provide some specific examples of one-off and potentially re-occurring financeability problems and how they could be addressed to maintain targeted credit ratings whilst maintaining a degree of pricing stability.⁶³

We view that the treatment of a financeability issue irrespective of whether it is one-off or recurring should depend on the source of the issue. Once the source of the concern is identified, then we can tailor the response to the issue based on whether the issue is recurring or one-off. An example of a recurring financeability concern would be where the business has adopted a gearing level that is significantly higher than the benchmark gearing level. An example of a one-off financeability concern could be when a large capital expenditure in a single year was deemed prudent but customer tariffs may not fully meet the funding cost in the short term. Publishing an exhaustive list of one-off or recurring financeability concerns and how these can be addressed would be difficult as these issues could arise due to many reasons, sometimes unique to a business, and how these can be resolved may differ from one business to another. We would, however, provide an explanation of our decisions within the context of each decision we make.

6.2 The remedies and the process to address a financeability concern

Draft decision

- 21 That, if the source of a concern is due to a regulatory setting, we would correct the regulatory setting by reassessing our pricing decision.
- 22 That, if the source of a concern is due to imprudent or inefficient business decisions, we would alert the business's owners to the potential need to inject more equity, accept a lower rate of return on equity, or both.
- 23 That, if the source of a concern is due to temporary cash flow problems, we could consider an NPV-neutral adjustment to prices.
- 24 That, if we consider an NPV-neutral adjustment is appropriate:
 - First, we would consider whether it is appropriate to implement this adjustment over the regulatory period under review.

⁶² Hunter Water submission to IPART Issues Paper, June 2018, p 13.

⁶³ Hunter Water submission to IPART Issues Paper, June 2018, p 13.

- Second, if we do not consider this adjustment should be restricted to the regulatory period under review, we could consider:
 - whether it is appropriate to implement an adjustment by allowing a higher depreciation allowance in the period under review in order to increase prices in the next regulatory period, or
 - an explicit adjustment to the pricing path over the regulatory period. If we made such an adjustment, we would publish the value of this adjustment in present value terms. This would allow a future Tribunal to consider this adjustment in a future regulatory period.

Our draft decisions have not changed with regard to remedies when a financeability concern arises due to a regulatory setting or due to imprudent business decisions.

However, in relation to temporary cash flow problems, our preliminary view was limited to making NPV-neutral adjustments only in the regulatory period under review. After considering feedback from our stakeholders, we have changed our draft decision to extend this adjustment to the next regulatory period, if necessary.

6.2.1 Stakeholders generally agreed with our proposed remedies for financeability concerns

Stakeholders largely supported our proposed remedies for the different types of financeability concerns. For example, WaterNSW and SDP agreed with our proposed remedies, with the Treasury supportive of the proposed remedies but suggesting that ‘any remedy must be determined in an open and transparent way’.

In contrast, CEG (on behalf of Sydney Water) stated that:

If there is a financeability problem given the notional capital structure it is because the assumed credit rating does not match the credit rating actually achievable by a business (given its expenditure profile etc.). Adjusting the notional assumptions to make them internally consistent is the most transparent means of solving a financeability problem.

In contrast to this, IPART is proposing that some kind of financeability problems can be resolved by the business taking a loan from itself (from its future revenues) at a rate that is equal to its cost of capital (i.e., higher than its debt financing costs). This would include a ‘solution’ that involves accelerated regulatory depreciation of the RAB for a short period. We do not consider that this is a sensible approach. It, in effect, amounts to ‘kicking the can’ down the road – potentially simply creating a new financeability problem in the future.⁶⁴

We would only implement an NPV-neutral adjustment if we considered the financeability concern was a genuine transitory issue that could be resolved by changing the timing of cash flows. Therefore, we do not agree with Sydney Water’s view that an NPV-neutral adjustment would create a longer term financeability problem.

With regard to making NPV neutral adjustments, our preliminary view was to make these adjustments only in the regulatory period under review. Stakeholders largely disagreed that

⁶⁴ Competition Economists Group, report on *IPART review of financeability test*, June 2018, p 26

it is appropriate to limit NPV-neutral adjustment to a single regulatory period. They argued that this adjustment would need to take place over multiple periods to manage price volatility.

In particular, SDP suggested that IPART could consider an NPV-neutral adjustment over multiple periods, by accelerating RAB depreciation in the current period.⁶⁵

This adjustment would provide the business with higher revenues in the current period while remaining NPV neutral over the long-run. This is because the starting value of the RAB in the next period would be lower, and the present value of future payments would be lower to offset the higher prices in the current period.

