



New South Wales
TREASURY



Mr Eric Groom
Principal Advisor
The Independent Pricing and Regulatory Tribunal
PO Box Q290
QVB Post Office NSW 1230

Contact: R Edwards
Telephone: (02) 9228 4119

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Dear Mr Groom

Treasury submission to the IPART Discussion Paper
– Estimating the debt margin for the weighted average cost of capital

I have enclosed the New South Wales Treasury's submission to the Independent Pricing and Regulatory Tribunal's discussion paper entitled *Estimating the debt margin for the weighted average cost of capital*.

I appreciate the opportunity to provide comment.

Yours faithfully

Stephen Brady
Deputy Secretary
Environment and Economic Services Directorate



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Estimating the Debt Margin for the Weighted Average Cost of Capital - NSW Treasury Response

Introduction

The regulated cost of debt is determined by the benchmark credit rating and the corresponding observed debt margin above the nominal risk-free rate. NSW Treasury supports a regulatory approach that determines debt margin based on benchmark corporate bond yields that:

- reflect a 10-year maturity, consistent with the adoption of a 10 year risk free rate and in recognition of the increasing risk of default over time, and
- have a BBB+ to BBB rating, consistent with the benchmark credit rating of a utility with 60 per cent debt gearing.

As outlined in IPART's Discussion Paper on Estimating the Debt Margin (Discussion Paper), the framework under which government-owned businesses operate should mirror that of a commercial business, consistent with the principles of competitive neutrality. Therefore, debt margin should be determined with reference to the debt gearing and stand-alone credit rating of a 'benchmark' commercially operated business, not based on the actual cost of debt.

IPART's Discussion Paper aims to identify a methodology for estimating the debt margin for regulated businesses that meets the following criteria:

- uses reference bonds that should result in a debt margin that reflects utility-specific risks,
- allows the debt margin to be adjusted to reflect a 10-year maturity for the bonds, and
- is robust and transparent, and can easily be replicated by stakeholders.

NSW Treasury supports the second and the third of these criteria. However, NSW Treasury does not believe that reference bond rates should be limited to bonds that solely reflect utility specific risks. Given the very limited number of long dated BBB to BBB+ rated utility bonds, this would unreasonably constrain the number of proxy bonds available for determining debt margin. Credit rating should be the primary determinant of debt margin and therefore BBB to BBB+ rated corporate bonds from all sectors should be included in the debt margin assessment.

Evaluation of Options

Option 1- Maintain the current set of securities and a fair value curve

The first option maintains the current approach used by IPART to determine debt margin. NSW Treasury supports the continued use of a target BBB+ to BBB credit rating to determine debt margin.

IPART currently derives debt margin estimates based on fair value yield curve data for BBB and BBB+ rated Australian corporate bonds with a maturity of 10 years, as well as actual bond yields for BBB and BBB+ rated securities. NSW Treasury is concerned that IPART's selected portfolio of proxy corporate bonds may underestimate the debt margin given their maturity periods are significantly shorter than the 10 year risk free period.

The portfolio of corporate bonds outlined in IPART's Discussion Paper have maturity dates ranging from September 2009 to September 2015, with an average term to maturity of around 3.5 years. Inevitably, the corporate bond with the shortest maturity period determines the low end of the debt margin range, thereby also impacting on the range mid-point. In recent determinations, the high end of the debt margin range has been consistently based on the Bloomberg 10 year fair yield curve data, indicating that yields on the proxy corporate bonds with shorter terms to maturity, may systematically underestimate the yield on 10 year corporate debt.

In IPART's Final Determination for Gosford and Wyong Councils, the September 2009 maturing AGL bond was excluded from the portfolio of corporate bonds:

*"IPART considers that one of the bonds that IPART uses in estimating the debt margin, the AGL bond, should be excluded. This is because it will mature in September this year, therefore its yield is not likely to be representative of the yield of 10-year corporate debt."*¹

However, the remaining bonds in IPART's selected portfolio also have maturities considerably shorter than the ten year risk free rate period and therefore may also underestimate the yield on 10 year corporate debt.

IPART's Discussion Paper acknowledges the relatively short maturity period of the traditional set of securities used in its portfolio. The Discussion Paper suggests that a standard methodology could be used to extend the term structure of debt margins obtained from Australian corporate bonds to match the term of the risk free rate. In principle, NSW Treasury supports such an approach. However given that long term BBB to BBB+ fair yield curve estimates are already available from Bloomberg and CBA Spectrum, NSW Treasury believes that IPART should rely predominantly on this information, rather than on a selected portfolio of corporate bonds that require potentially complex adjustments to extend term structure based on overseas credit spreads.

