



Independent Pricing and Regulatory Tribunal

# Financeability tests in price regulation

**Research — Final Decision**  
December 2013





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## Contents

<b>1</b>	<b>Executive summary</b>	<b>1</b>
1.1	Introduction	1
1.2	Overview of our final decisions	1
1.3	Structure of this report	3
<b>2</b>	<b>Context for this review</b>	<b>4</b>
2.1	Scope of the review	4
2.2	Review process	4
2.3	Matters we are required to consider	5
2.4	Our 2011 financeability policy	5
<b>3</b>	<b>Objective of the financeability test</b>	<b>6</b>
3.1	Stakeholders' views	7
3.2	Our analysis	7
3.3	Final decision	8
<b>4</b>	<b>Elements of a financeability test</b>	<b>8</b>
4.1	Stakeholders' views	9
4.2	Our analysis	10
4.3	Final decision	12
<b>5</b>	<b>Other issues raised by stakeholders</b>	<b>13</b>
5.1	Stakeholders' views	13
5.2	Our analysis	14
5.3	Final decision	17
<b>6</b>	<b>Implications from applying the financeability test</b>	<b>17</b>
6.1	Stakeholders' views	17
6.2	Our analysis	18
6.3	Final decision	18
<b>7</b>	<b>Implementation</b>	<b>19</b>
7.1	How we will implement the actual test	19
7.2	Changes from our 2011 financeability policy	20
7.3	Reviews to which the financeability test will apply	20
<b>Appendix</b>		
A	Kanangra consultancy report	22



# 1 Executive summary

## 1.1 Introduction

In making price determinations, we consider their likely effect on the regulated business's 'financeability' over the determination period by applying a financeability test. In this report, we outline our final decisions from the financeability review which commenced in September 2012.

As part of our review, we released a Discussion Paper and a Draft Decision that explained our draft decisions on conducting financeability tests for future price determinations, and invited stakeholder comment on our draft decisions.

This paper sets out our final decisions.

## 1.2 Overview of our final decisions

### 1.2.1 Changes from our Draft Decision

The major change compared to our Draft Decision is that we have increased the benchmark credit rating level from Baa3 to Baa2. We also decided consider longer term time periods in cases where we identify a financeability issue.

### 1.2.2 Our stakeholders' submissions

We received submissions 4 stakeholder submissions to our Draft Decision:

- ▼ Sydney Water Corporation (SWC)
- ▼ Hunter Water Corporation (HWC)
- ▼ the Sydney Catchment Authority (SCA)
- ▼ the Water Services Association of Australia (WSAA).

Overall, our stakeholders welcomed our review of the financeability tests. They submitted that we should:

1. use a higher benchmark level than Baa3 or BBB-
2. conduct the test over a longer time period
3. include the retained cash flow to capex ratio in our credit metrics
4. make net present value (NPV)-positive adjustments
5. consider the impact of a downgrade in the actual interest costs estimate

6. consider the economics of the building block models as part of our financeability test.

### 1.2.3 Final decision – objective of a financeability test

The objective of the financeability test is to assess the short-term financial sustainability of the utility. This means that we assess whether the utility will be able to raise finance, consistent with an investment grade-rated firm, during the regulatory period.

Our final decision is that, consistent with our objective, we will use a financeability test based on a utility's actual gearing ratio and a forecast of the actual interest expense. A test based on notional gearing and interest expense, as proposed by stakeholders,<sup>1</sup> is not consistent with the objective of our financeability test.

The time period for the test may be extended if we identify a financeability issue and robust forecasts are available.

### 1.2.4 Final decisions – elements of a financeability test

Our final decision is that we will:

- ▼ Use actual gearing and a forecast of actual interest costs.
- ▼ Make adjustments to account for operating leases and pension benefits.<sup>2</sup>
- ▼ Use an actual financeability test based on the credit metric benchmarks recommended by Kanangra Ratings Advisory Services (Kanangra) which take into account qualitative and quantitative factors.
- ▼ Base our benchmark ratios for the financeability test on the analysis by Kanangra, for an investment grade-rated utility (Baa2/BBB).
- ▼ Analyse 3 key financial ratios against benchmarks as well as financial statements.
- ▼ If we identify a financeability issue, extend our analysis to include 2 to 3 years before and after a regulatory period in our analysis, if sufficiently robust data for the forecast has been provided by the business.
- ▼ Refer short-term financeability concerns to the utility's shareholders or management to address in the first instance.
- ▼ Consider making a NPV-neutral adjustment if we find that shareholders or management of a utility cannot feasibly address financeability concerns.

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<sup>1</sup> For example, Sydney Water Corporation submission to IPART Draft Decision, pp 17-18, 22.

<sup>2</sup> This will be done consistent with Moody's methodology as outlined in Moody's Investors Service, *Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations*, 21 December 2010.

### **1.2.5 Final decision on other issues raised by stakeholders**

The issues of the value of the initial RAB and the depreciation charge, as raised by stakeholders are only relevant to financeability in so far as they relate to timing differences. The valuation of the initial RAB, the depreciation profile and the treatment of assets free of charge are issues relating to the regulatory framework. They are not subject of our review of the financeability test and we will not make any NPV positive adjustments in response to our stakeholders' submissions on these issues. Our economic building block model is designed to allow a utility to recover its efficient costs over the life of its assets and contributes to price stability and regulatory certainty.

Cash flow issues relating to the timing mismatch between regulatory revenue and a business' expenditure can be mitigated by utilities using financial market products. Under our financeability test, if we assess that utilities could not obtain finance in the short term, consistent with an investment grade-rated firm, we will consider the need for NPV-neutral adjustments (Chapter 6).

### **1.2.6 Final decisions – implications from applying the financeability test**

We consider that the responsibility for addressing short-term financeability issues should rest in the first instance with the utility and its owners. However, if it is not feasible for them to address a financeability shortfall, we may consider a transparent adjustment to regulated prices/revenue that is neutral in NPV terms.

We consider that our final decision improves the transparency of our approach and provides greater certainty to the businesses we regulate and their customers, while still allowing us scope to respond to the specific circumstances of each determination.

### **1.2.7 Implementation**

We will implement our new financeability policy in our price reviews starting with the publication date of this final decision. Chapter 7 describes in more detail the reviews to which our financeability test will apply.

## **1.3 Structure of this report**

The rest of this report explains our review and draft decisions in more detail:

- ▼ Chapter 2 provides context for this review
- ▼ Chapter 3 explains the objective of our financeability test
- ▼ Chapter 4 addresses the elements of our financeability test
- ▼ Chapter 5 addresses other concerns raised by stakeholders

- ▼ Chapter 6 considers the implications of applying our financeability test
- ▼ Chapter 7 shows how we will implement our new financeability test.

## 2 Context for this review

Financeability refers to the capacity of a business to finance its activities – including its day-to-day operations and its capital investments to replace, renew and expand the infrastructure required for these activities. In this report, the term financeability is used interchangeably with financial sustainability and financial viability, principally short-term financial viability.<sup>3</sup>

In this chapter, we discuss the matters that we are required to consider as part of price reviews and provide background information on our previous financeability policy.

### 2.1 Scope of the review

In this review, we are looking at the specification, application and interpretation of the financeability tests. This means:

- ▼ the different elements of our financeability test
- ▼ how we apply the test in price reviews
- ▼ how financeability issues can be resolved.

We are not revisiting the objectives of the financeability test and its role in determining prices, which are set out in more detail in *Financeability Tests and their Role in Price Regulation*, January 2011.