6.2.2 Analysis of our decisions

In this section, we outline our proposed remedies to the three sources of a financeability concern we outlined previously. In particular, we agree with stakeholder feedback that, in some cases, limiting adjustments to address cash flow problems to a single regulatory period might cause excessive price volatility. Therefore, we propose to consider two options to implement NPV neutral pricing adjustments over multiple periods.

Remedies when the regulatory allowance is set too low

If IPART were to set the regulatory allowance too low for a business, it would create a financeability concern. Therefore, we can use the benchmark financeability test to provide some confidence that the regulatory allowance is appropriate. If this benchmark test identifies a concern, then we would seek to pinpoint the cause and revise the pricing calculation. We anticipate doing this before the pricing decision is publicised.

Remedies when the regulatory allowance is insufficient for the actual business due to imprudent or inefficient decisions made by owners

If we identify that a financeability concern arises due to the imprudent and inefficient decisions made by the owners of a business, we would not revise our pricing calculations. Instead, we would first engage with the management and owners of the regulated business to confirm that our test results are based on reliable input data. If this process confirms our initial analysis, the business would need to address the financeability concern, for example, by injecting further equity to the business or accepting a lower return (dividend) or both.

For example, if our analysis shows that the financeability concern arises from excessive gearing levels, we would point this out to the owner. It would then be up to the owner to take the necessary steps to address the financeability concern, perhaps by reducing the gearing through equity injections.

It is an important principle that a business – whose regulated prices would permit a prudent and efficient business to remain financeable – should not receive a price increase simply because it has failed to be prudent and efficient. Burdening customers for inefficient decisions could create a moral hazard by encouraging the business's owners to continue making inefficient choices with the expectation that someone else will bear the cost.

⁶⁵ SDP submission to IPART Issues Paper, June 2018, p 12.

Remedies we propose to consider when a temporary cash flow issue exists

There may be cases, however, when a prudent and efficient business might suffer from temporary cash flow problems. The regulatory price determination process does not explicitly take account of cash flow timing issues, so it cannot anticipate every possible difficulty.

In the event that an efficient business experiences a temporary cash flow problem, our draft decision is that the Tribunal could consider an amendment to the regulatory price path that is neutral in present value terms. If the Tribunal considered an amendment appropriate it could involve a temporary increase in prices followed by a reduction in prices at a later time so that the two price changes offset each other in net present value terms. This would potentially overcome the business's cash flow problems, while leaving customers no worse off.

If the Tribunal decided that an NPV-neutral adjustment is not feasible, we would reclassify the financeability concern as a problem that required the owners of the business to resolve it; for example, by accepting a lower return on equity in some periods of the determination (potentially offset by higher returns in others).

We have maintained our preference to limit NPV-neutral pricing adjustments to a single regulatory period if possible. However, we also agree with stakeholder feedback that in some cases, limiting a pricing adjustment to a single regulatory period could lead to excessive price volatility. Therefore, we propose to adopt a staged process by:

- ▼ first considering the most restrictive changes that have the least impact on future regulatory periods, and then
- ▼ gradually considering changes that allow more flexibility over future pricing paths.

If the Tribunal considers a pricing adjustment is necessary to account for temporary cash flow concerns, we propose adopting a staged decision making process. We would first consider whether it is feasible to implement an adjustment to prices within a single regulatory period only. This would have no impact on prices in subsequent regulatory periods, but offers the Tribunal the least flexibility to smooth prices. We anticipate that in most cases any such price path amendment would be appropriate.

If such an adjustment would lead to excessive price volatility, our draft decision is that the Tribunal could consider two options to implement an NPV-neutral pricing adjustment over multiple periods. These options are:

1. Increasing prices in the regulatory period by providing a higher depreciation allowance. Allowing a higher depreciation allowance would increase prices in the regulatory period to address a financeability concern, but would lead to lower prices in the next regulatory period. This would be NPV-neutral over the life of the assets, because the starting value of the RAB in the subsequent regulatory period would be lower to offset higher prices in the previous period.
2. Making an 'ad hoc' adjustment to the NRR over the next regulatory period. We could then publish the value of this adjustment, in present value terms, which would allow a future Tribunal to consider this adjustment in future periods.