¹ IPART, Water — Determinations and Final Report, Gosford City Council Wyong Shire Council, May 2009, Page 189

Treasury therefore contends that BBB fair yield curve estimates should be the primary determinant of debt margin, consistent with the approach adopted by other Australian regulators including the AER. If deemed necessary, actual corporate bonds yields (adjusted to reflect a 10 year term structure) should be used as a cross check, together with published RBA data on capital market spreads.²

The longest maturity BBB bond fair yield now published by Bloomberg is 8 years. Due to the unavailability of the Bloomberg fair yields for BBB rated 10-year corporate bonds, NSW Treasury supports the approach adopted by the AER that uses the Bloomberg fair yield for BBB rated 8-year corporate bonds and adds the Bloomberg fair yield spread between A rated 8 and 10-year corporate bonds, in order to derive a proxy 10-year BBB corporate bond yield.

Option 2-Use a new set of securities based on companies from the utilities sector

NSW Treasury does not support the proposition that industry sector, rather than credit rating, should be the primary determinant of debt margin. Whereas a firm's industry sector may be indicative of underlying business risk, variations in financial leverage (ie financial risk) within an industry sector will also impact on debt margin. A utility with 80 per cent debt gearing should have a lower credit rating and higher debt margin relative to a utility from the same sector with 20 per cent debt gearing. Credit rating is impacted by both business and financial risk and therefore should be the primary determinant of debt margin.

The revised portfolio of utility sector securities under option 2 include:

- five AAA rated securities (all credit wrapped),
- one A- security,
- one BBB+ security, and
- one BBB security (that matures in September 2009).

IPART's Discussion Paper expresses concern that the current methodology may overstate current utility sector debt margins. NSW Treasury contends that the alternative set of predominantly AAA rated utility issued bonds with an average term to maturity of approximately 14 months will materially understate the debt margin, due to the mismatch in average term and credit rating relative to the 10 year risk free rate and BBB to BBB+ credit rating benchmarks. It is important that determination of debt margin be internally consistent with assumptions used to derive other WACC parameters.

IPART acknowledges that the term structure of utility bonds may need to be adjusted to reflect the 10 year risk free period. However, NSW Treasury is concerned that potential estimation errors associated with extending term structure will be magnified given the significant variation between the 14 month average term to maturity of the selected portfolio of utility bonds and the 10 year risk free term (i.e. the greater the mismatch in term structure, the greater the potential for estimation error).

² Statistical Tables of the April 2009 RBA Bulletin, Table F03: Capital Market Yields and Spreads – Non-government Instruments

NSW Treasury considers that the only bond with any relevance within IPART's portfolio of utility bonds is the Snowy Hydro EF870795 bond, as it is BBB+ rated and is the only utility issued bond with a term to maturity of over three years. In IPART's recent review of rate of return for the NSW Rail Access Undertaking (May 2009), the reported debt margin based on the Snowy Hydro bond was 2.82 per cent compared to a 3.50 per cent estimate based on the Bloomberg BBB fair value curve. If the term to maturity of the Snowy Hydro bond were extended to 10 years, the debt margin based on the Snowy Hydro bond would more closely align with the Bloomberg fair value estimate.

IPART's Discussion Paper acknowledges that:

- The Bloomberg service has been thoroughly reviewed by other regulators, regulated business and consultants, including NERA and the Allen Consulting Group (page 10),
- Other regulators, such as the AER, already use Bloomberg (page 10), and
- The Bloomberg BBB fair value curve provides a relatively objective view of how a BBB rated bond is priced (page 16)

Given that the Bloomberg fair yield methodology has been thoroughly reviewed and endorsed by Australian regulators and other stakeholders, NSW Treasury does not support a change in methodology based on reference rates from a limited selection of predominantly short term, AAA rated utility bonds, that require potentially complex adjustments for term structure and credit rating impacts associated with parental support and credit wrapping.

Option 3- Use a new set of securities based on companies from the utilities sector and the fair value curve based on a benchmark credit rating

As previously discussed, NSW Treasury does not believe that reference bond rates should be limited to short-term utility bonds that are predominantly AAA rated. Treasury is concerned that outcomes under such an approach may unduly impact on the lower bound of the debt margin range, resulting in a range mid-point that is materially below the Bloomberg BBB fair yield estimate and therefore materially below the debt margin adopted by the majority of Australian regulators.