### 2.2 Review process

We released a Discussion Paper on our financeability test in September 2012. We received 5 submissions to our Discussion Paper and held 2 workshops with stakeholders in February and April 2013.

We then released a Draft Decision on 9 September 2013. We received 4 submissions to our Draft Decision.

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<sup>3</sup> For the purpose of this review, “short term” refers to the length of a regulatory period.

## 2.3 Matters we are required to consider

The IPART Act<sup>4</sup> does not require us to undertake a financeability test as part of our pricing determinations.

Under Section 15 of the IPART Act, the Tribunal is required to consider, among other matters:

- ▼ the impact on pricing policies of the borrowing, capital and dividend requirements of the government agency concerned and, in particular, the impact of any need to renew or increase relevant assets (Section 15(1)(g))
- ▼ the standards of quality, reliability and safety of the services concerned (Section 15(1) (l)).

We do not determine the financing and dividend policies for utilities – these are matters for their managers and owners. However, if a utility is not financially sustainable this may affect its ability to:

- ▼ fund the provision of services
- ▼ service and repay debt and meet reasonable dividend requirements
- ▼ access debt markets for new borrowing requirements.

## 2.4 Our 2011 financeability policy

Our 2011 financeability policy concluded that using the actual gearing ratio is consistent with our objective of assessing a utility's short-term financial sustainability. We also made a clear distinction between our financeability test and our economic model – the building block model.<sup>5</sup>

Under the financeability test set out in 2011<sup>6</sup> we:

- ▼ determined the appropriate risk profile for the regulated business (very low, low, average, high or very high), based on the risk category assigned to it by NSW Treasury
- ▼ measured the business's likely financeability in each year of the determination period by using its forecast cash flows and its **actual gearing ratio** to compute the following financial ratios:
  - funds from operations cover
  - funds from operations/total debt
  - debt gearing
  - pre-tax interest cover

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<sup>4</sup> Some reviews may take into account different considerations. For example, we regulate electricity and gas retail prices under the *Electricity Supply Act 1995* and *Gas Supply Act 1996* respectively and bus and ferry fares under the *Passenger Transport Act 1990*.

<sup>5</sup> IPART, *Financeability tests and their role in price regulation – Final Decision*, January 2011, pp 2-3.

<sup>6</sup> *Ibid*, pp 1-2.

- ▼ computed its likely or notional credit rating in each year of the determination period, based on the appropriate risk profile and these financial ratios
- ▼ determined whether the business faces potential financial concerns over the determination period by identifying any years when its notional credit rating falls below our benchmark credit rating of between BBB+ and BBB
- ▼ identified the likely reasons why the notional credit rating is below this benchmark.

### 3 Objective of the financeability test

In our Draft Decision, we maintained that financeability is defined as the capacity of a business to finance its activities – including its day-to-day operations and its capital investments, and to replace, renew and expand the infrastructure required for these activities. The objective of our financeability test is to assess the financial sustainability of a utility during a regulatory period. This means we assess if it will be able to raise finance, consistent with an investment grade-rated firm, during a regulatory period. If we identify a financeability issue, we will refer this issue to the managers and the shareholders of the business in the first instance. If they cannot address the issue, by adjusting the capital structure for example, we will consider a NPV-neutral adjustment.

We clarified in our Draft Decision that the only test consistent with the objective of assessing financial sustainability over a regulatory period is one which uses actual gearing and interest expenses.<sup>7</sup> These are the same parameters a creditor would use when assessing the credit risk of a loan to the utility.

In their submissions to our Discussion Paper and our Draft Decision, stakeholders argued that the financeability test should be based on notional gearing and interest rates.

In this chapter we outline our views on the objective of the financeability test and address stakeholders' feedback on a test based on actual gearing and interest expenses. We maintain that using actual gearing and interest expenses is consistent with our objective of the financeability test.

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<sup>7</sup> IPART, *Financeability Tests in Price Regulation*, September 2013, p 7.

### 3.1 Stakeholders' views

SWC and WSAA contend that the financeability test should be based on notional gearing and done on a longer-term time period, and that:

- ▼ it is consistent with the revenue requirements of the building block model
- ▼ it provides a check on whether the notional regulated utility with a benchmark capital structure passes the financeability test.

SWC also argues that an actual test may mask underlying financeability issues. It presents a number of scenarios where, in the past, the actual test always provides a higher level of financeability than the notional test. It notes that regulators in the UK use a notional test on the building block model.<sup>8</sup>

WSAA submitted that focusing the financeability test on the short term is not in the interest of consumers. They argue that if long-term financeability issues arise, consumers will face price increases or reduced service levels.<sup>9</sup>

### 3.2 Our analysis

The purpose of our financeability test is to assess if a utility will be able to obtain additional financing in financial markets based on their current actual financial position, consistent with an investment grade firm. This is a short-term test for the next 4 to 5 years of a determination period. Our financeability test based on actual gearing and interest expenses is consistent with the way creditors would assess the credit risk of a utility loan.

Our approach to setting prices ensures that utilities are financially sustainable for the long term. Under the building block model, we set prices to cover the efficient costs of a benchmark business. This includes a market-based rate of return for equity and debt holders. In the short term, however, there may be many factors, such as fluctuations in market conditions, that cause difficulties for utilities in obtaining finance at reasonable rates. A financeability test based on actual gearing and interest rates is consistent with our objective of assessing the short-term impact of our price decisions.

As part of conducting the financeability test, we will also examine the utility's financial statements to assess its ability to fund capital expenditure and dividends.

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<sup>8</sup> Sydney Water Corporation submission to IPART Draft Decision, pp 17-18, 22.

<sup>9</sup> Water Services Association of Australia submission to IPART Draft Decision, 18 October 2013, p 7.

We consider there is merit in extending the period of the analysis if we identify a short-term financeability problem. This will allow us to determine the extent of any financeability concerns. We may look at 2 to 3 years preceding a regulatory period and at 2 to 4 years after the current regulatory ends. This will, however, depend on the quality of forward looking data we are able to obtain from utilities.<sup>10</sup>

### 3.3 Final decision

Our final decision is that:

- ▼ The objective of our financeability test is to assess the financial sustainability of the utility over the short term.
- ▼ The financeability test will be conducted using actual gearing and interest expenses.
- ▼ If our financeability test indicates that there is a short-term issue, we will extend the time period for the test, if robust data sets of cost and demand forecasts are available. We will use this extended time period analysis to determine if a financeability issue is of a short-term or a longer-term nature.

## 4 Elements of a financeability test

In our Draft Decision, we indicated that we will:

- ▼ use an actual financeability test based on the credit metric benchmarks recommended by Kanangra Ratings Advisory Services (Kanangra), which take into account qualitative and quantitative factors
- ▼ calculate actual interest expenses based on the information provided by utilities and our own forecast of interest rates and credit spreads
- ▼ analyse key financial ratios against benchmarks as well as financial statements
- ▼ base our benchmark ratios on those for an investment grade-rated utility (Baa2/BBB)
- ▼ make adjustments to account for operating leases and pension benefits.

The following sections summarise our stakeholders' views and outline our final decisions on the elements of a financeability test. We took account of stakeholders' comments and changed the investment grade benchmark for the financeability test from Baa3 (BBB-) to Baa2 (BBB). All other elements of the test in this Final Decision are consistent with our Draft Decision.

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<sup>10</sup> See Chapter 6 for a more detailed discussion on implications of applying our financeability test.

## 4.1 Stakeholders' views

Stakeholders mostly agreed with our Draft Decision on the elements of the financeability tests. The points on which our stakeholders disagreed with our draft decisions on the elements of the financeability test are:

- ▼ the credit metrics and their ranking
- ▼ the credit rating level used as the benchmark
- ▼ the forecast of actual interest expenses.

