

15 February 2013

Mr Warwick Anderson  
General Manager – Network Regulation Branch  
Australian Energy Regulator  
GPO Box 3131  
Canberra ACT 2601

Dear Mr Anderson

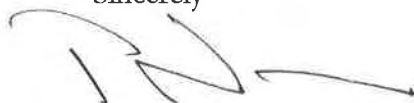
**Rate of Return Guidelines Issues Paper**

Queensland Treasury Corporation welcomes the opportunity to provide comments to the Australian Energy Regulator on the Rate of Return Guidelines Issues Paper.

We have provided responses to each question in the Issues Paper as well as additional material that is considered relevant to specific issues such as the return on debt.

Should you have any queries in relation to our submission please contact Brian Carrick on (07) 3842 4716 or David Johnston on (07) 3842 4782.

Sincerely



Philip Noble  
Chief Executive

# Rate of Return Guidelines Issues Paper



SUBMISSION TO THE AUSTRALIAN ENERGY REGULATOR

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## General comments

- Queensland Treasury Corporation (QTC) supports the approach put forward in the Issues Paper that the return on debt should be determined using a benchmark which reflects prudent and efficient debt financing practices.
- The amendments to the return on debt provisions in the National Electricity Rules (NER) reflect the views of consumer groups, network service providers (NSPs) and debt providers such as QTC, that the current 'on the day' approach does not meet the needs of consumers, NSPs or investors:
  - Consumers are exposed to the risk that rates might be set at high levels in volatile market conditions and that prices would fluctuate because of short term changes in interest rate markets, rather than underlying costs of building and operating networks.
  - NSPs and investors are exposed to the risk that the return on debt might be estimated at a point when rates were unusually low, which led to the use of costly risk management strategies that increased other risks, such as refinancing risk.
  - The divergence between the rate setting method and debt management practices, coupled with increased volatility in interest rate markets, has created perceptions that the benchmark return on debt is out of line with actual NSP funding costs.
- In drafting the new rules for setting the return on debt, the Australian Energy Markets Commission (AEMC) has correctly concluded that the long-term interests of consumers will be best served if the return on debt reflects efficient financing and risk management practices. In QTC's view, a well-designed return on debt approach will achieve greater alignment between the return on debt allowance paid by consumers and the debt costs that would be expected to be incurred by an efficiently financed benchmark NSP. Furthermore, the risks borne by consumers can be significantly reduced by allowing the return on debt to be based on longer-term averages of the corporate cost of debt.
- QTC has proposed a return on debt approach based on a weighted trailing average, which reflects the cost of debt produced by a benchmark portfolio of fixed rate with a staggered maturity profile out to ten years. This will deliver a smoother return on debt over the long term, reduce price volatility, create incentives for efficient debt management practices, and ensure efficient investment signals by compensating new debt at the prevailing cost of debt. This approach is broadly consistent with the debt management strategies used by capital intensive infrastructure firms which operate in competitive markets, and is equally well suited in a regulated context.

## Principles based approach

**Question 1 – Do stakeholders consider that following these principles would promote the allowed rate of return objective? Should any of the principles be considered as more prominent or important than others?**

**Question 2 – Are there other principles or criteria which should be considered?**

QTC supports the inclusion of assessment principles in the guidelines, however some amendments and additions are considered necessary to the proposed principles.

### Comments on the proposed assessment principles

QTC has identified a number of principles that may restrict the AER's ability to adopt a benchmark which is consistent with efficient debt financing strategies. In particular:

- Principles (1)(d) and (3)(a), relating to prevailing market conditions and the use of current data sets, may (unintentionally) restrict the use of trailing averages to determine the return on debt.
- Principle (5)(a), regarding consistent application of a particular approach over time, may imply the use of a single approach for determining the return on debt for all NSPs.
- If considered, the decisions made by other regulators (principle (5)(a)) should be assessed on their merits and against the allowed rate of return objective. Other regulators may not have the same flexibility that is now afforded in the NER regarding the approaches that can be used to determine the benchmark return on debt.
- In regards to principle (5)(c), QTC considers 'avoiding unnecessary complexity' to be a more appropriate way of expressing the objective rather than seeking simple solutions to complex problems. Some level of complexity should be afforded given the materiality of the rate of return decision. A method which is complex but has broad support is more likely to generate stakeholder confidence in the rate of return than a method which is simple but controversial. For example, the current five yearly reset of the cost of debt is simple, but creates significant risks for consumers and NSPs.

