IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Financeability tests and their role in price regulation

Other Industries — Discussion Paper
September 2010

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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 12 October 2010.

We would prefer to receive them by email stakeholders@ipart.nsw.gov.au

You can also send comments by fax to (02) 9290 2061, or by mail to:

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Our normal practice is to make submissions publicly available on our website <www.ipart.nsw.gov.au>. 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 subject to appeal under freedom of information legislation.

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

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1 Introduction

In making price determinations, the Independent Pricing and Regulatory Tribunal of NSW (IPART) considers how our pricing decisions are likely to affect the regulated business's 'financeability' over the determination period by applying a financeability test. We are currently reviewing this test and the way in which we respond when it indicates that the business may face financeability issues. As part of our review, we are seeking submissions from stakeholders.

The purpose of this paper is to assist stakeholders in making submissions by explaining what is meant by financeability, why and how IPART and other regulators assess financeability, the issues we intend to consider as part of our review, and our preliminary views on these issues.

1.1 What is financeability?

Financeability refers to the capacity of a business to finance its activities – including its day-to-day operations and its capital investments to renew and expand the infrastructure required for these activities. In this paper, the term is used interchangeably with financial viability, particularly short-term financial viability.

One indicator of a business's financeability is the credit rating that credit rating agencies such as Moody's, Standard & Poor's and Fitch Ratings assign it. Many firms rely on debt and equity markets to finance new capital expenditure, and refinance debt related to past capital expenditure on a regular basis. Lenders typically focus on credit ratings to determine how much they will charge, and firms with a lower credit rating usually face higher debt financing costs. If a firm's rating falls below investment grade[1], it may have difficulty raising finance at a cost it can afford, and this may threaten its short-term financial viability.[2]

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1 Standard & Poor's lowest investment grade credit rating is BBB-. Since the market for BBB-rated debt in Australia is illiquid, IPART and other regulators use BBB as the lowest investment credit rating.

2 Credit ratings are used to compare fixed-income securities, such as bonds, bills and notes. Most companies are issued a rating based on their financial strength, future prospects and past history. Companies that, according to Standard & Poor's, have manageable levels of debt, good earnings potential and good debt-paying records will have good credit ratings. Investment grade refers to the quality of a company's credit. In order to be considered an investment grade issue, the company must be rated at 'BBB-' or higher.

1.2 What is IPART's financeability test?

For most determinations, we base pricing decisions on our estimate of the revenue the regulated business will require to meet its efficient costs over the determination period. We use a 'building block' approach to calculate these costs and, in theory, this approach ensures that the business will recover its costs and remain financially viable in the long term. However, it doesn't necessarily ensure that it will be able to finance its operating and capital costs in the short term, such as over the 4 or so years of the determination period. Therefore, before we finalise our pricing decisions we apply a financeability test to understand how these decisions are likely to affect this short-term viability.

We apply and consider the results of financial performance tests when making pricing decisions. However, we have not specifically adjusted prices to improve a business's financeability. In particular, we compute and analyse 4 financial ratios using our forecast of the business's cash flows over the determination period. These ratios are:

- funds from operations interest cover
- funds from operations over total debt
- gearing (regulatory value), and
- pre-tax interest cover.

We use these ratios to forecast the business's likely credit rating. We assume that an investment grade BBB+ to BBB credit rating is sufficient to ensure its financeability over the determination period.[3] Thus we assume that a credit rating of less than BBB indicates that the business may face financeability issues over the period.

1.3 What is the purpose of this review?

The purpose of this review is to examine our current approach to assessing financeability and to determine whether it remains appropriate. In particular, we are considering our options for responding to the findings of our financeability test to decide, for example:

- whether it is appropriate to adjust our revenue requirement estimates or pricing decisions to ensure a regulated business's financeability, and
- if so, what are the options for making such adjustments, and should they be revenue neutral over the life of the assets.

[3] This credit rating is consistent with the target credit rating we use in estimating the cost of debt, which is one of the parameters we use to establish the business' weighted average cost of capital (WACC) as part of our cost building block calculations.

We expect that the outcome of the review will be a set of principles that will guide our approach to assessing financeability for future price determinations, while still allowing us to respond to the specific circumstances of each determination.

We believe that establishing clear, ex ante rules and principles for assessing regulated business's financeability and responding to the results of such assessments will provide as much certainty as possible to the businesses we regulate, the NSW Government (as owner and shareholder), ratings agencies and consumers without unduly constraining our ability to respond to future events. We intend that these principles will simplify and improve our existing approach to financeability and increase transparency, rather than radically change our current approach.

Note that the review's scope does not include our approaches for financial modelling and computing the financial statements used in determining the financial ratios, as these are fairly standard and widely used. Those who want more information on these approaches should refer to our paper on financial modelling.[4]

1.4 How and when can stakeholders provide input to this review?

All stakeholders and interested parties are invited to make submissions in response to this paper. These submissions are due on 8 October 2010. Details on how to make a submission can be found on page iii, at the front of this paper.

Table 1.1 provides an indicative timetable for the review.

Table 1.1 Review timetable update

Date	Event
1 September 2010	Release discussion paper
12 October 2010	Public submissions due
29 October 2010	Release of final decision

1.5 Issues on which IPART seeks comment

Throughout this paper, we have identified the issues on which we particularly seek comment. Stakeholders may address some or all of these issues, and are also free to raise and discuss any other issues that they consider relevant to the review. For convenience, a full list of the issues on which we seek comment is provided below.

1 Should we continue to use the current 4 financial ratios to project the likely credit rating? If not, what ratios should we use? 20

4 IPART, *Comparison of financial models – IPART and the Australian Energy Regulator - Research Paper*, November 2009.

1.6 What does the rest of this paper cover?

The rest of this discussion paper explains our review, the issues we will consider, and our preliminary thinking on these issues. It is structured as follows:

- Chapter 2 focuses on **why** IPART and other regulators assess financeability as part of price determinations
- Chapter 3 explains **how** IPART and other regulators currently assess financeability, and how we have responded in the past when our financeability test indicated potential financeability issues
- Chapter 4 discusses the main issues related to the appropriateness of the financeability test for future price determinations
- Chapter 5 discusses the main issues related to the appropriate response when the financeability test indicates potential financeability issues, including some options for response
- Chapter 6 summarises our preliminary views on these issues.

2 Why do IPART and other regulators test for financial viability?

We generally assess financeability as part of our price determination process to ensure that our pricing decisions will not threaten the regulated business's financial viability in the short to medium term. Assessing financeability is relevant to matters required to be considered under Section 15 of the *Independent Pricing and Regulatory Act 1992* (IPART Act). While our overall approach to regulation and the building block method we use in making price determinations are designed to ensure the regulated business's financial viability over the long term, it does not necessarily ensure this viability in the shorter term. Further, while it may be argued that financeability issues are less critical for government-owned businesses (which is the case for most of those we regulate), we consider these issues are still important given that our approach to regulating these businesses is predicated on a competitive private business model.

In the building block model, prices are derived based on an assumed WACC which is derived using an assumed cost of debt associated with a specified credit rating and an assumed (notional) gearing ratio. When calculating the financial statements of a utility, we can:

- use the notional gearing level used in the WACC, or
- use the actual level of debt of a utility divided by the value of the RAB to compute a gearing level.

Financeability tests involve checking whether the time paths of particular financial ratios which are outputs of the model are consistent with the assumed credit rating used as an input by reference to standards used by the rating agencies. However, the test involves some judgement because:

- rating agencies take additional factors into account, and
- the firm has flexibility in payout, capex and financing decisions which mean that it is likely that its actual gearing ratio will deviate from the notional gearing ratio.

Other regulators assess financeability for similar reasons. However, the importance of this assessment varies, depending on the legislative framework under which the regulator operates.

The sections below discuss our legislative obligations in relation to assessing financeability, and explain in more detail why we need to assess financeability even when the building block model is used, and when the regulated business is

government-owned. Box 2.1 discusses some differences in regulators' obligations in relation to financeability.

2.1 The relevance of financeability to IPART's legislative obligations

We conduct price determinations either under legislation or specific terms of reference. These instruments set out the criteria or factors we must consider in making our pricing decisions. Neither the current legislation nor the terms of reference we have been given to date specifically include financeability as one of these criteria or factors. However, we consider that a reasonable interpretation of the legislation is that we are indirectly obliged to consider whether pricing decisions are likely to adversely affect the financeability of a prudent, efficient business.

In particular, we make price determinations for the water, rail and ferry industries for under the IPART Act. We may also be directed to undertake special reviews under this Act.[5],[6] Section 15 of the IPART Act lists a range of matters we are required to consider in making pricing decisions. While not a direct requirement, those relevant to the firm's financeability are:

- the cost of providing the services concerned
- the appropriate rate of return on public sector assets, including appropriate payment of dividends to the Government for the benefit of the people of NSW
- the impact on pricing policies of borrowing, capital and dividend requirements of the government agency concerned and, in particular, the impact of any need to renew or increase relevant assets
- the impact on pricing policies of any arrangements that the government agency concerned has entered into for the exercise of its functions by some other person or body
- considerations of demand management (including levels of demand) and least cost planning, and
- standards of quality, reliability and safety of the services concerned (whether those standards are specified by legislation, agreement or otherwise).

5 In our view, the financeability test is most relevant to our determinations of water prices, and to special reviews of prices for non-transport commercial services undertaken under the IPART Act.

6 We also regulate the price of metropolitan bus fares under the *Passenger Transport Act 1990* which requires us to consider some of the same factors as the IPART Act. However, due to the contractual arrangements under the bus funding model, our price determinations do not directly affect the financial viability of the bus operators. Therefore, we do not apply the financeability test as part of these determinations.