### 4.1.1 Submissions on the credit metrics and their ranking

HWC submitted that the retained cash flow over capex ratio has the same impact on the credit rating as the funds from operations to net debt ratio and should be included to promote consistency with credit benchmarking.<sup>11</sup> They also submitted that the credit metric rankings used by Moody's should be applied to our financeability test.<sup>12</sup>

In its submission, SWC contends that our decision to exclude the retained cash flow over capex ratio is not supported by the approach taken by credit rating agencies, or by IPART in past financeability tests. They do not consider its exclusion is supported by the discussion or arguments raised in the paper by Kanangra.<sup>13</sup>

### 4.1.2 Submissions on the benchmark

SWC submitted that, if a utility is only provided with sufficient cash flow to support a BBB- credit rating, it will face higher financing costs than it is being compensated for under the building block model. Further, they argue that, given the potential cost increases relating to a credit rating downgrade, customers would be willing to pay a relatively moderate increase now to avoid paying a much larger future increase. SWC also provided a consultancy report by Deloitte Access Economics which argues that a benchmark level of BBB- is too risky for a regulated water utility such as SWC.<sup>14</sup>

### 4.1.3 Submissions on the actual interest expense

HWC submitted that we should take into account the potential costs of a credit rating downgrade in our forward looking interest cost expense.<sup>15</sup>

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<sup>11</sup> Hunter Water Corporation submission to IPART Draft Decision, p 4.

<sup>12</sup> Hunter Water Corporation submission to IPART Draft Decision, pp 4-5.

<sup>13</sup> Sydney Water Corporation submission to IPART Draft Decision, p 27.

<sup>14</sup> Ibid, pp 27-30. Deloitte Access Economics Report, *BBB- Benchmark in IPART's Financeability tests*, October 2013, pp 11, 14.

<sup>15</sup> Hunter Water Corporation submission to IPART Draft Decision, p 5.

## 4.2 Our analysis

In this section we present our analysis of the issues submitted by stakeholders.

### 4.2.1 Credit metrics and their ranking

#### Credit metrics

Our Draft Decision on the financial ratios used in our financeability test was based on our consultant David Howell's advice (Kanangra report).<sup>16</sup> The Kanangra report provides guidance on interpreting quantitative and qualitative factors in a credit rating assessment. The recommended benchmarks take into account specific qualitative factors relevant for the NSW utilities sector. Kanangra's full report can be found in Appendix A.

Kanangra proposes 3 ratios:<sup>17</sup>

- ▼ **Funds from operations (FFO) interest cover:** calculated as FFO plus interest expense divided by interest expense. This is a coverage ratio and measures a utility's ability to service its debt prior to repayment.
- ▼ **Debt gearing (regulatory value):** calculated as debt divided by the regulatory value of fixed assets plus working capital. This is a leverage ratio and measures a utility's ability to repay its debt.
- ▼ **FFO over net debt:** calculated as FFO divided by net debt. This is a more dynamic measure of leverage than debt gearing and a useful indicator of a utility's ability to generate cash flows.

The ratios and benchmarks recommended by Kanangra are outlined in Table 4.1.

**Table 4.1 Financial ratio benchmarks**

	A3	Baa1	Baa2	Baa3	Ba1
<b>FFO/interest</b>	>2.9	2.3x–2.9x	1.7x-2.5x	1.4/1.5x- 1.7x	<1.4/1.5
<b>Debt/RAB<sup>a</sup></b>	<60%	80%-85%	60%-91%	90%->100%	>100%
<b>FFO/debt</b>	>10%	>10%	<6-10%	5-8%	<4%

<sup>a</sup> regulatory asset base.

Source: Kanangra.

Kanangra does not propose a benchmark for the retained earnings to capex ratio we used in our previous test. Based on Kanangra's review of credit rating decisions, the retained earnings to capex ratio is rarely cited as a driver for potential downgrades or upgrades to credit ratings.

<sup>16</sup> Kanangra, *Report to IPART Concerning Credit Ratings*, May 2013.

<sup>17</sup> Kanangra, *Report to IPART Concerning Credit Ratings*, May 2013, p 8.

We maintain the position in our Draft Decision that this ratio has limited impact on the credit rating assessment process for global regulated water utilities. We also maintain that, for consistency, it is important to continue monitoring this ratio as part of our financeability assessment. We will also conduct an analysis of financial statements in parallel to our financeability test. This will allow us to consider the relationship between retained earnings and capex.

### Ranking of credit metrics

In our Draft Decision, we noted that Moody’s published rating methodology for global regulated water utilities provides weights for its financial ratios (Table 4.2).<sup>18</sup>

**Table 4.2** Moody’s weightings for financial ratios

Financial ratio	Moody’s overall weight in rating
FFO interest coverage	15%
Net debt to regulated asset base	15%
FFO to net debt	5%
Retained cash flow to capex	5%

**Source:** Moody’s Investors Service, *Rating Methodology Global Regulated Water Utilities*, December 2009.

HWC suggested that using Moody’s ranking is likely to increase the transparency of our decision-making. However, we do not intend to provide a credit rating as part of our financeability test. We will also assess the financial ratios in parallel with an analysis of the financial statements. Therefore, we consider there is little benefit in applying strict weightings to the financial ratios. The use of relative weights, with the first 2 metrics being relatively more important than the other 2, (Table 4.2) is consistent with:

- ▼ Moody’s methodology for global regulated water utilities
- ▼ our decision that we do not expect a utility to achieve all the financial ratio benchmarks in every single year.

#### 4.2.2 Credit rating level used as the benchmark

In our Draft Decision, we used the benchmark ratios of a Baa3 business as a guide in assessing whether a utility will be able to obtain finance, consistent with an investment grade credit rating.

<sup>18</sup> Moody’s Investors Service, *Rating Methodology Global Regulated Water Utilities*, December 2009, p 6.

Taking into account stakeholders' submissions on using Baa3 as the benchmark we found that:

- ▼ There is sufficient evidence that a Baa3 rating may be too risky. For example, SWC submitted that a BBB- benchmark would only ensure that cashflows are just sufficient to maintain the minimum investment grade credit rating. This, they argue, would expose them to significant financing risk as it would leave no headroom to absorb external shocks.<sup>19</sup>

We have therefore decided to increase our benchmark to Baa2 for our Final Decision.

#### **4.2.3 Estimating the actual cost of debt**

Our Draft Decision was to use a utility's actual interest expense and adjust it, if necessary, to reflect current market conditions for interest rates and credit spreads.

HWC submitted that we should take into account the potential costs of a credit rating downgrade in our forward looking interest cost expense.<sup>20</sup> As per Section 4.2.2, we will increase our benchmark level for the credit metric analysis from Baa3 to Baa2. No further adjustment to interest expenses will be necessary.

### **4.3 Final decision**

Our final decisions on the elements of our financeability test are:

- ▼ We will use the 3 credit metrics and their benchmarks provided by Kanangra as part of our financeability test. This is based on published Moody's methodology and credit ratings for relevant utilities.
- ▼ We will use the benchmark ratios of a Baa2 firm as a guide in assessing whether a utility is able to obtain finance, consistent with an investment grade firm. While we expect that financial ratios are generally within the investment grade level of our benchmarks, we do not expect a utility to meet every ratio in every year of a determination period. We consider the financial ratio benchmarks should be used as a guide in our financeability assessment. We will also review a utility's financial statements, particularly its cash flow statement, and assess its ability to fund capital expenditure and dividends.
- ▼ We will rank our financial ratios in order of importance. This allows us to focus on the ratios that are most relevant when assessing the likely financial sustainability of a utility. Stakeholders supported the ranking of financial ratios.<sup>21</sup>

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<sup>19</sup> Sydney Water Corporation submission to IPART Draft Decision, p 25.