Table 6.1 highlights the pros and cons of the two approaches. In particular:

- ▼ There may be some cases where providing a higher depreciation allowance is not appropriate. For example, where a business has a finite lease over regulated assets, accelerating depreciation would not be NPV-neutral for the business. This is because the higher depreciation allowance is recovered gradually over the entire remaining life of assets, rather than being limited to the remaining period that the business has a lease over these assets.
- ▼ Adjusting prices with an ‘ad hoc’ adjustment outside the building block allowance would allow the Tribunal maximum flexibility to adjust prices in the regulatory period to respond to a financeability concern. However, this may create a lack of certainty for stakeholders on what a future Tribunal may decide with regard to this adjustment. To address this, we could publish the present value of this adjustment, which would allow a future Tribunal to consider this adjustment in subsequent regulatory periods.

Table 6.1 NPV-neutral pricing adjustments over multiple periods

	Accelerate RAB depreciation	Adjust prices (NRR) outside the building block model
Pros	Implements an NPV-neutral adjustment over multiple regulatory periods.	Provides maximum flexibility to the Tribunal to adjust prices.
Cons	May not be NPV-neutral if a business has a finite term lease over regulated assets. Has a similar effect of moving prices from a real WACC allowance towards a nominal WACC allowance.	May create a lack of certainty for stakeholders on what a future Tribunal may decide with regard to the adjustment in subsequent regulatory periods.

By adopting this process, the Tribunal could first consider the most restrictive changes which have the least impact on future regulatory periods, before gradually considering changes which allow more flexibility over future pricing paths.



Appendices



A Relationship between the building block approach and the financial ratios in the benchmark financeability test

When making our price determinations for regulated businesses, we often use a building block approach to determine the Notional Revenue Requirement (NRR) for the business. This appendix shows how the components of the NRR relate to the financial ratios that we have proposed in the benchmark financeability test.

A.1 Notional revenue requirement

As shown in Box 4.1 there is a direct link between the components in the NRR and the inputs for the benchmark financeability test. To recap, the NRR is the sum of:

- ▼ Regulatory operating expenditure (*Opex*)
- ▼ Regulatory Depreciation (*Dep'n*)
- ▼ Return on Assets (*RoA*) = $WACC \times RAB$ = Return on debt (*RoD*) + Return on equity (*RoE*)
- ▼ Return on Working Capital (*RoWC*) (this typically represents less than 1% of NRR)
- ▼ Tax Allowance (*TA*)

So, if we omit the return on working capital (because it is small):

$$NRR = Opex + Dep'n + (RoD + RoE) + TA \quad (1)$$

Also, note that *RoD* is equivalent to the interest expense in the benchmark test and that:

- ▼ $RoD = \text{real cost of debt} \times RAB \times \text{gearing}$, and
- ▼ $RoE = \text{real cost of equity} \times RAB \times (1 - \text{gearing})$

A.2 Funds from Operations

One of the key inputs for the financeability test is Funds from Operations (*FFO*). For the benchmark test this is calculated as:

$$FFO = \text{Cashflow from Operations} + \text{Changes in Working Capital} - RoD \quad (2)$$

FFO also includes interest received, however for the financeability test, we assume cash is used to pay down debt and therefore the interest received is set to zero. By the same argument, net debt is then simply total debt.

The formula for *Cashflow from Operations* for the benchmark test is:

$$\begin{aligned} \text{Cashflow from Operations} \\ = \text{NRR} - \text{Opex} - \text{TA} - \text{Changes in Working Capital} \end{aligned} \quad (3)$$

Then, substituting (3) into (2)

$$\text{FFO} = \text{NRR} - \text{Opex} - \text{TA} - \text{RoD} \quad (4)$$

And then, substituting (1) into (4)

$$\text{FFO} = [\text{Opex} + \text{Dep}'n + (\text{RoD} + \text{RoE}) + \text{TA}] - \text{Opex} - \text{TA} - \text{RoD}$$

Therefore

$$\text{FFO} = \text{Dep}'n + \text{RoE} \quad (5)$$

A.3 FFO / Debt

The ratio FFO / Debt in the benchmark test is therefore:

$$\frac{\text{FFO}}{\text{Debt}} = \frac{(\text{Dep}'n + \text{RoE})}{(\text{RAB} \times \text{Gearing})} \quad (6)$$

Note that:

$$\text{Dep}'n = \frac{\text{Opening RAB}}{\text{asset life of existing assets}} + \frac{\text{Capex}}{\text{asset life of new assets}} \quad (7)$$

And

$$\text{RoE} = \text{real cost of equity} \times \text{RAB} \times (1 - \text{gearing}) \quad (8)$$

Therefore, if we:

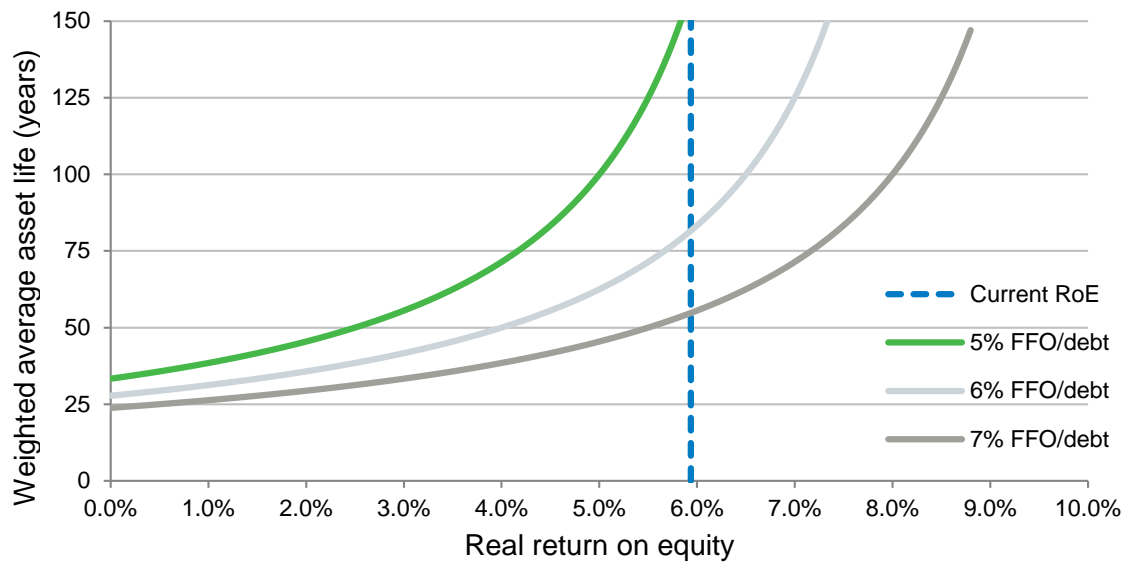
- ▼ Normalise the value of the RAB to 1
- ▼ Define α as the gearing ratio
- ▼ Define ε as the real cost of equity
- ▼ Define l as the weighted average asset life across existing assets and new capex
- ▼ Ignore working capital (which is small)

Then we can approximate the FFO / Debt ratio as a simple equation:

$$\frac{\text{FFO}}{\text{Debt}} = \frac{\frac{1}{l} + (1 - \alpha)\varepsilon}{\alpha} \quad (9)$$

Figure A.1 below plots the combination of average asset life and return on equity that correspond to FFO / Debt ratios of 5%, 6% and 7%.

Figure A.1 FFO / Debt expressed by return on equity and average asset life



Data source: IPART analysis

B Comparison with other regulators' approaches to financeability

Table B.1 compares the 2013 test with those of other regulators.

Table B.1 Comparison of the financeability test framework

	IPART	ESC	Ofgem	Owat
Objectives	To test the short-term financial sustainability of the utility. To assess whether the utility will be able to raise finance, consistent with an investment grade-rated business, during the regulatory period.	To test whether each business can maintain an investment-grade credit rating, and service the financing costs arising from investment in infrastructure to meet service expectations. (“Financial viability of the industry” is a requirement of the <i>Essential Services Commission Act 2001</i> .)	To test whether an efficient network has the ability to “secure financing to facilitate the delivery of their regulatory obligations” (a legal requirement of Ofgem). That is, whether “a notional efficient network company” can attain “a comfortable investment grade” credit rating.	To “assess whether allowed revenues ... are sufficient for a company to finance its investment on reasonable terms and to deliver its activities in the long term, while protecting the interests of existing and future customers”.
Period of assessment	Upcoming regulatory period.	10-year horizon.	Upcoming price control period.	Average and trends over the upcoming price control period.
Benchmark or actual data	Actual capital structure and forecast interest expense.	Actual capital structure and forecast interest expense.	Benchmark gearing and cost of debt. ^a Conducts scenario testing using actuals.	Benchmark gearing and cost of debt. ^a
Financeability concern indicator	Compares ratios against financial ratio benchmarks. Does not expect a utility to meet every financial ratio benchmark in every year.	Applies a “degree of judgement” when using metric thresholds and considers the trend in the ratios over time.	Fails to meet target ratio for a sustained period. Deviates significantly from a target for more than one year. Repeatedly fails one target.	A range of metrics look weak over multiple years or there is a significant decline in cash flow metrics.
Remedy for a financeability concern	Extend analysis to two to three years before and after a regulatory period (if robust data is available). Refer short-term financeability concerns to the shareholders or management. Consider an NPV-neutral adjustment if shareholders or management cannot feasibly address the concerns.	Make an upward adjustment to prices in an NPV-neutral way (but not for imprudent business decisions). Price increases over a current single regulatory period are offset by future NPV-neutral price reductions, smoothed over a number of years to ensure business does not re-enter a financially vulnerable position.	Preference for NPV-neutral adjustments.	Reduce amount of totex capitalised and/or increase regulatory depreciation (in an NPV-neutral way). ^b Restrict dividends. Equity injections. Companies may propose remedies.