For example, financeability is relevant to the payment of dividends (see Sections 15(c) and 15(g)), borrowing and capital requirements (Section 15(g)), and the capacity to fund assets (Section 15(g)). In the longer term if new investment cannot be funded the quality, reliability and safety of the services may ultimately suffer (Section 15(l)). Therefore, indirectly, financability may be considered in having regard to many of the matters listed in Section 15.

Tests of financeability assess the capacity to pay dividends and fund new investment from capital and borrowings from current and future cash flows. Given the commercial and regulatory precedents for testing financeability it may be seen as a useful metric for assessing the extent to which we have taken into account the financial considerations of Section 15. However, these financial factors have to be considered alongside other factors in Section 15. Our legal obligations on IPART in regard to the consideration of financial issues differ from those in the UK where much of the discussion of financeability has occurred. Finally, it should be noted that financability requirements may be less relevant to those businesses that rely upon large general subsidies or direct government funding such as CityRail. In these cases it is harder to directly link commercial tests of viability to the requirements of Section 15, such as the funding of new investment or dividend and capital or borrowing requirements.

2.2 Why we need to assess financeability when building block method is used

We usually base our pricing decisions on an estimate of the revenue the regulated business will require to meet its full, efficient costs over the determination period. We use the building block method to calculate these costs, which include operating and maintenance costs, plus allowances for returns on and of its assets. In calculating these allowances, we determine the appropriate rate of return on the business's regulatory asset base (RAB) by calculating its WACC using the capital asset pricing model.

This approach should allow the regulated business to recover all its efficient costs over the life of its assets, and thus should ensure its long-term financial viability. However financeability problems can arise due to:

- poor financial management and/or excessive costs
- a mismatch between revenues and costs under the building block method.

In principle, the regulator should not seek to protect firms from poor financial management or excessive costs. To do so would dilute the incentives for efficiency and good management. However, a mismatch between revenues and costs under the building block method may arise even where firms are well-managed and efficiently run. This can be due to:

- A mismatch between the term of financing and the asset lives. Infrastructure assets often have long lives (over 30 years) but the business may be only able to access 10-15 year financing or less. The building block approach recovers the cost over the whole of the asset life whereas the financing costs are paid over a much shorter period.
- A mismatch between real price paths and nominal financing. The building block analysis generates a real price path with a real cost of capital. However, assets are typically financed in nominal terms. While this balances out over an asset's life, in the early years the actual cost of financing will be greater than the allowance under the building block approach.
- A large wave of new investment. The mismatches between the term of financing and asset lives and between real price paths and nominal financing would not be important if there were a steady stream of capital expenditure and uniform age distribution of assets. But when there is a large wave of new investments these mismatches can become significant.

In these circumstances (which stem largely from the lumpy nature of the regulated business's infrastructure investments and the time of regulated cash flows), there may be periods of short- to medium-term financial viability concerns. Therefore, we need to consider these concerns as part of our building block analysis.

2.3 Why we need to assess financeability when the regulated business is government-owned

We primarily regulate government-owned businesses. The importance of financeability may be less obvious for such businesses, because of the strong possibility that the government will support businesses through their short-term financial viability issues.

However, our approach to regulating businesses is in line with the Council of Australian Government's agreement on competitive neutrality[7]. This means that in estimating and modelling their costs, we treat government-owned businesses as if they were privately-owned. This ensures that we set prices to reflect the opportunity cost of the resources these businesses use – especially capital resources – and that actual or potential competition from privately-owned businesses is not distorted.

7 Council of Australian Governments, Competitive Principles Agreement – 11 April 1995: http://www.coag.gov.au/coag_meeting_outcomes/2007-04-13/docs/competition_principles_agreement_amended_2007.rtf

In addition, also in line with competitive neutrality principles, the NSW Government treats these businesses as if they were competitive private businesses. For example, NSW Government-owned businesses can borrow money through the NSW Treasury's central borrowing authority, T-Corp. T-Corp borrows funds in the market under the NSW government's AAA credit rating, then lends these funds to government–owned businesses.

However, the business's borrowing costs do not reflect this AAA rating, as T-Corp charges them a loan guarantee fee. This fee is set as the difference between T-Corp's actual cost of borrowing the funds (based on the government's AAA rating) and the business's likely cost of borrowing (based on its individual credit rating). If a business's individual credit rating deteriorates over the term of its loan, the loan guarantee fee increases. Therefore, just like private firms, government-owned business's borrowing costs vary according to their credit rating, and this can reduce their capacity to fund necessary capital expenditure and ongoing activities from their own financial resources. Because the government-owned businesses we regulate require large, long-lived assets to provide their regulated services, small increases in their borrowing costs may have material impacts on their financial position. Appendix D provides some analysis that quantifies the impact of credit rating downgrades on the cost of debt.

Further, if the NSW Government has to provide subsidies to government-owned businesses because of their deteriorating credit ratings, it is likely that the credit rating agencies will take note of this. These subsidies transfer the risk from these businesses back to the Government. If they are substantial and persistent, credit rating agencies may lower the Government's credit rating in proportion with the increase in the probability of default.

In line with competitive neutrality principles, we consider it equally appropriate to assess the financeability of these businesses in making price determinations as it to assess the financeability of privately owned businesses.

Box 2.1 Why other regulators test for financeability

The reasons why regulators test for financeability and the importance of the tests vary, depending on the legislative and regulatory frameworks under which the regulators operate.

In general, the IPART Act requires us to balance the competing needs of consumers, the regulated entity, the Government and the environment. However, in most cases, a UK regulator's primary legislative obligation is to protect the long-term interests of consumers.[8] They have a duty to ensure that license holders are able to finance their activities. In interpreting this obligation, UK regulators have found that the long-term commercial sustainability of the efficient provision of services is integral to the protection of the consumers' long term interests. They have also found that consumers' interests are not advanced if investment in the continued provision of the services is not commercially viable – or if prudent and efficient operators fail on commercial grounds. Therefore, they consider they are required to consider the financeability of a prudent, efficient operator.

In the United States, the issue of financeability is less important due to the regulatory approach and framework in that country. Unlike regulators in Australia and the UK, US regulators focus on the return on equity, rather than the return on capital (ie, debt plus equity) in estimating revenue requirements and setting prices (ie, debt plus equity). They allow regulated businesses to pass through their actual debt costs provided they consider these to be reasonable. In addition, the US regulatory framework is premised on nominal debt costs and nominal returns on equity. That is, compensation for inflation is allowed for within the cost of debt and equity rather than through indexation of the RAB. Both these differences reduce the likelihood of mismatches between a regulated business's revenues and costs in the short to medium term, which, as discussed in section 2.2, can lead to financeability issues.

In the Netherlands, specific financeability thresholds for regulated energy networks are prescribed by Dutch law. Therefore, the Dutch energy regulator, Energiekamer, must test whether its price control determinations enable the regulated businesses to maintain a financial profile consistent with those thresholds.

8 A summary of the relevant UK legislations is attached in Appendix C.

3 How do IPART and other regulators assess financeability?

In general, regulators assess the financeability of a regulated business by applying a financeability test that involves:

- calculating financial statements for the business from the building blocks model
- calculating a set of financial ratios based on these financial statements
- calculating the business's likely credit rating based on these financial ratios, and
- reaching a conclusion on the business's short-term financial viability based on the likely credit rating.

If they conclude that the business's financial viability is at risk, regulators must decide whether they should address this risk by making an adjustment to their pricing decisions, or whether it is more appropriate for the business or its shareholders to address.

The sections below describe our current financeability test in detail, and discuss how we have decided to address short-term financial viability risks in past determinations, and how businesses and shareholders can address such risks. Box 3.1 outlines some differences between our and other regulators' financeability tests.

3.1 IPART's current financeability test

Generally speaking, our current financeability test involves taking the following steps for each regulated business:

- deciding on the gearing ratio to be used in computing the financial ratios (discussed below), which may be different to that used in calculating the WACC
- modelling the impact of the proposed price path on the business's revenues (using the building block model) to forecast its cash flows over the determination period
- computing financial statements from the forecast cash flows
- computing a set of financial ratios from the financial statements, and
- computing the business's likely credit rating from the financial ratios.

We then reach a conclusion on the business's short-term financial viability by comparing its likely credit rating to our target or benchmark credit rating for financial viability. If we find that the expected credit rating is below the benchmark and conclude that the business may face financial viability concerns, we then consider likely causes of these concerns and the remedies available to us under the IPART Act.

3.1.1 Deciding on the gearing ratio

For calculating the WACC, we generally use a notional gearing ratio in line with well-established regulatory practice. This ratio is generally a consistent 60%, to help ensure we provide a predictable regulatory environment and thus help ensure regulated business are financially viable in the long term.

However, for some parts of our financeability test, we have used both notional and actual gearing in the past. As Table 3.1 shows, for most water determinations, we have used the business's actual gearing ratio to assess financeability. However, in a few determinations, we used notional gearing of 60% and in one we used both notional and actual. In all cases, the actual gearing ratio was below the notional gearing ratio.