The proposed principles do not recognise the relationship between the long-term interests of consumers and the way in which the benchmark return on debt should be determined. In this regard, the AEMC observed that:

*'... the long-term interests of consumers are best served by ensuring that the methodology used to estimate the return on debt reflects, to the extent possible, the efficient financing and risk management practices that might be expected in the absence of regulation.'*<sup>1</sup>

The proposed principles do not recognise the interactions between the way in which the benchmark return on debt is determined and the debt financing strategies that are adopted by NSPs to align their actual cost of debt with the benchmark allowance. The desirability of minimising differences between actual and benchmark debt costs is reflected in clause 6.5.2(k)(1) of the NER.

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<sup>1</sup> AEMC, Final Rule Determination, *Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services*, November 2012, p. 76

Based on these considerations QTC recommends that the principles should provide that:

***‘The return on debt approaches and debt benchmark characteristics are consistent with efficient debt financing and risk management practices.’***

**Question 3 – Do stakeholders have a broad preference for predictability or flexibility, and do these preferences differ at each level (the overall rate of return, the return on equity and debt, and at the parameter level) of the rate of return?**

Regarding the return on debt, corporate finance theory and the appropriate financing practices for long-lived assets do not change materially over time, even though tactical decisions or trends such as de-leveraging and the issuance of shorter-term debt may prevail depending on market conditions. These considerations suggest a preference for predictability over flexibility.

**Question 4 – To what extent should the guideline set out a pre-determined approach that can be applied at each determination?**

The guidelines should contain enough detail to allow a reasonable estimate of the return on equity and the value of the debt benchmark to be made at a point in time. The details of the return on debt approaches that can be used to determine the benchmark return on debt should be clearly set out in the guidelines.

## Key concepts and terms

### Efficient financing costs

Efficient financing costs are those that are incurred as a result of efficient equity and debt financing strategies, employed by firms over time and spanning multiple regulatory periods. In the case of equity, due to the fact that funds are typically committed on an indefinite basis, opportunity cost approaches using prevailing market data may provide an appropriate return. Different considerations arise for debt because financing costs are usually locked in for a fixed period at the time of borrowing, often well in advance of a particular regulatory period.

In QTC’s view, efficient debt financing costs are the costs that would be expected to be incurred by a firm that prudently structures and manages its borrowings and interest rate exposures based on a range of market-based risks and constraints. These costs are the *outcome* from adopting and maintaining efficient debt financing and risk management strategies.

An efficient debt financing and risk management strategy is one that results in a firm’s equity providers being exposed to an acceptable level of refinancing, funding and interest rate risk taking into account the firm’s size, asset life, capital structure and the characteristics of their operating profits. These considerations apply to all leveraged firms regardless of whether they are subject to economic regulation.

For firms with long-lived assets and above-average gearing, an efficient strategy will focus on reducing the probability of financial distress<sup>2</sup>:

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<sup>2</sup> Stulz, R.M. (1996). *Rethinking risk management*, Journal of Applied Corporate Finance, pp.23-24.

*‘[T]he primary goal of risk management is to eliminate the probability of costly lower-tail outcomes—those that would cause financial distress or make a company unable to carry out its investment strategy.’*

While the regulatory framework does not compensate NSPs for inefficient costs, if it compels NSPs to adopt sub-optimal strategies, such as refinancing during a short period or excessive use of shorter term debt, then investment is unlikely to be efficient in the longer-term. For example, an NSP may be unable to undertake efficient investment or operate at an economically efficient level if financial resources are diverted away from new investment and/or core business activities due to adverse financing outcomes. These outcomes may include paying a yield premium to refinance a large debt when credit conditions are tight, using retained earnings to repay a maturing debt if new debt cannot be issued (at the expense of existing equity holders and its share price), or being unable to align the actual cost of debt with the return on debt allowance. In each case, investment will be lower than efficient levels.