<sup>20</sup> Hunter Water Corporation submission to IPART Draft Decision, 30 November 2012, p 5.

<sup>21</sup> Ibid, p 5.

- ▼ We will use a utility's forecast actual interest expense and adjust it, if necessary, to reflect current market conditions for interest rates and credit spreads.
- ▼ We will make adjustments for operating leases and pension benefits. The proposed adjustments are based on Moody's published methodology.<sup>22</sup>
- ▼ We will not issue a notional credit rating as part of our financeability test. The test is designed to assess a utility's ability to finance its operations during a regulatory period. We do not consider that we are best placed to estimate notional credit ratings, and the potential risks involved in getting such a rating wrong outweigh the benefits in our opinion. Instead, we will use financial ratio benchmarks and other financial information to guide our overall assessment of a utility's financeability over a regulatory period.

## 5 Other issues raised by stakeholders

In our Draft Decision we discussed whether, as our stakeholders have argued, a utility's financeability will be affected by:

- ▼ the initial value of the regulatory asset base (RAB) and the treatment of assets free of charge
- ▼ the difference between depreciation and replacement and renewal capital expenditure
- ▼ real and nominal cash flows.

In this Chapter we assess the views presented by stakeholders and provide reasons for our final decision. We consider the issues raised by stakeholders relate to timing differences. Our economic building block model is designed to allow a utility to recover its efficient costs over the long term. Cash flow issues relating to the mismatch between regulatory revenue and a business's expenditure can be addressed using financial market products. The model has been well-tested through its application to past reviews and independent reviews of whether it is fit for purpose. The latest of these was the review by NERA of the model and its application to the 2012 Sydney Water review.

### 5.1 Stakeholders' views

Our stakeholders submitted that they believe that we should consider our building block model inputs as part of our financeability test.

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<sup>22</sup> Moody's Investors Service, *Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations*, 21 December 2010, pp 6-10.

For example, SWC submitted that:

- ▼ It has experienced a shortfall in actual renewal capex versus depreciation over time, where allowed depreciation has generally been around 60% of the actual renewal capex. This has resulted in SWC having to increase its borrowings to fund those replacements and renewals.
- ▼ The initial capital base (ICB) is undervalued, which adversely affects its ongoing ability to access reasonably priced debt. It considers that financial pressures relating to the value of the ICB could be removed by:
  - uplifts for depreciation
  - shortening depreciation profiles
  - provision of CPI+X price paths in future regulatory periods.
- ▼ It recovers less cash due to our change from a pre to a post-tax WACC model. SWC notes that we use notional interest payments and SWC's actual and forecast depreciation in the building block model. According to SWC, the difference between tax depreciation and regulatory depreciation is \$80 million. They argue that the use of the effective tax rate and tax depreciation has led to a deterioration of SWC's notional revenue requirement.

HWC welcomed the discussion of potential financeability issues in our Draft Decision. It notes that a future review of other issues may address some of their concerns relating to the use of an actual rather than a notional test.

## 5.2 Our analysis

Our building block model is designed to calculate prices that recover a utility's full, efficient costs over the determination period, and over the life of its assets. The model takes account of a utility's operating costs and allowances for a return of and on invested capital. The return calculated under the model is comprised of an income component (revenue received during the regulatory period) and a capital gains component (indexation of the RAB means utilities recover the inflation component of their return on assets over their useful life). Short term financeability problems can arise due to:

- ▼ poor financial management and/or excessive operating costs
- ▼ a mismatch between revenues and costs due to a mismatch between building block model assumptions (which affect the timing of revenues) and management/ownership decisions (which affect the timing of costs).

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**Box 5.1      Timing issues between regulatory revenue and a business's expenditure**

Stakeholders have argued that a mismatch between regulatory revenue and a business's expenditure can be resolved by making NPV-positive adjustments to the building block model. Our view is that the issues raised by our stakeholders, such as valuation of the initial RAB, the depreciation profile and the treatment of gifted assets are issues relating to the regulatory framework and not subject of our review of the financeability test.

Our views are:

1. The building block model and its assumptions are robust and allow a business to recover its efficient costs over the life of its assets. Hence, NPV-positive adjustments are not needed as it would only provide businesses with additional revenue over and above their efficient costs.
2. As existing assets are renewed and replaced, these investments are added to the asset base such that utilities will earn both a return on investment and a depreciation allowance to maintain the value of this investment over time. This includes any assets which in the past have been gifted to a utility and then need to be replaced.
3. Valuing the initial RAB based on the then present value of future revenues is consistent with commercial practice. A privately held utility would value its own asset base using the same approach.
4. Valuing the initial RAB based on replacement cost of assets would have:
  - a) overstated the RAB by including unproductive assets and assets paid for by taxpayers or new customers
  - b) resulted in initial price shocks and ongoing high prices that do not reflect the underlying economic costs of the utilities.
5. Investments in assets to replace gifted and existing assets valued at less than replacement cost, represents an expansion in the funds invested in the business. The assured revenue from including these in the RAB covers the costs of debt and equity used to finance these assets.
6. The managers of a utility can, with the support of its shareholders, manage short term cash flow requirements through financing strategies such as additional borrowing or equity adjustments.

Once we set the initial RAB, it is indexed but not otherwise subject to revaluation. This provides for regulatory certainty and price stability. Similarly, we do not consider a change to our depreciation allowance policy is warranted. Our views are that:

1. There is not a direct connection between the level of depreciation and expenditure on asset replacement or renewal. Utilities can manage short term cash requirements for asset replacement or renewal through financing strategies.
  2. Adjustments to depreciation (such as accelerated depreciation) could lead to negative unintended consequences.
-

Stakeholders argue that the initial RAB was set too low which results in ongoing financial pressures. We do not agree with this. We previously set the initial RAB for water utilities with reference to the present value of the expected future revenue stream generated by the utility's assets. The prudent and efficient costs of assets are added to the RAB when incurred and utilities will earn a return on and of capital on these assets. Lumpy capital expenditure may result in short-term cash flow constraints. However, over the life of the new asset, the utility will recover its economic cost and the utility should be able to use financial markets to match the timing of the regulatory revenue and a business' expenditure.

We consider the methodology of using a NPV model to estimate the value of the initial RAB is robust and consistent with common valuation methodologies used in financial markets.

On the related matter of the depreciation charge, stakeholders argue the depreciation charge provided in our model falls short of the actual renewal capex required and should be adjusted.

Depreciation represents the apportionment of the costs of the original asset over its useful life. This satisfies the accounting principle of matching expenditures to the period in which income is earned. As it is a non-cash expense it generates cash that may be used to finance a utility's operation, including requirements for new investment. A higher allowance for depreciation in a period will result in higher revenues and cash flows in that period, but lower revenues and cash flows in future periods. However, there is no direct connection between the level of depreciation and expenditures on asset replacement and renewal. While it generates cash for a utility, depreciation does not equal the funding requirements for asset replacement.

Making adjustments to the depreciation allowance could have undesirable consequences, as shown by the experience in the UK. The UK energy regulator Ofgem indicated in early 2010 that it would move away from accelerated depreciation after it became clear that regulated companies would face a large reduction in depreciation allowance for existing assets once those assets had become fully depreciated.<sup>23</sup>

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<sup>23</sup> Ofgem, *Regulating Energy Networks for the Future: RPI-X@20. Emerging Thinking – Embedding financeability in a new regulatory framework*, 20 January 2010, p 8.