Table 3.1 Gearing used for the financeability test in previous IPART determinations

Determination	Year	Actual or notional gearing
State Water	2010	Actual
Wyong Shire Council and Gosford City Council (water)	2009	Actual
Hunter Water Corporation	2009	Actual
Sydney Catchment Authority	2009	Actual
Sydney Water Corporation	2009	Actual
Wyong Shire Council and Gosford City Council (water)	2006	Actual
Sydney Water and Sydney Catchment Authority	2005	Actual
AGL access arrangement	2005	Notional
Country Energy access arrangement	2005	Notional
NSW electricity distribution networks	2004	Actual and notional

Source: past IPART decisions. http://www.ipart.nsw.gov.au

3.1.2 Computing the financial ratios

The aim of the financial ratios we compute is to measure the business's financial risk, primarily in terms of its ability to repay its debt from its forecast cash flows, interest and principle, and level of gearing. We focus on 4 financial ratios:[9]

- **funds from operations cover,** calculated as funds from operations plus interest expense, divided by the interest expense
- **funds from operations over total debt,** calculated as funds from operations divided by average total debt
- **debt gearing,** calculated as debt minus cash, divided by, regulatory value of fixed assets minus working capital
- **pre-tax interest cover,** calculated as EBIT plus non-recurrent expenses minus capital contributions, divided by the interest expense.

These ratios are the same as those used by NSW Treasury, which ensures that our financeability assessments of the businesses we regulate are consistent with those of their shareholder.

3.1.3 Computing the likely credit rating

To compute the business's likely credit rating, each of the 4 financial ratios is given equal weighting. We determine which of 5 possible business risk categories the business fits into (very low, low, average, high or very high) based on the risk category NSW Treasury has assigned it. We then compare each of its financial ratios with the benchmark ratios a business in this risk category requires to achieve certain credit ratings. For example, the benchmark pre-tax interest cover a business in the low risk category requires for an investment grade credit rating is lower than the benchmark a business in the high risk category requires for the same credit rating.

Table 3.1 illustrates how changes in some of the key parameters of our cost building block model affect the credit rating calculated from the financial ratios for a hypothetical business. It shows how a hypothetical business's projected annual credit ratings for the determination period 2011 to 2014 changes when one of the parameters in the building block model changes.[10] For our base case, we assumed that:

- operating costs account for 46% of the business's revenue requirement over the determination period
- the return of capital (or regulatory depreciation) allowance accounts for 8% of its revenue requirement
- the return on capital allowance accounts for 46% of its revenue requirement

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9 These ratios are computed form our financial statements. Here fund from operations is defined as pre-tax profit plus depreciation minus tax paid minus change in working capital.

10 An explanation on how the scenarios in Table 2.1 are constructed can be found in Appendix A.

- the rate of return is 7%, and
- on average, capital expenditure over the determination period is 4% of the closing value of the RAB.

For our alternative scenarios, we assumed that the relative size of either the business's revenue, operating costs or capital costs increases or decreases.

Table 3.2 Impact of changes in capex, opex and revenue on a hypothetical business's likely credit rating

Scenario	2011	2012	2013	2014
Revenue requirement up 20%	AA	AA	AA	AA
Capex down 30%	A+	A+	AA	AA
Opex down 30%	AA	AA	AA	AA
Base case	A+	A+	A+	A+
Revenue requirement down 20%	BBB+	BBB+	BBB+	BBB+
Capex up 30%	A+	A	A	A
Opex up 30%	A	BBB+	BBB+	BBB+

Source: IPART's cost building block model, available on our website: http://www.ipart.nsw.gov.au/investigation_content.asp?industry=6&sector=17&inquiry=221&doctype=4&doccategory=1&docgroup=1

Table 3.2 indicates that changes in the business's revenue and operating costs have the largest effects on its projected credit ratings. For example:

- a 20% decrease in revenue led to a 3-step decrease in the credit rating (from A+ to BBB+ in 2014)
- a 30% increase in operating costs also led to a 3-step decrease (from A+ to BBB+ in 2014).

3.1.4 Comparing with target or benchmark credit ratings

In analysing the results of our financeability test, we assume that an investment - grade credit rating of between BBB+ or BBB is sufficient to ensure short-term financial viability. This is the same as the target credit rating we use in estimating the cost of debt as part of our WACC calculation. It is also consistent with the benchmark credit ratings other Australian regulators use in assessing financeability.

3.2 How IPART has addressed short-term financial viability concerns in past determinations

In making past determination, we have not made any explicit adjustments to a regulated business's revenue requirements when our financeability test indicated potential short-term financial viability concerns. In some cases, we considered the test results when setting the WACC parameters or deciding on the shape of the price path. However, in others, we have decided it was better for the owners of the asset to address these potential concerns.

For example, in making our 2010 determination for State Water, we decided that the short-term financeability issues we identified were best managed by the business and its shareholders, rather than by us. We considered that this was more consistent with our overall approach to regulation, which seeks to mimic the pressures of a competitive market on a privately-owned business.

When we applied the financeability test in making our draft determination for State Water, we found that the business's credit rating was likely to fall below investment grade over the 2010 determination period, primarily due to its large forecast capital expenditure program in combination with a high dividend payout ratio. In our draft report, we sought stakeholders comments on several options for lifting the credit rating back to investment grade and asked for stakeholder comment. The measures included:

- Not allowing for portions of the forecast capital expenditure, much of which was needed to meet statutory and regulatory obligations. This would mean that State Water would need to defer this expenditure until the next determination period.
- Choosing a higher WACC from within the feasible range which would impose higher costs on State Water's customers.
- The Government (as shareholder) increasing State Water's equity funding through larger equity injections[11].

Most stakeholders argued that deferring some the forecast capital expenditure or providing larger equity injections were the most appropriate option for improving State Water's credit rating. However, State Water argued that we should include a revenue volatility allowance in the cost building blocks and adjust the debt gearing ratio used in calculating the WACC, as it consider this was the best way to achieve an investment grade credit rating while maintaining the forecast capital expenditure program.[12]

11 IPART, *Final report – review of bulk water charges for State Water Corporation*, June 2010, p 160.
12 IPART, *Final report – review of bulk water charges for State Water Corporation*, June 2010, Chapter 12.

In making our final determination, we reconsidered these options taking account of stakeholders' comments. We concluded that in competitive market conditions, State Water would seek additional equity funding from its shareholder if it wished to maintain a BBB credit rating while maintaining its substantial forecast capital program. Therefore, we did not make any financeability adjustment to our building block model. Instead, we suggested that State Water and the Government consider whether an equity injection[13] (direct or through an increase in retained earnings) would be necessary to maintain an investment grade credit rating under the regulated price path.[14]

3.3 How regulated businesses and their shareholders can address financeability issues

Regulated businesses and their shareholders have a number of options to prevent financial distress relating to a projected short-term deterioration in their credit rating. Their first objective is to avoid this deterioration and the ensuing impact on their financeability. In addition to deferring capital expenditure or receiving equity injections as discussed in section 3.2, they can do this by, for example:

- better managing debt, for example by refinancing to better match repayments to revenue profiles, or using inflation swaps, or indexed bonds to hedge cash flows[15]
- making savings in other areas, such as efficiency savings or productivity increases
- reducing dividend payments
- ensuring credit rating agencies understand the regulatory framework and the assurance it provides on the business's future cash flows.

We note that where the regulated business is government-owned, equity injections and dividend reductions would have consequences for government budgets and finances. There would not be directly parallel consequences if the business was privately owned. The difficult question for the regulator is to what extent should these consequences influence its regulatory decisions?

We also note that there is a responsibility on the regulator to ensure that its approach is unbiased, credible and applied consistently over time. This helps provide longer-term assurance on future cash flows and reduces financial and regulatory risks.

13 Our final decision did not include an allowance for raising new equity.

14 IPART, *Final report – review of bulk water charges for State Water Corporation*, June 2010, Chapter 12.

15 This point has been discussed at length in submissions from industry to the AER's review of the WACC: http://www.aer.gov.au/content/index.phtml/itemId/722190

Box 3.1 Differences in financeability tests across regulators

While most regulators use a financeability test in their pricing determinations, there are some differences in these tests.

Financial ratios

Most regulators use largely similar financial ratios, as they base them on the various ratios used by credit rating agencies. In general, these ratios focus on the regulated business's ability to pay the interest due on its borrowings and its level of gearing.

Differences in gearing ratios

We mostly use the actual gearing ratio in the financial ratio analysis. However, UK regulators tend to use notional gearing as this ensures that the businesses they regulate, which are mostly privately owned, are treated consistently by the regulator.

In the Netherlands, the financeability rules prescribed by the Dutch Unbundling Act provide a different framework for analysing gearing for regulated energy businesses. This Act prescribes a maximum gearing of 60% for energy networks, with the possibility of stretching this limit to 70% to accommodate exceptional investment needs. This legal framework provides upper bounds for the gearing assumption, although it leaves some scope for the interpretation of what constitutes a prudent or efficient level of gearing below these binding caps.[a]

Differences in benchmark credit ratings

Like IPART, most Australian regulators generally assume that a BBB+ to BBB credit rating is sufficient to ensure that a regulated business remains financially viable. But in the UK, some regulators use higher benchmark credit ratings. For example, the UK's Competition Commission used benchmark credit rating of A- in the financeability test for its 2005 price control review. Similarly, Ofwat used an A- credit rating for its 2009 price review.

Victoria's ESC uses a different way to compute the likely annual credit rating from the financial ratios it uses. It considers a range of values and their upper and lower bounds from different sources, including Standard & Poor's and IPART.

Differences in regulatory response to evidence of financeability issues

While IPART has not made any specific adjustments to its pricing models to ensure the financeability of a regulated business, some overseas regulators have chosen to do so. For example, in its 2004 price review Ofwat made adjustments of GBP 430 million during the regulatory period to enable businesses to finance their activities and to retain investor confidence.[b] The water businesses Ofwat regulates are publicly traded, and as noted above it uses a higher benchmark credit rating (A-) than Australian regulators.