NSW Treasury considers the Snowy Hydro security as the only meaningful comparator bond within IPART's portfolio of utility bonds, as it is BBB+ rated and has a maturity term of over three years. However, given that IPART uses the lowest yielding bond within the portfolio to determine the lower bound of the debt margin range, the Snowy Hydro bond is effectively extraneous to the debt margin calculation. As a result, the lower bound of IPART's debt margin range will effectively be based on a AAA rated bond.

The potential impact on the debt margin range under this approach has been highlighted in recent IPART reports. For example, the Hunter Water Draft Determination (April 2009) indicated a lower bound debt margin range based on utility issued bonds of 0.7 per cent (including 12.5 basis points debt raising costs) compared to an upper bound range of 3.6 per cent based on the Bloomberg BBB fair

value estimate. NSW Treasury considers that a debt margin estimate of between 0.7 per cent and 3.6 per cent represents an unreasonably large range, especially given the majority of Australian regulators use a point estimate based on the Bloomberg fair yield curve. The lower bound estimate of 0.7 per cent is clearly inconsistent with current market conditions and highlights the problems associated with the term structure and use of AAA rated credit wrapped utility bonds.

Impact on Value

IPART's Discussion Paper indicates that switching to option 2 or 3 would not have a substantial impact on businesses, customers or the shareholder. NSW Treasury does not agree with this conclusion.

Based on the debt margin analysis presented in IPART's Hunter Water Draft Determination (April 2009), the resultant debt margin ranges under the alternative options are tabled below:

Debt Margin Range	Lower Bound	Upper Bound	Mid-point
AER (Bloomberg BBB)	3.6%	3.6%	3.6%
IPART - Option 1 *	2.6%	3.6%	3.1%
IPART - Option 2	0.7%	2.6%	1.65%
IPART - Option 3	0.7%	3.6%	2.15%

* excludes September 2009 AGL bond

Based on 60 per cent debt gearing assumptions, the WACC under option 2 is 1.17 per cent lower than that based solely on the Bloomberg BBB fair yield estimate (i.e. the AER approach). Based on Sydney Water's projected regulatory asset values over the four-year regulatory period commencing 2008/09, a 1.17 per cent reduction in WACC translates to a reduction in regulated earnings of \$577 million (\$2008/09) over the regulatory period. Under option 3, the corresponding reduction in WACC is 0.87 per cent and reduction in regulated earnings is \$429 million.

Target Credit Rating

IPART's Discussion Paper seeks comments on whether the reference credit rating should remain at BBB to BBB+ or be increased in line with the practice of other regulators.

NSW Treasury is unaware of any Australian regulator that currently uses a reference credit rating benchmark of above BBB+. Table 3.1 in IPART's Discussion Paper refers to debt margin decisions and target credit ratings from six Australian regulators. Of these, only the ICRC (2004) used a credit rating range of above BBB+ (i.e. A to BBB+). However, the ICRC has used a target credit rating of BBB in more recent determinations (eg 2008 Water Review).³

³ Independent Competition and Regulatory Commission, Water and Wastewater Price Review, Final report and Price Determination, April 2008, page 102.

NSW Treasury considers that a BBB to BBB+ credit rating range is an appropriate benchmark for an efficient regulated utility given the underlying debt gearing benchmark of 60 per cent. This compares to average gearing levels of around 30 per cent across the entire market. For regulated utilities, below average business risk and above average financial risk have cancelling effects on credit rating.

As credit rating is impacted by both business and financial leverage, an alternative perspective on credit rating is to consider whether a regulated business could retain an investment grade stand-alone rating with gearing levels above 60 per cent. If a BBB to BBB+ credit rating benchmark is considered too low given 60 per cent gearing assumptions, then alternatively a 60 per cent gearing benchmark would be considered too low given BBB to BBB+ credit rating assumptions. Whereas historically there have been examples of private sector utilities with gearing levels above 60 per cent, such businesses have been impacted greatest during the current financial crisis. This is supported by the Moody's financial ratio matrix shown at Table 5.3 in IPART's Discussion Paper, which indicates a BB credit rating for a medium-risk utility with gearing levels above 60 per cent.