### 5.3 Final decision

Our economic building block model is designed to allow a utility to recover its efficient costs over the long term and to contribute to price stability and regulatory certainty. The model takes account of a utility's operating costs and allowances for a return of and on invested capital. The issues of the value of the initial RAB and the depreciation charge as raised by stakeholders relate to timing differences. Cash flow issues relating to the mismatch between regulatory revenue and a business's expenditure can be mitigated by utilities using financial market products. Under our financeability test, if we assess that utilities could not obtain finance in the short term, consistent with an investment grade-rated firm, we will consider the need for NPV-neutral adjustments (Chapter 6).

## 6 Implications from applying the financeability test

In our Draft Decision, we outlined a number of possible actions that may be taken if the financeability test shows there are short-term financial sustainability issues. These are to:

- ▼ refer the issue to the shareholder/owner of the utility
- ▼ make a NPV-neutral adjustment.

Our Draft Decision maintained that adjustments should be NPV-neutral approaches. Stakeholders submitted that NPV-neutral adjustments may only shift a financeability issue from one period to the next, and that only a NPV-positive adjustment would be able to address any long-term financeability concerns.<sup>24</sup>

In the following sections, we outline our stakeholders' submissions and our final decisions on the implications of applying the financeability test. Consistent with the objective of the financeability test as outlined in Chapter 3, we consider that the prime responsibility to address short-term financial concerns rests with the owner and that any regulatory adjustments, if necessary, should be NPV-neutral.

### 6.1 Stakeholders' views

Stakeholders argued that, if a utility fails the notional test, a NPV-positive adjustment should be provided. Their argument is largely based on the assumptions that:

- ▼ the financeability test should be based on a longer-term time frame
- ▼ NPV-neutral adjustments do not address the root problem of a financeability issue

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<sup>24</sup> Sydney Water Corporation submission to IPART Draft Decision, p 5.

- ▼ if the test is done on a notional basis, financeability issues indicate that some of the building block model assumptions may not be adequate.

Further, SWC submits that a NPV-neutral adjustment may exacerbate financeability issues in the future, which may not be in the long-term interests of consumers.<sup>25</sup>

The SCA argues that, if financeability issues are due to structural changes in financial markets or the product market, a NPV-neutral adjustment would only shift the problem from one regulatory period to the next. It favours a NPV-positive adjustment.<sup>26</sup>

## 6.2 Our analysis

Our objective in undertaking the financeability tests is to identify short-term financeability issues, which in most cases will arise out of a mismatch of cash flows. Our building block model provides for utilities to be financially sustainable for the long term, and we do not consider NPV-positive adjustments are consistent with providing short-term financial relief.

If we consider there are financeability concerns, we will extend the period of analysis to immediately before and after the upcoming regulatory period (refer to Chapter 3). This will assist in determining the extent of the financeability issue before discussing it with shareholders or management.

We consider that shareholders of a utility or its management are best placed to deal with short-term financial issues. For example, if management is embarking on a major capital expansion program, an option for management to fund the program is to reduce the level of dividends for a period of time. If we consider that it is not feasible for management or shareholders to address financeability concerns, we would then consider making a NPV-neutral adjustment.

## 6.3 Final decision

Our final decision is that we maintain:

- ▼ shareholders/management of the utility are best placed to address short-term financeability concerns in the first instance
- ▼ any adjustment, if necessary, should be NPV-neutral.

If we identify a financeability issue, we will, if sufficiently robust data is available, extend the time period of our assessment of financeability to a few years before and after the regulatory period. We will then discuss potential remedies with the shareholders and management of the utility.

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<sup>25</sup> Ibid, pp 33-34.

<sup>26</sup> Sydney Catchment Authority submission to IPART Draft Decision, p 1.

Where it is not feasible for shareholders or management to address short-term financeability concerns, we will consider a NPV-neutral adjustment, including how and when to return this to customers in a manner that:

- ▼ Businesses do not face any future issues relating to the same cash flow mismatch.
- ▼ Customers are compensated for providing a financeability allowance through price increases. This will most likely mean that such an adjustment will be returned at the future value based on the business's cost of debt.

## 7 Implementation

We will apply our new financeability tests from the publication date of this Final Decision. In the following sections, we outline the steps we will perform under the financeability test and the reviews where we will apply it.

### 7.1 How we will implement the actual test

We will conduct our financeability test by following the steps outlined below.

- ▼ Converting cash flows from our building block model into a set of notional financial statements, including a profit and loss statement, a balance sheet and a cash flow statement.
- ▼ Adjusting for operating leases and pension benefits in the profit and loss statement, balance sheet and cash flow statement.<sup>27</sup> These adjustments will be based on figures in the latest financial statements of a utility.
- ▼ Forecasting the actual interest cost over the upcoming regulatory period using the business's forecast and our own analysis of interest rates.
- ▼ Calculating the following financial ratios:
  - FFO interest cover: calculated as FFO plus interest expense divided by interest expense
  - debt gearing (regulatory value): calculated as debt divided by regulatory value of fixed assets plus working capital
  - FFO over net debt: calculated as FFO divided by net debt.
- ▼ Comparing the results of the financial ratio analysis against the range of benchmark levels for a BBB-rated entity as outlined in the Kanangra report and trends over time, together with an analysis of the financial statements (based on the building block model and adjusted for forecast actual interest cost).

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<sup>27</sup> This will be done consistent with Moody's methodology as outlined in Moody's Investors Service, *Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations*, 21 December 2010.

- ▼ Assessing the financial sustainability of a utility over the upcoming regulatory period.
- ▼ If we identify a financeability issue, extending our analysis to include 2 to 3 years before and after a regulatory period in our analysis, if sufficiently robust data for the forecast has been provided by the business.

## 7.2 Changes from our 2011 financeability policy

The major changes proposed compared to our 2011 financeability framework are:

- ▼ to use the actual interest cost to compute the financial ratios used in our financeability test
- ▼ not to provide a notional credit rating but to conduct the analysis with reference to a BBB benchmark entity
- ▼ to assess financial sustainability with reference to a range of benchmark financial ratio levels provided by Kanangra and assess trends over time
- ▼ not to expect a utility to meet all the financial ratio benchmark levels in every year of a determination
- ▼ to extend the assessment period in our financeability test if we identify an issue and if sufficiently robust forecasts data have been provided by utilities.

## 7.3 Reviews to which the financeability test will apply

The financeability test seeks to ensure that an efficient operator can fund provision of the services required (including new investment) having regard to the commercial interest of its owner/shareholders.

In summary we do not propose to apply the financeability test where:

- ▼ the prices we regulate do not determine the revenues of the service provider
- ▼ the service provider is not established as, or part of, an entity with a distinct capital structure.

Table 7.1 provides a summary of our reviews and our consideration of whether the financeability test should apply.