Based on these considerations, it is QTC’s view that providing compensation for efficient debt financing costs can be achieved by:

1. determining the characteristics of prudent and efficient debt financing and risk management strategies for a benchmark NSP, and then
2. making the best estimate of the costs that would be incurred to adopt and maintain these strategies over time.

As the cost of capital is a risk-adjusted cost, it is inappropriate to only focus on the level of cost when comparing the outcomes from different financing strategies. For example, although shorter-term debt usually carries a lower interest rate compared to longer-term debt, this does not mean that longer-term debt is inefficient. When used as part of debt portfolio, longer-term debt can reduce risk for consumers by producing a relatively stable cost of debt which is largely insensitive to short-term volatility in the prevailing cost of debt.

**Question 5 – Aside from the balance between debt and equity financing, are there other characteristics of the way in which an efficiently financed entity would approach its financing task that should be considered in estimating the allowed rate of return?**

The strategies used to manage refinancing, funding and interest rate risk should be considered when estimating the benchmark return on debt. These should be informed by analysing the strategies employed by NSPs and firms with similar capital structures, capital intensity and business profile (ie, long-term infrastructure investment).

The extent to which NSPs and similar infrastructure businesses generally seek to issue long-term debt is a particularly relevant characteristic. While this is readily observable across a range of businesses and over the longer term, in certain market conditions businesses will need to deviate from the preferred strategy. Preferred funding strategies should be distinguished from shorter term funding tactics, which are often dictated by temporary market conditions.

## Managing refinancing and funding risk

Refinancing risk is the risk that a borrower is unable to issue new debt to repay a maturing debt, or that new debt can be issued, but not on the preferred terms or at a reasonable interest rate. Funding risk is similar to refinancing risk, but relates to the issuance of new debt to fund capital expenditures rather than to refinance a maturing debt. Adverse funding risk outcomes will impact the capital program, while failure to manage refinancing risk could create liquidity issues. Given the similarities between the causes of these risks, the term ‘refinancing risk’ has been used to describe both risks in this submission.

An efficiently financed entity will seek to manage refinancing risk by:

- maintaining access to multiple sources of debt finance
- issuing new debt early to ensure funds are available to repay maturing debts in full and on time, and
- staggering the maturity dates of its borrowings out to a sufficiently long maximum debt tenor, and refinancing each maturing debt with new long-term debt (on average).

These strategies are discussed in the following sections.

There are other strategies that may be used to manage refinancing risk, which are less efficient than the strategies listed above, although these may be employed at various times in response to market conditions. This could include maintaining large cash balances and other short term liquid investments or raising equity rather than debt (de-levering). Combining these strategies with shorter term debt issuance could limit the increases in refinancing risk associated with illiquid debt markets. Notwithstanding that the observed interest rate on shorter term debt is likely to be lower compared to longer term debt, when combined with the cost of investing excess cash at low returns or the cost of raising equity, the overall cost to the business may well be higher than the normal strategy.

The extent to which firms need to employ the strategies outlined above will depend on a number of factors, including their size. Firms which are relatively small may have access to adequate debt funding from banks at an acceptable level of refinancing risk, and may not have sufficient presence to access international debt markets. However, most NSPs are sufficiently large that bank funding would represent only a portion of their overall debt, with greater reliance on domestic and international capital markets.

### **Multiple sources of debt finance**

An efficiently financed entity would maintain access to a range of debt instruments such as bank and capital market debt, and to the domestic and offshore markets. Having access to domestic and offshore debt markets would reduce the risk of the entity being unable to issue new debt if the availability of credit in a particular market was constrained.

### **Early issuance of new debt**

Issuing debt and investing the proceeds in a low-risk asset until required is a prudent and efficient strategy to manage refinancing risk. This practice ensures that funds will be available to repay a maturing debt on time and to fund new investments when required. The cost associated with this practice is the difference between the interest paid on the newly issued debt and the interest received on the low-risk short-term investment.

Appendix A provides evidence of the use of this practice by a range of borrowers including regulated utilities.

Failing to repay a debt on the scheduled maturity date can have serious consequences for a borrower. Unless an extension can be obtained a failure to pay will constitute a default, which may see the borrower's assets taken over by its creditors. Even if an extension can be obtained, the borrower's reputation is likely to be damaged, which may jeopardise their ability to issue debt in the future. At a minimum, the borrower can expect to pay a higher yield margin on any future borrowings and for their credit rating to be downgraded.