IPART's Discussion Paper provides that the BBB to BBB+ credit rating should be viewed as a minimum benchmark, however it *"does not directly address the issue of the appropriate benchmark credit rating for an efficient well-managed firm"* (page 33). In this regard, NSW Treasury notes that there is not a direct relationship between credit rating and efficiency. Indeed, a credit rating above BBB+ may be indicative of a 'lazy' balance sheet and failure to minimise cost of capital through an appropriate mix of debt and equity financing.

IPART's Discussion Paper also indicates that there may be a change to the upper end of the target credit range given *"some of the utilities are rated higher than BBB+"* (page 35). Based on this logic, it could also be argued that there should be a change to the lower end of the range as some utilities are rated below BBB. However as highlighted by IPART, it is widely recognised that there is substantial uncertainty involved in estimating the cost of debt from benchmark data. Variations in capital structure and the level of parent company support will impact on credit rating. In this regard, it is inappropriate to base regulated credit rating benchmarks on comparator utilities whom benefit from parent company support or have gearing levels significantly below the 60 per cent regulatory benchmark.

Credit Rating and Debt Margin

Chapter 5 of IPART's Discussion Paper compared the yields of Australian corporate bonds and concluded that:

- debt margins for utilities are lower than other industry groups,
- there were larger variations in debt margins across different credit ratings, and
- there are not the expected relationships between ratings and debt margins.

As outlined in IPART's Discussion Paper, debt margin should reflect both the credit rating of the issuer and the term to maturity of the security. In this regard it is

plausible for a short term BBB rated bond to have a lower debt margin than a higher rated bond with a longer maturity term. IPART's analysis does not account for variations in maturity terms. This, together with the limited number of long-term utility issued bonds available, potentially clouds the interpretation of results.

Debt Gearing and Credit Rating

Figure 5.13 in IPART's Discussion Paper shows the relative gearing levels and credit ratings for a small number of utility and non-utility businesses. From this analysis, IPART concluded that debt gearing is not the key determinant of credit rating:

"Figure 5.13 indicates that the companies included in the new set of securities have a much higher total debt to total assets ratio than those included in the traditional set of securities. This clearly illustrates that the level of gearing is not the key determinant of the credit rating. For example, SPI is rated A- with a gearing just below 60 per cent. Coles on the other hand is rated BBB with a gearing level of 15 per cent and GPT is rated BBB with a gearing level of 36 per cent". (page 39)

NSW Treasury considers that debt gearing levels, in conjunction with other debt servicing measures, are key determinants of credit rating. As previously discussed, low business risk and high financial risk have cancelling effects on credit rating, meaning that low business risk utilities can afford to adopt more aggressive financial leverage relative to non-utilities with higher business risk. The capacity of SPI to support both a higher credit rating and higher gearing levels relative to Coles and GPT is indicative of the relative underlying business risk of the three businesses, and does not illustrate that gearing levels are extraneous to the determination of credit rating.

Credit Rating Modelling

NSW Treasury acknowledges that credit rating is determined by both quantitative and qualitative factors. However, NSW Treasury does not agree with IPART's conclusion that for natural monopolies operating within a stable regulatory system, rating agencies assign a higher weighting to qualitative, rather than quantitative factors. Nor does Treasury agree that rating agencies assign a *"higher credit rating than that purely stipulated by the financial ratios"* (page 38).

The financial ratio criteria commonly used by rating agencies already factor in the underlying business risk of the sector. For example, Moody's expected financial ratio matrix for a utility company (shown at Table 5.3) may differ considerably to the expected financial ratios for a non-utility company with higher business risk. Similarly within the utility sector, Moody's uses different ratio ranges to further differentiate between low and medium risk utilities, depending on the level of regulatory support and exposure to non-regulated activities.

NSW Treasury uses a similar approach in modelling the credit worthiness of Government owned utilities. NSW Treasury's model uses five different sets of financial ratio criteria (based on Standard & Poor's data), depending on the underlying business profile of the business. As a result, regulated water and electricity utilities require significantly less financial protection in order to achieve the same credit rating relative to a non-regulated utility. For example, Sydney Water and

TransGrid are considered to have ‘well above average’ business profiles (indicative of well below average business risk) and require a minimum FFO interest cover ratio of 2.0 in order to achieve a BBB rating. In comparison, NSW owned generators are considered to have ‘below average’ business profiles (relative to other utilities) as they are subject to competition and potential cash flow volatility. As a result, NSW owned generators require a minimum FFO interest cover of 4.0 in order to achieve an equivalent BBB rating.