B See for example, Oxera, Updating the WACC for energy networks, Prepared for Energiekammer. September 2009, p 17.

b Details on the 2004 price review can be found on Ofwat's website: http://www.ofwat.gov.uk/pricereview/pr04/

4 How IPART should address finaceability in the future?

We have identified 2 sets of issues that we will consider as part of our review of financeability tests and their role in price regulation. The first set relates to how we should assess financeability for future determinations. The second set relates to how we should respond when a regulated business fails our financeability test. The sections below discuss the first set of issues, including:

- Whether we should consider other factors in addition to financial ratios when projecting the likely credit rating?
- The appropriate benchmark or target credit rating?
- Whether we should use a nominal or actual gearing ratio for the financial ratio analysis in the financeability test?

Chapter 5 discusses the second set of issues.

4.1 Should we consider other factors in addition to financial ratios when projecting the likely credit rating?

As chapter 3 discussed, IPART currently computes 4 financial ratios as part of our financeability test (funds from operations cover; funds from operations divided by total debt; debt gearing; and pre-tax interest cover). We use these ratios to project the regulated business's likely credit rating in each year of the determination period.

The financial ratios we use are largely consistent with those used by the global credit ratings agencies (and NSW Treasury). However, we note that the credit ratings agencies usually consider a number of factors in addition to financial ratios when they assess a business's financial viability and assign it a credit rating. For example, when assessing regulated water utilities, Moody's also takes account of their regulatory environment and asset ownership model, operational characteristics and asset risk, and business model and financial structure (Table 4.1).

Table 4.1 Factors considered by Moody's in rating regulated water utilities and their weighting

Factor	Weighting
1. Regulatory environment & asset ownership model	**40%**
1. (a) Stability & Predictability of Regulatory Environment	15%
1. (b) Asset Ownership Model	10%
1. (c) Cost and Investment Recovery (Ability & Timeliness)	12%
1. (d) Revenue Risk	3%
2. Operational characteristics & asset risk	**10%**
2. (a) Operational Efficiency	5%
2. (b) Scale & Complexity of Capital Programme & Asset Condition Risk	5%
3. Stability of business model & financial structure	**10%**
3. (a) Ability & Willingness to Pursue Opportunistic Corporate Activity	3.33%
3. (b) Ability & Willingness to Increase Leverage	3.33%
3. (c) Targeted Proportion of Revenues Outside Core Water and Wastewater Activities	3.33%
4. Key credit metrics (financial ratios)	**40%**
4. (a) Adjusted Interest Coverage or FFO Interest Coverage	15%
4. (b) Net Debt to Regulated Asset Base or Debt/Capitalisation	15%
4. (c) FFO/Net Debt	5%
4. (d) Retained Cash Flow/Capex	5%

Source: Moody's Global Infrastructure Finance "Global Regulated Water Utilities" December 2009, p 7.

Table 4.1 shows that Moody's only assigns a weight of 40% to the financial ratios. This means that:

- 60% of the overall credit rating is determined by factors other than financial ratios
- most of the factors included in this 60% are based on a qualitative assessment involving at least some degree of judgement
- 40% of the overall credit rating is determined by the nature of the regulatory environment and asset ownership model
- only 3% of the overall credit rating relates to revenue risk.

We also note that Moody's assigns a significant weight (15%) to the stability and predictability of the regulatory environment. In fact, it assigns as much weight to this qualitative factor as it does to the level of financial leverage (debt divided by capitalisation). However, Moody's recognises that a serious weakness in one area often cannot be completely offset by strength in another area, and that the lack of flexibility normally associated with high degrees of leverage can heighten risk.

Our preliminary view on this issue is that we should continue to derive projected annual credit ratings from financial ratios, as this represents the best available objective information available to us. However, in cases where the financial ratios result in a projected credit rating that is below the benchmark for passing our

financeability test, we may also consider qualitative information obtained from stakeholders to reach a final decision on the short-term financial viability of the regulated business.

IPART seeks comment

1 Should we continue to use the current 4 financial ratios to project the likely credit rating? If not, what ratios should we use?

2 Should we consider other factors in addition to these financial ratios in projecting credit rating? If so, what factors should we consider, and why?

4.2 What is the appropriate benchmark or target credit rating?

As Chapter 3 indicated, in analysing the results of our financeability test, we currently assume that an investment grade credit rating of between BBB+ and BBB for 10-year maturity debt is sufficient to ensure the financial viability of a regulated business over the determination period.[16] This is the same as the target credit rating we use in estimating the cost of debt as part of our WACC calculation. It is also consistent with the benchmark credit ratings most other Australian regulators use in assessing financeability.

We consider that setting a benchmark credit rating implies that to pass the financeability test, the value of each financial ratio needs to be sufficient to achieve a BBB+ or BBB credit rating. That is, financial viability is assessed against all the ratios, and a high value for one ratio cannot offset a low value for another. We also consider that this use of financial ratios provides a good way to identify sources of risk to financial viability provided that all the ratios are assessed in parallel and in accordance to the overall risk profile of the business.

As Box 3.1 noted, our current benchmark credit rating is relatively low compared to the benchmark rating used by some overseas regulators (which can be as high as A-). This is because Australian regulators have much less information to drawn on in making their assumptions about the credit rating needed to ensure that debt can be obtained at a sustainable cost. In the absence of perfect information, we have chosen to be conservative our assumptions.

The Australian debt capital market is not very liquid compared to the markets in the UK and the US. Therefore, benchmark bond issues with a 10-year maturity that can be used in regulatory decision-making are rare. Currently, it is virtually impossible to find such a benchmark debt issue in the Australian market. This makes it difficult to identify the credit risk associated with different regulated assets.

16 For more information on why we use a BBB+ to BBB credit rating, please refer to our discussion paper on the debt margin "Estimating the debt margin for the weighted average cost of capital", May 2009.

Where overseas regulators have used a higher credit rating, the regulated businesses are generally publicly-traded and so there is more information available to the regulator to make an independent assessment on the appropriate credit rating.

Our preliminary view is that a benchmark credit rating of BBB+ to BBB remains appropriate.

IPART seeks comment

3 Should we continue to use a credit rating of BBB+ or BBB as the benchmark for passing the financeability test? If not, what benchmark should we use?

4.3 Should we use notional or actual gearing ratio for the financeability test?

Using a notional gearing ratio in calculating the regulatory WACC is well-established practice. For most of the utilities we regulate, we use a notional gearing ratio of 60% for this purpose. This implies that, in our view, the efficient capital structure for a typical Australian network utility consists of 60% debt and 40% equity. This gearing ratio then feeds into several parts of our building block model and our financeability assessment:

- the WACC used in calculating the allowances for a return on and of capital is based on a constant 60% gearing level throughout the determination period
- the annual interest payments within our building block model are based on the 60% gearing level.

However, we used the actual gearing ratio in our financial ratio analysis in most of our determinations (section 3.1). In a few cases, we used notional gearing and in one case both notional and actual.

We have favoured using the actual over a notional gearing ratio in our financial ratio analysis in the past because it reflects commercial practice more closely. It enables us to assess the impact of our pricing decisions on the financial viability of the regulated business over the determination period. In contrast, using the same notional gearing ratio we use in calculating the WACC would place more weight on the long-term viability of a business. While we consider this makes actual gearing more appropriate for the financeability test, there are some problems with its use. For example:

- using the actual gearing level in the financial ratio analysis is inconsistent with the notional gearing (and the target debt margin) assumptions in the WACC, and
- using actual gearing means that businesses within the same industry are not treated equally due to variations in actual gearing levels.

A highly geared business will have a lower credit rating than an equivalent business with a lower level of gearing.

As part of its work for Ofgem (the energy regulator in the UK), the consulting firm CEPA[17] summarised the different types of gearing ratios that regulators can use and their impact on the financeability test. In particular, it identified the following 3 options:

- **Option 1: Long-term notional gearing ratio.** This ratio would be same for all businesses within an industry. It could be used in the WACC and the financeability test.
- **Option 2: Short-term notional gearing ratio.** This ratio would be based on a gearing level that is appropriate for each company over the determination period, and could be set for an industry or for individual businesses. It could be used in the WACC and the financeability test, but it would make it difficult to undertake a long-term financeability test.
- **Option 3: No notional gearing (ie, actual gearing).** This option transfers full responsibility for capital structure to the regulated businesses and encourages them to finance themselves efficiently. The regulator would still have to determine its gearing ratio for the WACC, but should clearly state that it does not endorse any specific capital structure.

CEPA recommended the use of a long-term notional gearing level for as this would allow the regulator to assess all businesses within in industry on an equal basis.

In terms of the options identified by CEPA, we currently use 2 options:

- a long-term notional gearing ratio in calculating the WACC, and
- the actual gearing level in the financial ratio analysis for the financeability test.

We consider that there are both advantages and disadvantages of using a notional or the actual gearing level in the financeability test. For example, our initial view is that using a notional gearing ratio has the following advantages:

- it can ensure that the notional gearing level is consistent with the level used in calculating the WACC
- it represents the regulator's view of the efficient gearing level
- it ensures consistency between financing cash flows for businesses in the same industry.

However, its disadvantages are that:

- in cases where the actual gearing level is lower than the notional gearing level, the use of a notional gearing level in the financeability test may drive prices
- businesses should have better information about what constitutes an efficient gearing level.

17 CEPA, *RPI-X@20: providing financeability in a future regulatory framework - Final Report*, May 2010.

The advantages of using the business's actual gearing ratio in the financeability test are that:

- it reflects the actual probability that the business will default on its loans
- it ensures that debt financing cash flows are consistent with the business's actual costs.

However, as the actual gearing level of most of the businesses we regulate is lower than the 60% notional level we use for the WACC, it leads to a disconnect between the higher probability of default (higher gearing level) priced into the WACC and the lower probability of default (lower gearing level) used in the financeability test.