### **Staggered debt maturity profile**

In QTC's view, maintaining a staggered debt maturity profile out to a sufficiently long maximum debt tenor is an essential feature of a prudent and efficient strategy to manage refinancing risk.

As it is not possible for a levered firm to completely eliminate refinancing risk, it is important for the firm to structure its borrowings to keep its exposure to adverse refinancing outcomes at a sufficiently low level. A reasonable estimate of a firm's refinancing risk exposure is the percentage of total debt that matures each year, and in particular the percentage that matures within the next twelve months.

Subject to market-based constraints, the level of exposure can be determined by maintaining an equally spaced debt maturity profile out to a maximum debt tenor such that a relatively small percentage of the total debt matures each year<sup>3</sup>. For example, an equally spaced maturity profile out to ten years will result in ten per cent of the total debt maturing each year. To maintain this profile, and a constant refinancing risk exposure, each maturing debt must be refinanced with new ten-year debt. Over time, the average interest rate on the portfolio will equal a ten year trailing average of the ten-year total corporate cost of debt.

It follows that a firm's refinancing risk exposure is directly related to the average tenor of debt that is issued to refinance each maturing debt.

#### *Debt maturity profiles maintained by regulated utilities*

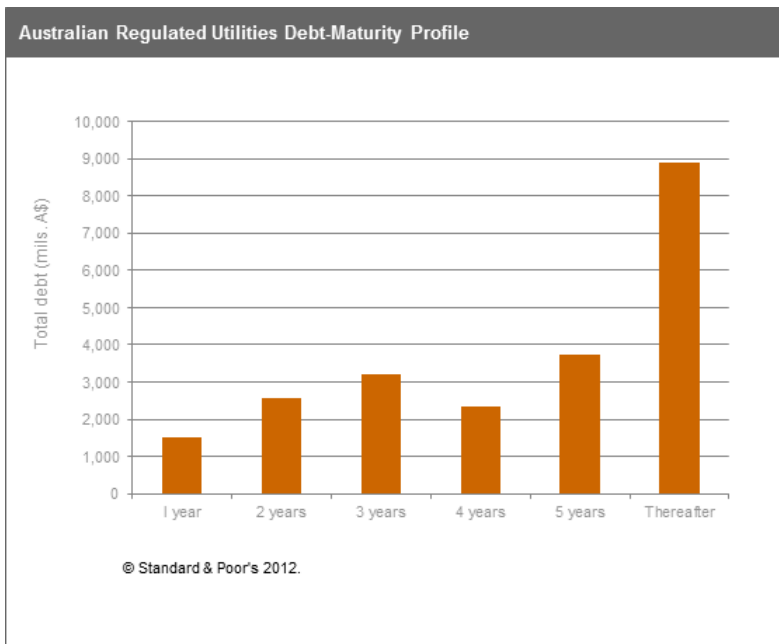
Regulated utilities have displayed a preference to refinance maturing debts with longer term (eg, ten year) debt. This is consistent with keeping exposure to refinancing risk at a relatively low level when relatively high debt levels are used to fund assets with very long economic lives.

The issuance of mostly shorter-term debt between 2008 and 2010 was largely due to market conditions and a general reluctance by lenders to provide new debt finance for tenors longer than five years. Despite this period of shorter-term issuance, the debt maturity profile for Australian utilities remains well spaced across a wide range of tenors:

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<sup>3</sup> Assuming equal borrowing amounts for each tenor, the general relationship between the percentage of debt maturing each year and the debt issue tenor is:

$$\% \text{ maturing per annum} = \frac{100\%}{\text{maximum debt issue tenor}}$$



*Source: Standard & Poors – Industry Report Card: Australian and New Zealand Network Utilities Maintain Stable Credit Quality, November 14 2012*

It is worth noting that the current return on debt approach does not incentivise NSPs to adopt staggered maturity profiles. By fully resetting the return on debt every five years, the current approach assumes that an NSP's debt is fully refinanced during each 10 to 40 day averaging period. This implies that all existing debt matures over 10 to 40 *consecutive* days. That NSPs choose to maintain staggered maturity profiles despite the lack of regulatory incentives to do so is a strong indication of the prudence and efficiency of this practice.