In terms of the ratings analysis shown at Table 5.4 in IPART’s Discussion Paper, the rating outcomes under NSW Treasury’s model are broadly consistent with the Moody’s model, based on the low business risk profile appropriate for Sydney Water and EnergyAustralia. NSW Treasury does not agree with IPART’s conclusion that rating agencies would necessarily assign a higher stand-alone credit rating than that determined by these ratios, merely because they are regulated monopolies. Rather, the lower business risk associated with regulated monopolies is already factored into the target ratio ranges.

	FFO Interest Cover	FFO to Debt	Debt Gearing
EnergyAustralia	2.97	9.37	57.3
NSW Treasury Rating	BBB+	BBB	A
Moody’s Rating	BBB+	BBB+	A+
Sydney Water	1.86	8.0	46.0
NSW Treasury Rating	BBB+	BBB+	AA
Moody’s Rating	BB+	BBB+	AA+

Note – EnergyAustralia’s FFO to total debt of 9.37 was incorrectly reported as a BB rating under NSW Treasury’s model in the Discussion Paper.

Bloomberg versus CBA Spectrum

NSW Treasury notes the recent debate on the relative merits of Bloomberg and CBA Spectrum fair yield curve estimates. Historically, IPART has relied on CBA Spectrum estimates. In the 2008 Sydney Water Final Determination, IPART concluded:

“IPART is of the opinion that the yields provided by CBASpectrum are the best available proxy for estimating a debt margin for Sydney Water that meets the competitive neutrality principle:

- *the model is widely used in the market*
- *the model generates yields for fairly (efficiently) priced bonds and*
- *there is no credible evidence that the model produces consistent under-valuation of any class of bonds.’⁴*

In its recent determination for NSW electricity distributors, the AER concluded that:

⁴ IPART, Review of prices for Sydney Water Corporation’s water, sewerage, stormwater and other services, June 2008, Page 165

“Bloomberg provided better estimates of 10-year BBB+ fair yields than CBA Spectrum because they were more consistent with the observed yields of similarly rated actual bonds.”⁵

In recent decisions, IPART has indicated that Bloomberg BBB fair yield estimates may over estimate the cost of debt that a private sector utility may face in a competitive market. This contrasts to evidence provided by private sector Victorian distributors in a recent joint submission to the AER:

“The recent volatility in credit markets and the absence of an active primary and secondary market in corporate bonds have put severe strains on the credibility of Bloomberg’s fair market curves as a reliable indicator of the cost of corporate debt. The Bloomberg curves appear to be underpricing credit spreads not only in Australia but in other countries including the US. The problem in the Australian market is exacerbated by the fact that the universe of bonds is small and only one fresh bond issue has been undertaken since October 2007.”

“For maturities longer than two to three years, the Bloomberg fair yield curves do not appear to provide a fair representation of the yield on corporate bonds during the prescribed measurement period. In particular, it is apparent that from November 2012 (that is, a maturity of just over 3 years), the fair yield curve for BBB bonds is below the yields of all of the A-rated and BBB-rated reference bonds with maturities greater than 3 years in the Bloomberg universe.”⁶

The joint submission from Victorian distributors provided supporting evidence of Bloomberg fair yield estimates being significantly below equivalent estimates based on:

- RBA published spreads for one to five year BBB bonds⁷,
- the Tabcorp 5 year BBB-rated bond issue of April 2009 (the only long-dated BBB rated domestic issue by an Australian non-bank since October 2007)⁸; and
- recent 10 year United States dollar bond issues by Australian non-bank companies in the United States.

Given conflicting evidence relating to the relative merits of Bloomberg and CBA Spectrum estimates, NSW Treasury’s preferred approach is to establish a debt margin range based on both Bloomberg and CBA Spectrum fair yield estimates, complemented by available RBA data on capital market spreads. In this regard, NSW Treasury notes that debt margin estimates based on Bloomberg, CBA Spectrum and RBA data, are all well above the mid-point debt margin estimates adopted by IPART in recent determinations.

⁵ AER, NSW distribution determination 2009-10 to 2013-14, Final Decision, 28 April 2009, Page 224.

⁶ Debt Risk Premium for Use in the Initial AMI WACC Period, Paper produced jointly by the Victorian Electricity Distribution Businesses, 1 June 2009, Pages 10 and 17.

⁷ Statistical Tables of the April 2009 RBA Bulletin, Table F03: Capital Market Yields and Spreads – Non-government Instruments, <http://www.rba.gov.au/Statistics/Bulletin/F03.pdf>

⁸ Converted from variable rate bond to fixed rate equivalent.