**Table 7.1 Summary of IPART reviews and financeability test application**

<b>Industry/reviews</b>	<b>Financeability test applies?</b>	<b>Comment</b>
Transport – Sydney Trains, Sydney Ferries, metro buses	No	Our price determinations have a limited impact on total revenue of the utility or service provider.
Transport – taxis, regional buses, and private ferries	No	Industries are regulated under a cost index approach. To apply a financeability test would increase regulatory burden.
Local government	No	Regulated under a cost index approach. Approach already considers financial sustainability.
Water Administration Ministerial Corporation	No	A department without a commercial capital structure.
Water utilities – HWC, SWC, SCA, Sydney Desalination Plant, Gosford City Council, Wyong City Council	Yes	A commercial capital structure exists and our price determinations affect the utility's revenue.
Water utilities – Essential Energy	Yes	A commercial capital structure exists and our price determinations affect the utility's revenue.
Retail energy	Yes, but modified	Need to have regard to the terms of reference, legislation, form of regulation, and characteristics of services. Retail energy suppliers do not have large asset bases, but face significant market volatility.
Section 9 reviews	Yes, subject to terms of reference	

## **A Kanangra consultancy report**



## **Report to IPART concerning Credit Ratings**

### **Summary**

The purpose of this report is to provide guidance on interpreting quantitative and qualitative factors in a credit rating assessment and recommend a set of benchmark financial ratios that can be used for guidance for credit ratings for NSW water businesses. These benchmarks, although they are financial metrics, take into account the qualitative factors.

Section 1 outlines the definition of credit ratings, as opinions from rating agencies concerning the creditworthiness of entities which issue debt (Issuers) and/or individual issues of debt. Long term credit ratings are generally three to five years look-forward opinions of the creditworthiness.

Section 2 examines the methodology used by both S&P and Moody's in assigning credit ratings, using a combination of qualitative and quantitative factors. S&P has a methodology which is applied to all corporates in which the agency establishes a Business Risk Profile and Financial Risk Profile for each Issuer. The interplay of these two profiles determines the rating.

Moody's has developed industry methodologies which describe how the rating of each corporate within particular industries is rated. Until recently no regulated water companies were rated in Australia, but the Moody's Electric and Gas ("Energy") Network methodology has very similar factors and can be used as a good guide to the way that regulated water companies would be rated.

The analysis of financial ratio benchmarks at different credit ratings of Australia energy networks is addressed in Section 3, Moody's uses the Electric and Gas Networks methodology and the methodology predicts the rating within one notch. The mapping of many of the non-financial (qualitative) factors is largely the same between all the networks. Thus the financial metrics are the only distinguishing factors between individual networks and can be used to predict the credit ratings of networks. In particular the FFO Interest Cover is a good guide to the credit ratings.

Section 4 examines the mapping of Sydney Water Corporation (SWC), and notes that the factor mapping is slightly different to the Energy networks on non-financial factors. However Moody's has determined that on financial metrics, particularly FFO Interest Cover, the two groups exhibit the same range of metrics for the Baa2 rating. This leads to a mapping for water companies using the Energy methodology.

### **Section 1: Definition of a credit rating**

A credit rating is an opinion from a recognised rating agency as to the creditworthiness of an Issuer (a company, a sub-sovereign or sovereign or some other corporate group) or a tranche of debt issued by an Issuer.

As part of its deliberations concerning the financeability of water utilities, IPART is contemplating the likely credit rating of these utilities. However IPART is not including a credit rating as part of the financeability test. A credit rating is assigned by a credit rating agency at a

Rating Committee and includes discussion of both qualitative judgements concerning the Issuer/issue and comparison of quantitative (financial) metrics with other rated entities.

S&P has defined a long term<sup>1</sup> credit rating<sup>2</sup> as “our opinion of the general creditworthiness of an obligor or the credit risk associated with a particular debt security or other financial obligation”.

Moody’s has defined credit ratings as “opinions on the relative ability and willingness of an Issuer to make timely payments on specific debt or related obligations over the life of the instrument”

Fitch, the third rating agency, states that ratings are opinions which “are forward looking and includes the analysts’ views of future performance”. These “opinions are based on established criteria and methodologies. They are not facts, and therefore cannot be described as ‘accurate’ or ‘inaccurate’”.

The common elements of long term credit ratings can be summarised as the following:

- They are opinions and can be wrong. The opinions only have value because they are given by organisations which have, for around a century, provided such opinions and these opinions have been in the past have been found to be useful.
- They are opinions of the “creditworthiness” or the willingness and ability of the Issuers to pay the debt obligations in full and on time. A ‘default’ in terminology of ratings is a delay of a single day in the payment of the debt obligation, as thus does not have same meaning as ‘default’ in the legal or other sense.
- The opinions are generally assigned to a single tranche or issue of debt. Sometimes a shorthand can be used, and, for instance, an Issuer will be described as a BBB company. The strict interpretation of this is that the senior unsecured debt of the Issuer would be rated as BBB.
- The rating of corporate Issuers are opinions which generally address the financial health of the Issuer for the next three to five years. Rating agencies believe that more than five years in the future cannot be accurately predicted.

There are several aspects of “credit” which are not addressed by credit ratings. Agencies are quick to point out that the following are NOT the attributes of credit ratings:

- They are not facts; they are merely opinions concerning the Issuer and/or its debt. Thus they can be wrong, if for instance, the agency has missed a risk or it has been misled or other facts have come to light which the agency did not consider;
- Ratings are not recommendation to buy or sell securities; they are merely opinions concerning the relative creditworthiness of securities;
- Ratings do not represent an audit of the Issuer or the debt issue. The agency generally believes the information they are told concerning the future direction of the Issuer, and can change the rating if the forecasts do not come to fruition.
- Ratings are opinions about the credit of the Issuer or issue; they do not address the market for the securities, anything concerning the portfolio risk, or default correlation.

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<sup>1</sup> Credit rating which are designated in the scale of AA, BBB, B, CCC and /or Aaa, Baa, Ba, Ca are all long term ratings. Other ratings are short term rating which are seldom referred to.

<sup>2</sup> A table explaining the relation between S&P, Moody’s and Fitch ratings is given in Appendix A.

## **Section 2: Qualitative and quantitative factors in ratings**

Both S&P and Moody's undertake their ratings in a similar way, assigning a credit rating after it has been analysed and voted on by the rating committee. However some of the detailed methodology is different.

### **Section 2A: S&P**

S&P has a common methodology for all corporate rating, in which the agency judges the credit of a corporate according to two factors: Business Risk Profile and Financial Risk Profile. These factors are judged independently and the rating is derived by examining the relation between the two profiles.

**Business Risk:**

Business Risk Profile encompasses the following sub-factors<sup>3</sup>

1. Country Risk
2. Industry Factors:
3. Competitive Position
4. Management Evaluation
5. Profitability/Peer Group Comparisons:

Each of these sub-factors is qualitative in nature and thus require judgement as to the characteristics of the Issuer in question. These sub-factors are discussed and agreed at the Rating Committee meeting which determines the credit rating.

These Business Risks are generally summarised in the Business Risk Profile, which can be ranked for each Issuer as either Excellent (being the lowest risk) through Strong, Satisfactory, Fair, Weak to Vulnerable (the highest business risk). Mostly, but not always, S&P states the exact Business Risk Profile they have decided upon in their written opinions of individual companies.

**Financial Risk:**

Financial risk encompasses the following sub-factors:

1. Financial Policy/Governance/Risk Tolerance
2. Accounting characteristics and information risk
3. Cash Flow Adequacy
4. Capital Structure and Asset Protection
5. Liquidity/Short term Factors

Most of these Financial Risk sub-factors are expressed as financial metrics.

These Financial Risks are summarised in a Financial Risk Profile which could be from Minimal (the lowest financial risk), through Modest, Intermediate, Significant and Aggressive to Highly Leveraged (the most financial risk).