We note that in theory, it may be preferable to use a long-term notional gearing ratio for both the WACC and the financeability test, as this ensures internal consistency in the building block model. However, in practice, we used the actual gearing level in most of our pricing determinations in the past. This allowed us to assess the impact of our proposed pricing decisions on short-term financial viability – which is the primary purpose of our financeability test. However, there may be cases, such as the regulation of an industry with multiple businesses, where the use of a notional gearing level would be more appropriate. Table 4.2 shows the level of the actual gearing of utilities we used in our decisions.

Table 4.2 Level of actual gearing ratios used in IPART determinations

Determination	Year	Expected actual gearing over regulatory period
State Water	2010	25% to 45%
Hunter Water	2009	36% to 53%
Gosford	2010	10% to 25%
Wyong	2010	35% to 57%
Sydney Catchment Authority	2009	35% to 357%
Sydney Water	2008	46% to 47 %
Gosford	2006	7% to 10%
Wyong	2006	16% to 18%

Source: Various IPART reports. State Water 2010, p 180. Hunter Water 2009, p 180. Gosford 2009, p 150. Wyong 2009, p 163. Sydney Catchment Authority 2009, p 105. Sydney Water 2008, p 138. Gosford 2006, p 89. Wyong 2006, p 90. All are available on IPART's website: http://www.ipart.nsw.gov.au

Table 4.2 shows that in all the determinations where we decided to use the actual gearing ratio of a business, this ratio is significantly lower than the notional gearing ratio of 60% we use in computing the WACC. In cases where the actual gearing level is lower than the notional gearing level, the business would be in a better position to withstand short-term financial viability problems. On the other hand, if the actual gearing level is higher than the notional gearing level, then the business would be in a worse position than under the notional gearing ratio. Our financeability test is aimed at understanding how our pricing decisions impact on the expected financial viability of a utility during the regulatory period. We therefore believe that the

actual gearing ratio better reflects the impact of our pricing decisions on the financial viability of a utility.

Having reviewed our past practice and the practice of other regulators, we have not formed a view as to whether notional or actual gearing, or both, should be used in undertaking the financeability analysis.

IPART seeks comment

4 Should we use the actual gearing ratio in assessing financeability, or a notional gearing ratio of 60% (as we do in calculating the WACC)?

5 How should IPART respond when a business fails the financeability test?

Where our financeability test indicates that a regulated business's projected credit rating will fall below investment grade during the determination period, we have to decide how to respond. In particular, we need to assess whether the potential financial viability issues are best managed by the business or its shareholders, or whether we should adjust our building block model inputs (and thus the proposed prices) to improve the business's cash flows and thus prevent the deterioration in its expected credit rating.

The sections below discuss a range of issues related to this question that we will consider as part of this review. These issues include:

- whether we should allow for equity raisings in setting prices or suggest equity injections to ensure short-term financial viability?
- the circumstances, if any, should IPART make adjustments to prices to address financeability issues?
- the options for making such adjustments are available?
- whether any such adjustments be NPV neutral?
- the regulatory precedents for making such adjustments?

5.1 Should IPART allow for equity raisings or mandate equity injections to ensure short-term financial viability?

One of the principles of incentive regulation is that it should seek to replicate the pressures of a competitive market. In such a market, the participants are price-takers and cannot set prices to directly match their specific financing requirements – whether these are due to the asset cycle stage they are in, their level of efficiency or their financing strategies. This principle suggests that, in the first instance, the responsibility for managing short- to medium-term financeability issues should rest with the business. This is also consistent with the principle of allocating risk to those who can best manage it (in this case, the management of the business rather than its customers).

As section 3.3 noted, there are a range of options available to businesses and their shareholders to manage their financeability. One of these options is equity injections. These may take the form of direct equity injections from existing or new shareholders or through retained earnings. If retained earning are not sufficient to cover the

required equity injection, a cut in dividends may be necessary. While a direct equity injection from shareholders may alter the ownership structure of a business – for example by diluting existing shareholder interests – a cut in dividends is likely to impact on business valuations. Therefore, the business needs to consider the trade-offs involved in using each form of equity injections.

However, the costs of raising equity can be significant. If a pricing review finds that an equity injection may be necessary to ensure financial viability, the regulator should consider whether it is appropriate to include an allowance for raising equity in the cost building blocks. There are regulatory precedents for this approach. For example, as part of its 2007 transmission networks review, Ofgem found that a significant equity injection would be required over the determination period to maintain financial viability. Ofgem included an allowance for these equity raisings in its determination, as well as an explicit equity issuance cost of 5%.[18]

We are not aware of any Australian regulator adopting the above approach (ie, recommending a specific equity injection). Nor do we believe that it is the regulator's role to mandate specific financing strategies. However, we note that some UK regulators have started to make recommendations to utilities for equity injections or maintenance of maximum gearing ratios to address financeability problems.[19]

Our preliminary view is that, in principle, the responsibility for managing short- to medium-term financeability issues should rest with the business, and one of the options to consider is equity injections. However, it is not our role to mandate specific funding strategies to address short-term financeability issues. We aim to provide greater clarity on this through this review and are particularly interested in stakeholders comments.

IPART seeks comment

5 How should IPART respond when a business fails the financeability test?

6 Should responsibility for addressing short-term financial viability issues rest with the business and its shareholders, not the regulator?

7 If a regulator finds that additional equity raisings are necessary to ensure financeability, should it include an allowance for this in its building block calculations?

8 Is it appropriate for the regulator to mandate a specific funding strategy to address short-term financial viability issues? If so, in what circumstances?

18 Ofgem, *Transmission Price control Review: Final Proposals,* December 2006, p 59.

19 See Appendix B.

5.2 In what circumstances should IPART make adjustments to address financeability issues?

As indicated above, our preliminary view is that, in principle, a regulated business and its owner should be primarily responsible for managing fluctuations in the business's financeability. However, there are precedents for regulators intervening by adjusting building block cost inputs (and thus prices) to address financeability concerns (see section 5.4 below).

We would not wish to rule out such regulatory intervention to ensure financeability. However, we consider it important to clearly identify the circumstances in which such intervention might be appropriate. For example, these might include where the financeability concerns are likely to be severe or long-lasting.

In making our pricing decisions, we are generally required to consider a number of factors including efficient prices, and the impacts of our pricing decisions on consumers, the environment, competition and the financial viability of a business. This makes it difficult for us to consider financeability issues in isolation and particularly important to identify the circumstances when financial viability concerns might outweigh other concerns.

IPART seeks comment

9 In what circumstances might it be appropriate for IPART to make adjustments to the building block model to address financeability concerns?

5.3 What options for making such adjustments are available?

Potentially, IPART could address financeability issues by making adjustments the inputs to the building block model, and thus to its proposed prices. The most obvious options for such adjustments are:

- **Adjusting the WACC.** Even a small increase in the WACC could lead to a substantial improvement in the projected credit ratings. However, this option would lead to a gap between the regulatory and the financial market cost of capital. Therefore, it would be a direct cost pass through to customers. In past decisions, we have made it clear that we do not consider it appropriate to adjust WACC parameters to address financeability issues.
- **Accelerating depreciation to bring cash flows that would occur in the future forward into the current determination period.** This would address immediate financeability concerns in a neutral manner, assuming that it would not result in financeability issues in the future.

However, in general, we consider that these options will distort the efficient cost projections of the regulated business, and will have consequences for inter-generational equity. In addition, they can diminish the consistency and credibility of the regulatory regime. We raised similar concerns about adjusting cost and prices to address affordability issues in our recent discussion paper on the regulatory instruments available to address such issues.[20]

In our 2009 determination for Hunter Water Corporation, we addressed the issue of balancing intergenerational equity and financeability concerns directly in relation to the recovery of costs associated with the construction of Tillegra dam. This dam will provide a large increase in Hunter Water's capacity that will be largely taken up by its future customers over the next 50 years. We decided that it was more consistent with intergenerational equity to defer the recovery of part of the costs to future consumers. In making this decision, we took into account the short- to medium-term financeability impacts but considered that they were outweighed by concerns of intergenerational equity (see Box 5.1 for more information).

In other past determinations, we have considered financeability issues (among others) in deciding on the appropriate WACC from within the feasible WACC range as an alternative to making specific adjustments to the building block inputs. In calculating the WACC, we estimate some parameters (eg, the equity beta and the market risk premium) as a range to take account of the uncertainties involved in estimating them. This results in a feasible range for the WACC rather than a single value. We generally choose the midpoint of this range as the appropriate WACC. However, we may choose a WACC above the midpoint to help address financeability issues (or below the midpoint to help address affordability issues). We have done this on 2 occasions – in the 2009 Hunter Water determination,[21] and the 2009 Australian Rail Track Corporation (ARTC) decision.[22]

Other considerations may include whether a higher WACC should apply to new investments. For example, the idea of a dual cost of capital – one on existing assets and one for new assets – is currently being discussed in the UK (see Box 5.2).

Our preliminary view is that we are not in favour of adjusting the building block inputs to address financeability concerns, due to their likely impacts on pricing efficiency, the consistency and credibility of the regulatory regime, and inter-generational equity. We note that if we were to make an adjustment to the building block inputs, we would have to be satisfied that the need to ensure financeability outweighed the impacts on these other factors, and that such regulatory intervention was the best available option.

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20 IPART, *Addressing the affordability of regulated prices*, March 2009.

21 IPART, *Review for prices for water, sewerage, stormwater and other services for Hunter Water Corporation,* July 2009.

22 IPART, *NSW Rail Access Undertaking – review of the rate of return and remaining mine life - Final Report,* July 2009.