#### *Debt maturity profiles maintained by unregulated businesses*

Further evidence of the efficiency of this practice can be found by examining the debt maturity profiles of borrowers that are not subject to economic regulation. Although the business risk profiles of some of these borrowers may differ from a regulated NSP, both groups are exposed to a common risk of having to refinance maturing debt or fund new investment when credit market conditions are unfavourable.

Appendix B displays the debt maturity profiles for a range of businesses. The businesses most closely related to an NSP are those with long-lived infrastructure assets such as the Sydney Airport Corporation, Brisbane Airport Corporation, Telstra and Transurban. The maturity profiles for these businesses are well-spaced and extend out to at least ten years. As at 30 June 2012, the average remaining debt tenor for these businesses was 7.1 years, which is consistent with an average debt issue tenor in excess of 10 years.

### Managing interest rate risk

Interest rate risk is the risk of a firm's debt servicing costs not being aligned with its operating profits. The net cash flows to the equity providers will be more volatile if debt servicing costs are relatively high (low) when operating profits are relatively low (high).

It is reasonable to expect an NSP to seek to align its total cost of debt with the benchmark allowance, and this is reflected in clause 6.5.2(k)(1) of the NER. However, it would not be rational to engage in practices to match actual and benchmark costs if doing so created



exposures to more significant risks such as refinancing risk. The way in which this trade-off is managed can be observed by the debt financing and risk management strategies used by NSPs.

Under the current approach, aligning the actual and benchmark debt risk premium component of the cost of debt requires an NSP's debt to fully mature during each 10 to 40 day averaging period. In practice, NSPs do not adopt this type of maturity profile because doing so would expose them to an unacceptably high level of refinancing risk.

A similar problem arises for some NSPs when seeking to align the base interest rate component of the cost of debt as it is currently determined. For NSPs with large debt portfolios, attempting to transact a large volume of interest rate swaps with the same tenor over 10 to 40 consecutive days will create exposures to new risks, such as opportunistic pricing by other market participants and the risk of incurring large transaction costs due to insufficient market liquidity.

As there is no way of reliably estimating the potential impact of these risks, it is prudent and efficient practice for large NSPs to progressively re-price their base interest rate over a much longer period of time.

In both cases the NSPs are exposed to an uncompensated mismatch between their actual and benchmark debt costs, despite adopting a prudent and efficient risk management strategy.

**Question 6 – Is it still appropriate to separate a conceptual benchmark from its practical implementation?**

QTC considers that it is appropriate to have a separate conceptual benchmark. This allows evidence to be drawn from sources that do not perfectly match the benchmark, while being transparent as to why that evidence is considered relevant and why adjustments need to be made to align it to the benchmark. For example, QTC considers that efficient debt financing strategies for the benchmark NSP should be informed by the strategies employed by non-regulated infrastructure businesses, on the basis that these are also capital intensive, highly-g geared owners of long-term assets.

## Benchmark efficient entity

**Question 7 – Does the current definition reflect an appropriate level of detail for the conceptual definition? Are there other factors which should be considered?**

**Question 8 – In relation to the current definition of the conceptual benchmark, is more or less detail preferable?**

As discussed above, the current definition allows for evidence to be used from firms that are similar to the benchmark entity, provided this is done in a transparent way.

QTC does not recommend changing the reference to 'without parent ownership'. The benefits of parent ownership on a subsidiary is a 'zero sum' relationship, in that lower debt funding costs are based on the parent effectively assuming part of the credit risk of its subsidiary. This requires that the parent company has a lower level of debt (ie, excess debt capacity), so that on a consolidated basis the overall credit exposure is within reasonable levels. In addition, there is

a risk that removing these words may impose a particular industry structure if firms without parent support are unable to recover their costs.

Implicit in the concept of a benchmark efficient entity is that it will operate in an economically efficient manner in relation to its financing arrangements. The efficient debt financing and risk management practices outlined in our response to Question 5 are considered to be relevant factors when defining a benchmark efficient entity. QTC has suggested in our response to Question 2 that efficient financing practices could be recognised as part of the principles; however, an alternative would be to confirm that the benchmark efficient entity would undertake financing and risk management practices.