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<sup>3</sup> The most recent exposition of Business Risk and Financial Risk profile is S&P's publication "Corporate Rating Criteria, 2008"

The interplay<sup>4</sup> between the Business Risk Profile and Financial Risk Profile will determine the rating. Lower ratings will result from issuers with more significant Business Risk Profiles than those which exhibit lesser Business Risk Profiles. Likewise issuers with high financial risk will be rated lower than those with lower financial risk. Thus two issuers with similar Business Risk Profiles could be rated differently if their Financial Risk Profiles are different.

The interaction between Business Risk Profile and Financial Risk Profile is shown in the table below:

S&P Matrix of Business Risk Profile and Financial Risk Profile

Financial -> Business V	Minimal	Modest	Intermediate	Significant	Aggressive	Highly Leveraged
Excellent	AAA/AA+	AA	A	A-	BBB	-
Strong	AA	A	A-	BBB	BB	BB-
Satisfactory	A-	BBB+	BBB	BB+	BB-	B+
Fair	-	BBB-	BB+	BB	BB-	B
Weak	-	-	BB	BB-	B+	B-
Vulnerable	-	-	-	B+	B	B- or lower

## Section 2B: Moody's

Moody's has taken a different approach to S&P and has published a series of industry methodologies which outlines the ratings drivers for each industry. Each methodology lists the factors which are important to the rating for companies in that industry, the characteristics of each factor at each rating level and the weighting of each factor in determining the rating. Individual factors would fit into the Business and Financial Risk Profile categories of S&P and each methodology has about 50% business and 50% financial factors.

There are two relevant methodologies for the regulated Australian water companies:

- Global Regulated Water Utilities – December 2009: When the methodology was written there were 26 water utilities rated using the methodology, of which 15 were in the UK, 6 in the US and the other 5 five in Europe, Latin America and Asia. There was no water utilities rated in Australia. However in late February 2013 the rating of Sydney Water Corporation was published and the rating used this methodology.
- Regulated Electric and Gas Networks – August 2009: When this methodology was published it was used to rate 53 networks globally, 11 of which were in Australia.

Both these methodologies have very similar rating factors and similar attributes for each factor. The table in Appendix B shows the factors and the weighting of each factor in arriving at the rating for both water and energy networks.

Each of the sub-factors in Appendix B has a range of mapping characteristics (from Aaa, Aa, A Baa, Ba and B) which reflects the attributes of a company rated in that band.

The sub-factor descriptions are almost identical for both methodologies, but the financial metrics (sub-factors 4(a) – 4(d), see Table in Appendix B) have slightly different ranges for each industry, as exemplified in the table below:

<sup>4</sup> See "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded" S&P, 27 May 2009

Comparison of FFO Interest Cover – water versus electric and gas networks

Rating Range	Sub-Factor 4(a): FFO Interest Cover – Water Utilities	Sub-Factor 4(a): FFO Interest Cover – Electric and Gas Networks
Aaa	>10.0x	>7.0x
Aa	7.0-10.0x	5.0x – 7.0x
A	4.5x – 7.0x	3.5x – 5.0x
Baa	2.5x – 4.5x	2.5x – 3.5x
Ba	1.8x – 2.5x	1.5x – 2.5x
B	1.5x – 1.8x	<1.5x

Were a water utility and an electric network to both have FFO Interest Cover of (say) 6.0x then the water utility would map to an A whereas the network would map to an Aa. However if the metric was 2.0x for both then both would map to Ba.

Each of the agencies is keen to stress that the methodologies used by them is only a guide to the rating and that the rating committee within each agency makes the final decision concerning assigning a rating. However, Moody’s has stated that around 80% of final rating should be within one notch of the rating as calculated from the mapping within the methodology.

### Section 3: Mapping of Australian Electric and Gas Networks to the methodology

The table below shows that the actual rating is within one notch of the rating calculated from the methodology mapping for Australian energy networks.

Relationship between the mapped and actual rating – Moody’s

Issuer	Date of Publication	Business/State	Mapped Rating	Actual Rating	Difference between Mapped and Actual ratings
ETSA Utilities	9/2012	Electricity/SA	Baa1	A3	+1
United Energy Distribution	5/2012	Electricity/Vic.	Baa3	Baa2	+1
Powercor	8/2012	Electricity/Vic.	A3	A3	0
ElectraNet	4/2012	Electricity/SA	A3	Baa1	-1
ATCO Gas Australia	12/2012	Gas/WA	Baa1	Baa2	-1
Envestra	5/2012	Gas/SA,Vic,Qld	Baa2	Baa2	0
Energy Partnership (Gas)	5/2012	Gas/Vic.	Baa3	Baa3	0

Moody’s publishes the mapping for each sub-factor for each issuer and so the actual rating drivers can be directly compared. As the weighting of each sub-factor is outlined in the methodology, it can be seen that 60% of the rating is dictated by qualitative (non-financial) factors (factor 1, 2 and 3, in Appendix B) and that 40% is driven by financial metrics.

It can be seen that the sub-factors are a mix of qualitative and quantitative factors. In general both the energy networks rate very highly on the qualitative factors and rather weaker on the quantitative factors, as shown in the following table:

Moody's rating for energy networks and the contribution of qualitative and quantitative factors

Factor	SA Electric Networks	Powercor	ElectraNet	Envestra	United Energy Distribution	ATCO Gas	Energy Partnership (Gas)
Overall Rating	A3	A3	Baa1	Baa2	Baa2	Baa2	Baa3
Qualitative Rating	Aa3	Aa3	Aa3	Aa3	A1	Aa3	Aa3
Quantitative Rating	Baa3	Ba1	Baa3	Ba2	Ba3	Baa3	Ba3

In addition, sub-factors representing 42.7% of the energy networks rating are the same for all energy network issuers. The remaining qualitative sub-factors show very little variation between issuers and thus the differentiating factors become the financial metrics.

In addition to the methodology Moody's provides guidance in its publications for the expectation for financial metrics at the current rating level and the triggers for upgrade and downgrade. In these opinions Moody's provides limits for ratings for FFO Interest Cover and Debt/RAB and occasionally FFO/Debt for the current rating. This can be confusing as the ranges do not necessarily match the sub-factor guidance given in the methodology. From an analysis of the publications (which is listed in full in Appendix C) it can be derived that the energy networks can be distinguished by using financial metrics, particularly FFO Interest Cover as follows:

Summarised financial metric limits for Energy Networks from Moody's

	A3	Baa1	Baa2	Baa3	Ba1
FFO/Interest	>2.9	2.3-2.9	1.8-2.3/2.5	1.4/-1.8	<1.4
Debt/RAB	<60%	80-85%	60%-91%	90% ->100%	>100%
FFO/Debt	>10%	<12%	<6%-10%	5-8%	<4%

#### Section 4: Mapping Sydney Water to the electricity and gas methodology and to the water methodology

The recent publication of the rating of Sydney Water Corporation (SWC) uses the Moody's water utilities methodology. The mapped rating is Baa2 and the stand alone rating is also Baa2<sup>5</sup>.

The sub-factors map to similar levels as the Australian energy networks, with a couple of notable exceptions:

Factor Number	Broad Rating Factors	Rating Sub-Factor	Sub-Factor Rating (Sydney Water)	Sub-Factor Rating (Electric and Gas Networks)
1(a)	Regulatory Environment and Asset Ownership Model	Stability and Predictability of Regulatory Regime	A	Aaa
1(b)		Asset Ownership Model	Aa	Aa
1(c)		Cost and Investment Recovery	A	A
1(d)		Revenue Risk	A	Aa-A
2(a)	Efficiency and Execution Risk	Operational Efficiency (called Cost Efficiency in E&G)	Baa	Aaa-Aa

<sup>5</sup> The published rating is actually A1, which is a four notch upgrade from the stand alone rating of Baa2, due to the ownership of SWC by the State of NSW (Aaa) and the importance of SWC to the State.