IPART seeks comment

10 What form should any regulatory adjustment to address financeability concerns take?

Box 5.1 Balancing concerns about financeability and intergenerational equity

Our decision on the treatment of Tillegra dam capital expenditure, made as part of our 2009 determination for Hunter Water, is an example of how we balance the interests of the regulated business and its customers (both current and future). Our final decision was that the portion of Hunter Water's notional revenue requirement associated with the dam should be recovered over time, and in a manner that reflects the distribution of benefits of the dam to current and future customers and hence ensure intergenerational equity. We considered that this approach would alleviate the cost burden on the relatively small base of current customers. As Hunter Water will recover the costs of Tillegra dam over time, it also meant that the business's long-term financial viability would not be affected.

In applying the financeability test for the 2009 Hunter Water decision, we assumed that Hunter Water makes tax equivalent payments of 30% earnings and dividend payments of 50% of post-tax earnings. The financeability test indicated that the maximum prices set in the determination will enable Hunter Water to achieve an overall credit rating of at least BB+ in each year of the determination period.

Box 5.2 The idea of a dual cost of capital

In the UK, some of the recent discussion on financeability has focused on the idea of a dual or split cost of capital. For example, in its July 2009 report, Europe Economics recommended that the UK water regulator, Ofwat, adopt a dual approach in assessing the ongoing ability of the water businesses to finance their debt by:

- applying the WACC to all new capital
- applying the historical debt cost to historic debt.

Europe Economics noted that such an approach "is not at tension with the rejection of embedded debt adjustments in assessing the WACC, for the WACC calculation and the financeability analysis have different purposes – the former aims to identify the correct forward-looking cost of capital adequate for the company to engage in new investments; the latter aims to test whether the WACC determination leaves the company able to finance its actual functions".[23]

According to UK consulting firm, CEPA, some regulators have tried to encourage additional investment by offering a higher rate of return on new investments.[24] This was proposed in the US through the FERC Order 2000 for transmission assets, and is used in France for certain gas transmission assets. According to CEPA, there is little evidence that this type of approach will actually have an impact on the marginal incentive to invest.

In addition, Civil Aviation Authority (CAA) used a differential rate of return in its determination for Terminal 5 at Heathrow airport for one price control period only.

23 Europe Economics, *Cost of capital and financeability at PR09*, October 2009.
24 CEPA, *Ofgem RPI-X@20: Providing financeability in a future regulatory framework*, May 2010.

5.4 Should any regulatory adjustments to address financeability issues be NPV-neutral?

In general, NPV-positive approaches transfer risk from the business to customers. They do not alter prices over the life-cycle of the assets but they do alter the pattern of prices over time. In so doing, they transfer the burden between generations.

In purely economic terms, there should be no positive NPV adjustment (funded by customers through prices) to the building block model to address financeability problems. The building block model already includes all efficient economic costs, and managing the risk related to cost forecasts should be left to those best-placed to manage them – ie, the business and not the customers. This approach is also consistent with the principles set out in our discussion paper on affordability instruments[25] which highlighted that any regulatory adjustments to address affordability issues should not adversely affect the commercial interests of the regulated business.

If any adjustments have to be made to the building block model, then an NPV-neutral adjustment is superior to an NPV-positive adjustment in terms of economic efficiency. However, even an NPV-neutral adjustment is questionable as the relatively long life of infrastructure assets raises intergenerational equity issues – as noted above.

IPART seeks comment

11 Should any adjustments to address financeability concerns be NPV-neutral?

5.5 What regulatory precedents exist for adjusting prices to address financeability issues?

In the past, UK regulators have been more willing than Australian regulators to make price or cost adjustments on financeability grounds. For example, Ofwat made an explicit allowance of GBP 430 million in its 2004 determination to address financeability concerns[26]. As we mentioned in Box 2.1, UK regulators have a duty to ensure that license holders are able to finance their activities. In its 2009 determination, Ofwat recommended equity injections to address financeability concerns (see Box 5.3).

In addition, Ofgem used accelerated depreciation to address financeability issues in its 2004 and 2009 decisions for electricity distribution network providers, and both accelerated depreciation and equity injections in a recent decision on the transmission investment for renewable generation component of its transmission price control. However, we note that Ofgem is currently reviewing its approach to financeability as part of a broader review of its approach to regulating the UK's

25 IPART, *Addressing the affordability of regulated prices*, March 2009.

26 Details on the 2004 price review can be found on Ofwat's website: http://www.ofwat.gov.uk/pricereview/pr04/

energy networks. In a recent discussion paper for this review, it signalled a move away from making regulatory adjustments for financeability reasons (see Box 5.4).

Other regulators that have assessed the benefits of making adjustments to their financial model to improve financeability have generally found that these adjustments were not appropriate. For example, in 2008, the UK's Civil Aviation Authority (CAA) considered advancing revenue on a NVP-neutral basis to remedy the adjusted interest cover ratio. However, it was reluctant to do so because it considered that this would not reflect costs, and it seemed counter-intuitive to defer revenues in order to improve financeability.

However, in general, regulators have tended to be reluctant to make any adjustments to the building block model. Although it is sometimes argued that the regulatory cost of capital includes some headroom, it is not really clear whether this headroom allows for a correction of financeability issues or if it compensates for the risk inherent in forecasting market-dependent WACC parameters.

As Chapter 3 discussed, we have not made any explicit financeability adjustments to our building block model in past determinations. However, in our 2010 State Water pricing decision, we indicated that the shareholders could use equity either through the form of direct equity injections or through retained earnings, to address financeability concerns. We noted that while we consider the financeability test to be an important part of our pricing decisions, we believe that the business owners, or management, are best placed to address short-term financeability issues.

Box 5.3 Case study: Ofwat

In its 2004 determination, Ofwat included a financeability adjustment mechanism to fulfil its obligations to ensure that the regulated water companies could finance their activities and to retain investor confidence. As a result, water companies' revenue increased by GBP 430 million during the regulatory period (AMP4).[a] This reflected the industry's continued high levels of investment and the impact this might have on companies' financial health if revenues were to be derived purely from the normal building block approach to price setting.

The regulator's financial test included the following:

- Identifying indicators and thresholds – it used cash-based indicators and thresholds that are in line with investment grade credit ratings.
- Developing a modelling framework – it applied a notional gearing ratio of 55% to all businesses and dividends that were consistent with the cost of equity (less an amount to fund future growth).
- Applying the test – Ofwat retained discretion in applying the test.

In its 2009 price review, Ofwat maintained the inclusion of a financeability adjustment mechanism. It based its financeability analysis on the financial ratios in the table below.

Ofwat 2009 price review – financial ratios used in financeability analysis

Ratio	Water and sewerage	Water only
Cash interest cover (funds from operations/gross interest)	About 3 times	About 3.5 times
Adjusted cash interest cover (funds from operations less capital charges/net interest)	About 1.6 times	About 1.8 times
Funds from operations/debt	About 13%	About 17%
Retained cash flow/debt	About 8%	About 10%
Gearing (dent debt/regulatory capital value)	Below 65%	Below 60%

Source: Ofwat.

In its final 2009 determination, Ofwat targeted financial ratios under the notional structure that are consistent with an A- credit rating.[b] It also switched from making revenue adjustments to equity injections.

a Upfront although much of it was back-loaded.

b This is consistent with the target credit rating for the cost of debt estimate.

Box 5.4 Case study: Ofgem

Ofgem is currently undertaking fundamental review of energy network regulation, known as RPI-X@20. As part of its consultation for this review, Ofgem is reviewing how the new regulatory framework may embed Ofgem's financing duty. In May 2010, Ofgem released a paper outlining its initial thinking on the issue of financeability. A final decision is to be expected in mid-2010. The 4 main messages from Ofgem's May 2010 paper are that:

- As long as the allowed rate of return, depreciation profile and capitalisation are set appropriately and that there is consistency in Ofgem's respective future determinations, the notional company should be financeable.
- Ofgem will continue to consider the financial ratios (and possibly other qualitative or quantitative indicators) that the credit rating agencies look at to determine a business' credit rating.
- Ofgem will not advance cash flow in light of apparent short-term deteriorations in the financial ratios or credit ratings. It will attempt to understand the reasons behind the deterioration but the onus will be on the business to resolve the situation (for example, by injecting equity or reducing dividend payments to shareholders).
- On the other hand, when relative expenditure levels decrease, a business may choose to remove equity if it deems it appropriate (for example, through the payment of special dividends).

Ofgem considers that by placing a greater onus on businesses to take action to ensure short-term financeability it reduces the requirement for it to make adjustments to other areas of the price control.

6 Summary of IPART's preliminary views

Our preliminary view is that in assessing financeability, a benchmark credit rating of BBB/BBB+ is likely to continue to be the most relevant in the context of Australian capital markets and utility financing. However, having reviewed our past practice and the practice of other regulators, we do not have a preliminary view as to whether the notional or actual gearing, or both, should be used in undertaking the financeability analysis.

We consider that the building block approach provides assurance on financeability over the long term and that, in the first instance, short- to medium-term financeability issues should be addressed by management and the owners of the utility. In the case of government-owned businesses, we recognise that this may at times require reductions in dividends and equity injections that have consequences for the budget and state finances. Where the financeability options are severe and/or longer lasting, we would not wish to rule out regulatory adjustments, but we consider it is important that we provide greater guidance on the circumstances in which such adjustments may be appropriate.

If regulatory adjustments are to be made, we consider that they should be NPV-neutral. They should also have careful regard to the impacts on efficient pricing, competition from alternatives, and inter-generational equity.