## The practical implementation

### **Question 9 – Are the proposed factors reasonable?**

### **Question 10 - Are there other factors which should be considered?**

The use of a broader sample of data is reasonable provided the analysis does not introduce further qualifications to the definition of a benchmark entity. For example, there may be different efficient debt financing practices for small, medium and large firms, which arise because of the relative size of each firm to the debt capital markets. If the average or median firm is used, the financing practices of the medium firm may be deemed efficient, and the small and large firms could be disadvantaged. For example, if it is assumed that the benchmark firm can hedge the base interest rate during the 10 to 40 day averaging period, then large firms that cannot do this are disadvantaged because of their size. The better approach would be to recognise that there are different efficient financing practices for firms of different sizes.

QTC supports the use of larger samples to estimate the value of the debt benchmark, including the use of a wider range of credit ratings, debt tenors and data from offshore debt issues to estimate the value of the debt benchmark at a point in time.

The use of observed market practices should apply to regulated and unregulated firms. If certain practices are common to both groups of firms, this provides strong evidence of the prudence and efficiency of those practices. If certain practices are only observed among regulated firms, this may indicate the presence of a regulatory distortion that regulated firms are rationally responding to.

## Similar degree of risk

### **Question 11 – Are there characteristics that differentiate the level of risk in the gas and electricity sectors, or between distribution and transmission networks?**

We do not offer any views on this matter.

**Question 12 – Are there other characteristics that should be taken into account when assessing the level of risk?**

The size of the NSP's funding task (as measured by the regulated asset base (RAB)) should be taken into account, as it affects the risk management strategies that are available to NSPs with large debt portfolios.

The base interest rate hedging strategy that is currently assumed to be applied by the benchmark firm is not feasible for NSPs with large debt portfolios. By implication, the current benchmark firm is effectively defined by reference to the smaller listed NSPs, and the larger NSPs are required to bear a higher and uncompensated level of interest rate mismatch risk because of their inability to follow the implied strategy.

The consideration of size as a relevant characteristic does not mean that larger NSPs would be exposed to less risk under the regulatory framework compared to smaller NSPs. By explicitly taking size into account it should be possible for the design of the return on debt approaches to allow all NSPs to achieve the same outcome of using a prudent and efficient debt financing and risk management strategy to align their actual debt costs with the benchmark return on debt. This will ensure that all NSPs are exposed to similar levels of interest rate risk irrespective of the size of their debt portfolios.

**Question 13 - To the extent that different risk levels exist, can these differences be estimated in a manner consistent with the regulatory principles outlined in section 2?**

Consistent with our response to question 12, differences in risk levels which relate to debt management strategies available to firms of different size should be addressed by providing benchmarks that are consistent with the efficient debt funding practices for firms of different size.

## Overall rate of return

**Question 14 – To date our practice has been to estimate the allowed rate of return based on the standard WACC formula. Should we continue with this, or if not, what alternative approaches should be explored?**

**Question 15 – How can the overall rate of return considerations be used under the new rule framework? This may include consideration of the relevance of the methodologies identified above (or others not yet identified), and how such information could be used.**

The standard approach to calculating the weighted average cost of capital (WACC) should continue to be used. That is, the best estimates of the return on equity and return on debt should be made, with these estimates being combined to arrive at the WACC. Provided the best estimate of the individual WACC parameters has been made, there should be no need to make a subsequent adjustment to the weighted average of these estimates.

The requirement that the AER consider a range of estimation methods, financial models, market data and other evidence should allow sufficient reasonableness checks to be performed when estimating the individual components of the WACC. For example, the output from a particular return on equity model can be compared to outputs from alternative models, estimation approaches and market evidence.

Once the individual components have been estimated, an effective way of assessing the reasonableness of the final WACC estimate is by examining the size of the margin between the return on equity and the value of the debt benchmark (rather than the return on debt, which may be based on a longer-term trailing average).

**Question 16 – Are the assessment criteria presented in section 3.1 an appropriate basis for evaluating the cost of equity methodology in order to meet the allowed rate of return objective?**

The principles in section 3.1 of the Issues Paper may be appropriate to evaluate the cost of equity methodology. However, greater weight should be given to the first three principles.