2(b)		Scale and Complexity of Capital Programme	A	Aa-Ba
3(a)	Stability of Business Model and Financial Structure	Ability and Willingness to Pursue Opportunistic Corporate Activity	Aa	A
3(b)		Ability and Willingness to Increase Leverage	Aa	A-Baa
3(c)		Targeted Proportion of Operating Profit Outside Core Regulated Activities	Aa	A
4(a)	Key Credit Metrics	Adjusted ICR (or FFO Interest Cover)	Ba	Baa-Ba
4(b)		Net Debt/RAV (or Fixed Assets)	Baa	Baa-B
4(c)		FFO/Net Debt	Ba	A-Ba
4(d)		RCF/Capex	B	Ba-B

Sub-Factor 1(a): Stability and Predictability of Regulatory Regime: Whereas all the energy networks map to Aaa on this sub-factor SWC maps to A. The difference is that in SWC's case the regulatory framework is "generally supportive of SWC's credit profile"<sup>6</sup> due to high transparency and consistent approach to revenue determination. This is in contrast to the energy networks which uniformly display Aaa characteristics related to the length of the regulation (some around 20 years).

Sub-factor 2(a): Operational Efficiency: SWC maps to Baa ("performance in line with national average") whereas the energy networks are rated Aaa or Aa on this factor as they are generally regarded as performing better.

Sub-Factors 3(a), (b) and (c): Energy networks map to a range of A to Baa on this sub-factor due their ability to conduct other works outside their regulated activities and can borrow externally. SWC however borrows through NSW TCorp and thus is more restricted. Accordingly it rates Aa on all these sub-factors.

Moody's opinion states that it expects that the FFO Interest Cover for the rating of SWC at Baa2 should be around 1.8x for the next three years and that the rating would change were the metric to go above 2.5x or less than 1.7x. This range is almost exactly the same range as Baa2 for energy networks. Thus despite the fact that the non financial factors map to slightly different ratings, the financial metrics are the same for SWC as for other energy networks.

In its opinion Moody's also compares SWC with Envestra and United Energy Distribution (UED), both of which are rated Baa2, stating that SWC has "somewhat weaker interest coverage".

In the most recent Envestra opinion<sup>7</sup> Moody's expects that Envestra metrics to improve over the next three years, increasing to above 2.5x, FFO/Debt to over 10% and Debt/RAB towards mid 70%. The triggers for upgrade and downgrade for Envestra are FFO/Interest of 2.3x to 2.5x and Debt/RAB of 80%-85% on the upside and FFO/Interest of 1.7x and Debt/RAB of above 90% on the downside. These are almost identical with those for SWC.

In the May 2013 opinion on the rating of UED, Moody's expected that FFO/Interest Cover would be above 2.0 and Debt/RAB around 91% for the next three years. The triggers for rating

<sup>6</sup> Quotes in this section are from Moody's published opinion

<sup>7</sup> 17 April 2013

movements as stated as FFO/Interest of greater than 2.3-2.5x and Debt/RAB around 80%-85% for an upgrade and FFO/Interest of below 1.8x and Debt/RAB of above 100% on the downside.

In conclusion, it can be seen that the triggers for movements in the rating of SWC are very similar to the triggers for changes in the ratings of electric networks.

Thus by combining the opinions published by Moody's with the table of rating ranges on page 6 above the following table can be established for water utilities (provided that the water utilities have a similar regulatory framework as SWC):

	A3	Baa1	Baa2	Baa3	Ba1
FFO/Interest	>2.9	2.3x-2.9x	1.7x-2.5x	1.4/1.5x- 1.7x	<1.4/1.5
Debt/RAB	<60%	80-85%	60%- 91%%	90%->100%	>100%
FFO/Debt	>12%	>10%	<6-10%	5-8%	<4%

**Appendix A:**

Comparison of Rating Scales for Moody's, S&P and Fitch

Moody's	S&P	Fitch	
Aaa	AAA	AAA	Investment Grade Non-Investment Grade
Aa1	AA+	AA+	
Aa2	AA	AA	
Aa3	AA-	AA-	
A1	A+	A+	
A2	A	A	
A3	A-	A-	
Baa1	BBB+	BBB+	
Baa2	BBB	BBB	
Baa3	BBB-	BBB-	
Ba1	BB+	BB+	
Ba2	BB	BB	
Ba3	BB-	BB-	
B1	B+	B+	
B2	B	B	
B3	B-	B-	
Caa1 etc.	CCC etc	CCC etc	

**Appendix B:**

Moody's factors in rating regulated water utilities and electric and gas networks

Factor Number	Broad Rating Factors	Rating Sub-Factor	Sub-Factor Weight (Water Methodology)	Sub-Factor Weight (Electric and Gas Methodology)
1(a)	Regulatory Environment and Asset Ownership Model	Stability and Predictability of Regulatory Regime	15%	15%
1(b)		Asset Ownership Model	10%	10%
1(c)		Cost and Investment Recovery	12%	10%
1(d)		Revenue Risk	3%	5%
2(a)	Efficiency and Execution Risk	Operational Efficiency (called Cost Efficiency in E&G)	5%	6%
2(b)		Scale and Complexity of Capital Programme	5%	4%
3(a)	Stability of Business Model and Financial Structure	Ability and Willingness to Pursue Opportunistic Corporate Activity	3.33%	3.33%
3(b)		Ability and Willingness to Increase Leverage	3.33%	3.33%
3(c)		Targeted Proportion of Operating Profit Outside Core Regulated Activities	3.33%	3.33%
4(a)	Key Credit Metrics	Adjusted ICR (or FFO Interest Cover)	15%	15%

4(b)		Net Debt/RAV (or Fixed Assets)	15%	15%
4(c)		FFO/Net Debt	5%	5%
4(d)		RCF/Capex	5%	5%
			100%	100%

E&G = Electric and Gas Network Methodology

Appendix C: The relationship between Credit Ratings and Financial Metrics for Networks, from various Moody's publications

Company	Rating (movement)	FFO/Interest	Debt/RAB	FFO/Debt
ElectraNet (3/13)	To be upgraded to A3	2.9-3.0	<60%	>10%
United Energy (5/13)	Up to Baa1	At least 2.3-2.5x	80-85%	
Envestra (Consolidated) (4/13)	Up to Baa1	2.3-2.5x	80-85%	
ATCO Gas (12/12)	Up to Baa1	2.7-2.8x		12-15%
ElectraNet (3/13)	To be downgraded to Baa2	< 2.3	>75%	<6%
United Energy (5/13)	Baa2 (current metrics)	>2.0x	~91%	
Envestra (Consolidated) (4/13)	Baa2, Stable (current metrics)	>2.5x	Mid 70%	>10%
ATCO Gas (12/12)	Baa2 (current metrics)	~2.5x	60%-70%	11-12%
DBNPG (5/13)	Up to Baa2	1.8-1.9x		8%-10%
Energy Part. (Gas) (5/13)	Up to Baa2	>=1.8x	<85%	
ATCO Gas (12/12)	Down to Baa3	<1.8x	>90%	<8%
United Energy (5/13)	Down to Baa3	<1.8x	>100%	
DBNPG (5/13)	Baa3 (current metrics)	~1.7x		5-6 %
Envestra (Consolidated) (4/13)	Down to Baa3	<1.7x	>90%	
DBNPG (5/13)	Down to Ba1	<1.4x		<4%
Energy Part.	Down to Ba1	<1.4x	>100%	

(Gas) (5/13)				
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