a The benchmark gearing ratio is set at the beginning of the period and is allowed to fluctuate endogenously based on the cash flows and expenditures of the benchmark business during the regulatory period.

b This adjustment is conceptually equivalent to reducing capex and increasing opex by the same amount (in present value terms).

Sources: IPART, *Financeability tests in price regulation – Final Decision*, December 2013; ESC, *Assessing the financeability of Victorian water businesses: Consultation paper*, December 2013; ESC, *Assessing the financial viability of Victorian water businesses: Summary of views and proposed new indicator*, June 2014; Ofgem, *Strategy decision for the RIIO-ED1 electricity distribution price control: Financial Issues – Supplementary annex to RIIO-ED1 overview paper*, March 2013; Owat, *Delivering Water 2020: Our final methodology for the 2019 price review*, December 2017.



Table B.2 compares our financial metrics with those of other regulators and Moody's.

Table B.2 Comparison of the financial metrics used in the financeability test

Financial metric	Interpretation	Typical formula applied	IPART	ESC	Ofgem	Ofwat	Moody's
Debt ratios							
FFO interest cover	Measures the business's ability to service its debt	$(\text{FFO} + \text{interest}) / \text{interest}$	✓	✓	✓	✓	✓
Gearing	Measures the business's leverage	Net debt/RAB	✓	✓	✓	✓	✓
FFO/net debt	Measures the business's ability to generate cash flows to service and repay debt	FFO/net debt	✓	✓	✓	✓	✓
RCF/net debt	Measures a company's debt burden relative to operational income, after paying dividends	$(\text{FFO} - \text{dividends paid}) / \text{net debt}$			✓	✓	✓
Internal financing ratio	Measures extent to which an entity has cash remaining to finance capex after dividends	$(\text{FFO} - \text{dividends paid}) / \text{capex}$		✓	✓		
Adjusted interest cover ratio (PMICR ^a)	Measures a company's ability to meet its interest payments, taking into account regulatory depreciation	$(\text{FFO} + \text{interest} - \text{RAB depreciation}) / \text{interest}$			✓		
Adjusted cash interest cover ratio (ACICR)	Measures a company's ability to meet its interest payments after meeting costs that have been expensed and RAB run-off	$(\text{FFO}(\text{pre interest}) - \text{RAB run off}) / \text{cash interest}$				✓	
Equity ratios							
Regulated equity/EBITDA	Measures the return on regulated equity	Regulated equity/EBITDA			✓		
Regulated equity/profit after tax	Measures the return on regulated equity	Regulated equity/profit after tax			✓		
Dividend cover ratio	Measures a company's ability to pay dividends or, if a financeability problem is due to dividend commitments	Profit after tax/dividends declared			✓	✓	
Return on capital employed	Allows assessment of overall returns against the WACC	Profit after tax/ RAB				✓	
Return on regulated equity	Allows assessment of the returns earned by equity providers against the cost of equity	$(\text{EBIT} - \text{tax} - (\text{cost of debt} * \text{net debt})) / \text{equity component of the RAB}$				✓	

^a PMICR stands for 'Post-maintenance interest coverage ratio'.

Sources: IPART, *Financeability tests in price regulation – Final Decision*, December 2013; ESC, *2018 water price review – Guidance paper*, November 2016; Ofgem, *RIIO-ED1: Draft determinations for the slow-track electricity distribution companies: Financial issues – Supplementary annex to RIIO-ED1 overview paper*, July 2014; Ofwat, *Delivering Water 2020: Our final methodology for the 2019 price review*, December 2017; Moody's Investors Service, *Rating methodology – Regulated Water Utilities*, June 2018.