Finally, we consider that the question of financeability is most relevant to, and most easily assessed, for commercial businesses that are not dependent on large general subsidies from government. In the NSW context, this means that financeability analysis would be most relevant to the determination of prices for the water utilities (except for the NSW Office of Water).

If we adopted these preliminary views, we would in the normal course of a review:

- use a notional gearing level in the WACC and actual or notional gearing level in the financial ratio analysis
- determine the appropriate business risk profile
- compute financial ratios based on cash flows
- compute the notional credit rating on an annual basis over the determination period
- identify whether there are any potential financeability issues, based on years where the credit rating falls below BBB

- identify the reasons for the deterioration in the credit rating
- assess whether any change in the capital structure would be able to lift the credit rating back up to investment grade
- quantify the options available to the business and shareholders without making any direct adjustments to any of the building block inputs.

All of the above steps would be undertaken at the draft stage of a pricing decision, and the key findings would be clearly communicated to stakeholders. Every pricing decision we make follows a process that allows businesses, their shareholders and customers to engage in discussions with us at least at the draft stage of a decisions. This ensures that we provide a consultative environment where stakeholders can be made aware of potential financeability issues that may arise out of a pricing decision. For example, if at the draft stage of a pricing decision it appears that a regulated utility will lose its BBB credit rating during the upcoming determination period, business, shareholders and customers are made aware of this issue and provided with the opportunity to provide us with their views, analysis and proposed solutions. In some cases, customers may be willing to accept higher prices for capital expenditure that substantially increase service quality. In other cases, businesses may be able to achieve productivity improvements that may allow them to delay some of the capital expenditure. Alternatively, shareholders may decide that the only solution is to provide additional equity finance.

While there is always a risk that we underestimate the severity of any short-term financial viability issue, the fact that we allow stakeholders to comment on our draft decision before it becomes final should allow for sufficient stakeholder input into our final decision. At the same time, we also provide regulated businesses and their investors with a stable and predictable regulatory environment. This should allow the businesses to undertake the necessary measures to mitigate any perceived risks arising out of an upcoming final pricing decision. While this may involve costs in itself, we believe that any risk management is best left to the market (through an insurance premium, for example) and that it can be achieved at a lower cost this way, rather than passing on the full costs at risk to customers now or in the future.

Appendices

A Modelling credit rating changes

In section 3.2 we demonstrated how changes in revenue, opex and capex impact on the notional credit rating of a regulated utility. In order to compute these changes, we used a simplified version on our building block model which is available on our website:
http://www.ipart.nsw.gov.au/investigation_content.asp?industry=6&sector=17&inquiry=221&doctype=4&doccategory=1&docgroup=1

We computed the changes on the notional credit rating in this building block model by varying annual revenue, opex and capex. For all scenarios, we have held the Tariffs increases constant at 4.61%.

1. Varying revenue. We have varied the annual revenue by increasing or decreasing the revenue line in the "Tariffs" sheet by 30% (cells K53 to N53).
2. Varying capex. We have varied the annual capex by increasing or decreasing the capex line in the "Inputs" sheet by 30% (cells K71 to N71). We also held the revenue from sales constant, based on the 4.61% tariff increase per annum.
3. Varying opex. We have varied the annual opex by increasing or decreasing the opex line in the "Inputs" sheet by 30% (cells K90 to N90). We also held the revenue from sales constant, based on the 4.61% tariff increase per annum.

B Financeability tests in other jurisdictions

Organisation	Report/Review	Date	Credit rating applied[27]	Financial indicators applied	Outcome	Action considered/taken/proposed
Commission for Aviation Regulation – Ireland	Determination on Maximum Levels of Airport Charges at Dublin Airport	4 December 2009	A- & BBB	FFO: Net Debt FFO: Interest Cover	Ratios are poor in short term. Medium and long term prospects appears to be sufficient in maintaining investment grade status Financial ratios consistent with a BBB rating by 2012 and will continue to improve	An uplift in allowed revenues early on No need to accelerate depreciation in later years to improve financial viability Not necessary to increase charges in later years for future capex
Competition Commission UK	Stansted Airport Q5 price control review	23 October 2008	A3/A-	Interest Cover Ratio FFO interest coverage Post maintenance interest cover ratio Adjusted interest cover ratio FFO: debt Debt to regulatory asset ratio	Benchmarks used from Heathrow and Gatwick review On average across Q5, all key ratios were met However, 4 key ratios failed in 1st year and 2 ratios failed in second year Overall, no significant concerns about notional financeability – net cash inflow of 436 million GBP with CAPEX outflow of 166 million GBP.	To maintain the 50% gearing condition, an equity injection needed in first year
Office of Water UK	Future water and sewerage charges 2010-2015 draft determinations	2009	BBB+/Baa1	Cash interest cover (FFO: net interest) Adjusted cash interest cover (FFO less capital charges: net interest) FFO: debt Retained cash flow: debt Gearing (net debt: regulatory capital value)	Most company can meet BBB+ or above it.	Equity injections or rights issues can be used to ease financing constraint. Only one company Thames, had weak financial ratios OFWAT assumed an equity injection of 15% of opening notional equity to relieve financing constraint
Office of Rail	Determination of Network	October	BBB+/Baa1	Adjusted interest cover ratio	Financial ratios forecasted are strong –	N/A

[27] As in the relevant determination.

Organisation	Report/Review	Date	Credit rating applied[27]	Financial indicators applied	Outcome	Action considered/taken/proposed
Regulation	Rail's outputs and funding for 2009-14	2008		FFO/interest Debt/RAB (Gearing) FFO/Debt RCF/Debt	the results are consistent with a solid investment grade credit rating in current and prospective conditions (2009-2014) Sensitivity and Monte Carlo tests showed that a solid investment grade credit rating can be maintained in the face of a range of fluctuations in cash flow.	
Civil Aviation Authority UK	Economic Regulation of Heathrow and Gatwick Airports 2008-2013 Heathrow and Gatwick Airports – CAA price Control Proposals	March 2008 November 2007	BBB+/Baa1	Adjusted interest cover ratio Net debt to RAB FFO/interest coverage FFO/adjusted net debt	Price caps for Heathrow are likely to be consistent with maintenance of solid investment grade from at least 2 credit agencies Gatwick airport would be likely to maintain solid investment grade. However one ratio – adjusted interest cover ratio exhibits declining profile – more consistent with Baa2.	In the 2007 report, the CAA considered advancing revenue using a net present value neutral basis to remedy the adjusted interest cover ratio However, CAA was reluctant to do so because (1) it would not reflect costs and (2) it would seem counter-intuitive to defer revenues in order to improve financeability, In the final decision in March 2008, the CAA concluded that there was no basis to adjust price controls.
OXERA EnergieKamer (Netherlands)	Updating the WACC for energy networks – methodology paper	September 2009	BBB+/Baa1	No discussion of financial ratios	The paper examines the appropriate gearing level to maintain an investment grade credit rating The paper concludes that a strong BBB+/Baa1 rating is the minimum after considering market data, credit companies and regulatory decisions The paper concludes that the appropriate gearing level to maintain this rating is approximately 50-60%. This figure is reached by examining the average gearing of European network companies and regulatory precedents	N/A

Organisation	Report/Review	Date	Credit rating applied[27]	Financial indicators applied	Outcome	Action considered/taken/proposed
					from European regulators	
Fathom Consulting	Final Report for the Consumer Council of Water	2009	N/A	No discussion of financial ratios	The report provides some discussion of the financeability problem. It concludes that financeability concerns are not as significant as water industry companies stated. Most water companies remain above the lower bound of the investment grade spectrum. Secondly, some water companies had previously pursued aggressive payout policies. These aggressive payout policies have been paid out of increased leverage. Vast majority of payout ratios are above the average payout ratio for the UK equity market.	Financeability could be addressed at least partially with cuts in dividend payouts. And a less aggressive dividend policy, these 2measure would tend to improve the company's credit rating
Queensland Competition Authority	Benchmark Retail Cost Index for Electricity: 2010-11	December 2009	N/A	No discussion of financial ratios	No discussion of financeability issue	N/A
Essential Service Commission (Vic)	Metropolitan Melbourne – Water Price Review 2009 Final Decision	June 2009	BBB+	No discussion of financial ratios	No discussion of financeability,. However it does state that a BBB+ credit rating is used to determine the debt margin in calculating WACC	N/A
Australian	Electricity transmission and	May 2009	BBB+	No discussion of financial ratios	No discussion of financeability	N/A

Organisation	Report/Review	Date	Credit rating applied[27]	Financial indicators applied	Outcome	Action considered/taken/proposed
Energy Regulator	distribution network service providers Review of the WACC parameters				However, in determining the appropriate credit rating, the AER did examine 2 ratios of different energy companies: interest cover and FFO/Debt AER found that a rating of BBB+ is the suitable credit rating benchmark for an efficient NSP and is also consistent with the National Electricity Objective	
Essential Services Commission of South Australia	2005-2010 Electricity Distribution price Determination	April 2005	BBB+	No discussion of financial ratios	No discussion of financeability ESCOSA found that an efficiently run distribution business with 60% gearing would be expected to maintain at least a BBB+ rating.	N/A
Essential Services Commission of South Australia	Inquiry into the 2009-10 Metropolitan and Regional Water and Wastewater Pricing Process Final Report	August 2009		No discussion of financial ratios	No discussion of financeability or credit ratings	N/A

C CEPA note on UK legislative requirements

C.1 The legal basis for financeability testing in the UK

Statutory regulators in the UK are charged to protect the interests of consumers. In order to sustainably achieve this goal, their legislative duties have usually required them to ensure that licence holders are allowed sufficient revenue to fulfil their regulatory duties.

Current primary legislation in the industries considered in this note does not require for licensees to achieve certain financial benchmarks, as might be implied by the financeability tests they have been conducting, but instead gives a set of broad objectives to be interpreted by the regulators and implemented in the manner they see best fit.

This note briefly presents the legal basis for financeability testing for 4 UK regulators:

- The Water Services Regulation Authority (Ofwat).
- The Office of Gas and Electricity Markets (Ofgem).
- The Office of Rail Regulation (ORR).
- The Postal Services Commission (Postcomm).

Ofwat

Ofwat's responsibilities as an economic regulator are derived from the *Water Industry Act 1991*[28] (amended by the *Water Act 2003*[29]). Their legislative remit requires them to ensure that companies are able to "finance the proper carrying out" of their regulated functions. They make explicit reference to the requirement that in particular, they should ensure that they can secure reasonable returns on capital. As with the duties of the other regulators included in this note, this does not provide explicit guidance on how this might be achieved or assessed. Instead the onus is on the regulator to provide its own actionable definition with which it can best fulfil its duty.

28 http://www.opsi.gov.uk/acts/acts1991/ukpga_19910056_en_1
29 http://www.opsi.gov.uk/acts/acts2003/ukpga_20030037_en_1

Ofwat currently define their financial responsibilities as having 2 strands:[30]

- An efficient company should be able to provide services to customers and earn a return at least equal to the cost of capital. The cost of capital Ofwat sets at price reviews takes into account how we have considered risk in all aspects of the price limit package.
- Price limits must secure that efficient companies can be financeable, such that a company's revenues, profits and cash flows are sufficient to allow it to raise finance on reasonable terms.

They limit their interpretation of financeability to the latter strand. This interpretation is not set down in law, but rather the explicit statement of this interpretation could be the basis for a judicial review if a company felt that it was not being adhered to. Their approach to financeability has come under scrutiny as part of Bristol Water's appeal of its price control to the Competition Commission. Ofwat expects to publish a report on financeability in September 2010.

Ofgem

The Gas and Electricity Markets Authority (GEMA) and the Secretary of State have had the duty to ensure that their licence holders are able to finance their activities since the *Gas Act 1986*[31] and the *Electricity Act 1989*.[32] Their responsibilities were updated in the *Utilities Act 2000*[33] such that they have the duty to carry out its function in the manner they consider to be best calculated to further the principal objective of protecting the interests of consumers while having regard to the need to secure that licence holders are able to finance their activities.

Ofgem's thinking on financeability has been changing recently through the RPI-X@20 review. A final view on their interpretation of financeability and how they will apply their responsibility in practice in future reviews should be clear in their final report published in autumn 2010. The legal basis for their financeability tests is unlikely to change.

30 http://www.ofwat.gov.uk/future/monopolies/fpl/prs_inf_100621fpl_financeability.pdf
31 http://www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1986/cukpga_19860044_en_1
32 http://www.opsi.gov.uk/acts/acts1989/ukpga_19890029_en_2#pt1-pb1-l1g3
33 http://www.opsi.gov.uk/acts/acts2000/ukpga_20000027_en_1

ORR

ORR's main economic regulatory functions and responsibilities are set out in the *Railways Act 1993*,[34] (amended 2005[35]). These were inherited from its predecessor, the Rail Regulator, when it was established as a non-ministerial government department through the *Railways and Transport Safety Act 2003*. The relevant duty for its consideration of financeability is: "to act in a manner which it considers will not render it unduly difficult for persons who are holders of network licences to finance any activities or proposed activities of theirs in relation to which ORR has functions."[36] This was interpreted in the 2008 price review as "a duty to act in a manner that will not render it unduly difficult for Network Rail to finance its activities" and that they would "consider financeability in the round."

While this responsibility is similar to Ofwat and Ofgem's, they are also required to bear in mind Network Rail's licence requirements, which include that "the licence holder shall use all reasonable endeavours to ensure that the licence holder as issuer of any corporate debt maintains at all times an issuer credit rating which is an investment grade rating."[37] This brings the legal basis for financeability testing much closer to prescriptive hurdle objectives used in most financeability tests.

Postcomm

Postcomm is a non-ministerial department established under the *Postal Services Act 2000*.[38] Its actions are governed by the same Act and the 1997 Postal Services Directive[39] (amended).

The *Postal Services Act 2000* includes the provision that Postcomm should have regard to the need to ensure that licence holders, such as Royal Mail, can finance activities authorised or required by their licences.[40] As with the other regulators, this requirement is not methodologically prescriptive. Therefore as part of their 2005 Review of Royal Mail, Postcomm established a set of objectives for the review including: "to ensure the continued provision of an affordable universal postal service, whilst allowing Royal Mail sufficient revenue to finance its licensed activities."[41] They explicitly stated that this would not replace or supersede their statutory duties but would instead explain they would give those duties practical effect for the review.

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34 http://www.opsi.gov.uk/acts/acts1993/ukpga_19930043_en_1
35 http://www.opsi.gov.uk/acts/acts2005/ukpga_20050014_en_1
36 http://www.rail-reg.gov.uk/server/show/nav.94
37 http://www.networkrail.co.uk/browse%20documents/regulatory%20documents/regulatory%20compliance%20and%20reporting/licence%20documents/network%20licence.pdf
38 http://www.opsi.gov.uk/acts/acts2000/ukpga_20000026_en_1
39 http://www.psc.gov.uk/legal-framework/postal-legislation/1997-postal-services-directive-as-amended.html
40 http://www.opsi.gov.uk/acts/acts2000/ukpga_20000026_en_2#pt1-l1g1
41 http://www.psc.gov.uk/postcomm/live/policy-and-consultations/consultations/price-control/15466Pricecontrolproposals1Jun05.pdf

Summary

The regulators included in this appendix have all performed financeability tests as part of their price controls. Each of them has a legal responsibility to ensure that regulated activities are financially viable. However their required objectives are defined such that they must use their own interpretation to shape and understand how it affects their operations. Regulators' statements in this regard are not intended to replace legislated duties. However, the Bristol Water Competition Commission enquiry should provide useful precedent and clarity regarding how UK regulators are legally accountable for their interpretations and comments on the implementation of their financeability responsibilities and testing methodologies.

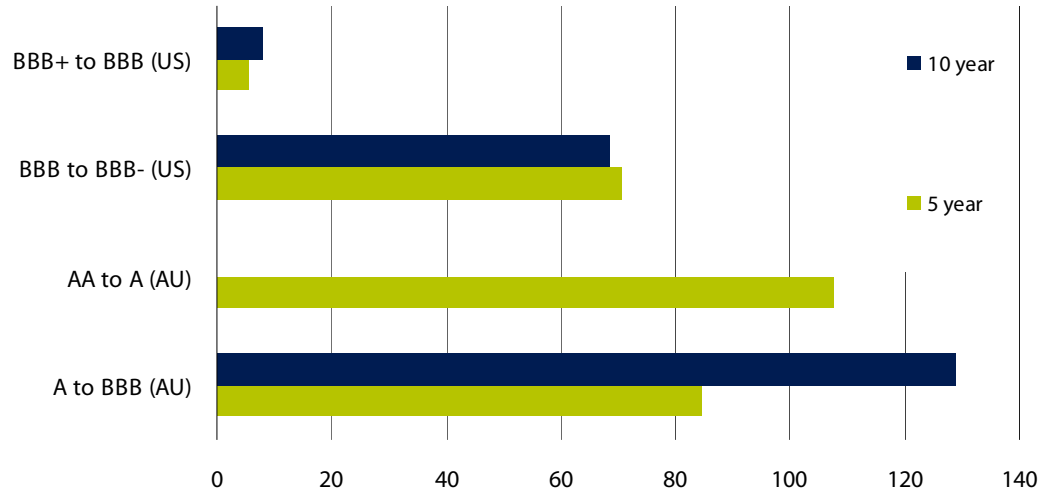
D Quantifying the impact of credit rating downgrades on the cost of debt

As this paper discusses, we currently base our assessment of a regulated business's short-term financial viability by projecting its annual credit rating over the determination period, and considering whether this rating falls below our benchmark credit rating for ensuring financial viability. The reason we do this is that any change in the credit rating theoretically increases the probability of default on loan repayments, which means that any new or refinanced debt will attract a higher interest rate. This will increase its overall interest costs, which may lead to further deteriorate in its financial position.

To help quantify the potential impact of a change in the credit rating on the cost of debt, we have analysed the likely increase in a business's cost of debt due to a downgrade in its credit rating (based on the yield differentials for 5 and 10 year bonds purchased on the US and Australian markets as at 22 June 2010). We included US data as there is limited data available for the Australian market. We were only able to quantify the impact of 3-step credit rating downgrade (from AA to A or from A to BBB) for the Australian market, again due to the limited data available.

Figure D.1 shows the results of this analysis.

Figure D.1 Percentage increase in the cost of debt due to a credit rating downgrade (basis points)[a]



a We note that due to the global financial crisis, yield differentials between different credit ratings have increased substantially. Hence, getting the rating wrong is a more significant issue now than before the global financial crisis.

Data source: Bloomberg's fair value curves, IPART analysis.

The analysis indicates that the size of increase in the cost of debt depends on the base credit rating, the country of issuance and the maturity. For example, a change from a 10-year maturity BBB to a BBB- credit rating for US-issued corporate debt would result in an increase in the cost of debt of 68 basis points. A change from a 5-year maturity AA to A credit rating for Australian issued corporate debt would result in an increase in the cost of debt of 107 basis points.

Given that for the businesses we regulate, the cost of debt generally accounts for 60% of the WACC and that the WACC can account for 40% to 60% of the overall revenue requirement of a regulated utility, increases of this magnitude may have a material impact on the business's financial viability.