**Question 17 – What overall cost of equity methodology best meets the allowed rate of return objective?**

A range of models should be used in the estimation process, and the outputs should be checked against other evidence regarding the prevailing cost of equity in the market. This could include valuation models that are based on current market prices and the cost of capital assumptions used in practice by valuation experts.

The cost of equity methodology should accommodate the fact that risk premiums vary over time. Observable risk premiums such as credit spreads tend to increase when investor risk aversion increases, and the same behaviour should be expected in risk premiums such as the market risk premium that are not readily observable.

**Question 18 – What individual cost of equity model best meets the allowed rate of return objective?**

No individual model can be consistently relied upon in isolation to produce the best estimate of the return on equity and a range of models should be used.

**Question 19 – What other evidence (estimation methods, financial models, market data and other estimates) is relevant to the determination of the cost of equity?**

Any evidence or data that provides information on the current price of risk, which is dependent on the level of investor risk aversion, is relevant when determining a cost of equity that reflects prevailing market conditions.

A comparison of observable risk premiums such as corporate credit spreads with their long-term averages may provide useful information as to whether the current market price of risk can be estimated using historical data. Similarly, the yield margin between assets with the same

level of credit risk but different levels of liquidity may be useful to determine whether current liquidity premiums are at normal or elevated levels.

The level of the risk-free yield curve may provide further information on the level of investor risk aversion at a point in time. As investors tend to allocate a greater proportion of their wealth to risk-free assets during periods of crisis and heightened uncertainty, the behaviour of the risk-free yield curve can be a useful barometer to gauge the level of risk aversion.

## Return on debt

Following an extensive consultation process, the AEMC reached a number of important conclusions on how the benchmark return on debt should be determined. In particular<sup>4</sup>:

- to serve the long-term interests of consumers, the approach for determining the return on debt should reflect the efficient financing and risk management practices that might be expected in the absence of regulation, and
- the return on debt should create incentives for NSPs to adopt efficient financing practices.

These conclusions highlight the importance of identifying the characteristics of efficient debt financing and risk management practices for a benchmark NSP *before* the return on debt approaches are developed. Furthermore, these practices should not be constrained by factors that are unique to the regulatory framework.

### Considerations when developing return on debt approaches

The new rules for calculating the return on debt recognise the following:

- any approach implies the use of a particular debt financing and risk management strategy (or strategies)
- the debt financing strategy implied by a particular approach may be inefficient from a risk management perspective for some NSPs
- an efficient firm will adapt its risk management strategies to reduce interest rate risk to an acceptable level, and
- if the chosen approach promotes the use of inefficient strategies, over the long term investment will be inefficient and consumers will be negatively affected.

In particular, clause 6.5.2(k)(1) recognises that NSPs should have the opportunity to align their actual debt costs with the benchmark allowance by adopting prudent and efficient debt financing and risk management strategies. Chapter 7 of the Issues Paper identifies the financing strategy implied by the current ‘on the day’ approach, and the risks inherent in this strategy.

QTC agrees with the views in the Issues Paper that developing benchmarks for efficient and prudent financing practices should not ‘seek to cover every conceivable actual debt funding arrangement currently in use, or potentially available in the future’.<sup>5</sup> At the same time, it is unlikely that a single approach could be devised which would cover all circumstances, which was the same conclusion reached by the AEMC:

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<sup>4</sup> AEMC, Final Rule Determination p. 73 and p.76

<sup>5</sup> AER, Rate of Return Guidelines Issues Paper, December 2012, p. 31

*It should remain open to the regulator and service providers to consider that different sectors and different kinds of service providers have different risk characteristics that lead to different characteristics for efficient debt financing. The Commission therefore agrees that a one-size-fits-all approach to setting a benchmark should not be considered a default position.’<sup>6</sup>*

*‘The Commission intends that the regulator could adopt more than one approach to estimating the return on debt having regard to different risk characteristics of benchmark efficient service providers.’<sup>7</sup>*

These views are reflected in clause 6.5.2(j) of NER, which outlines three broad return on debt approaches that can be considered by the AER:

1. the prevailing cost of funds approach
2. an historical trailing average approach, and
3. some combination of these two approaches.

QTC considers that the development of the rate of return guidelines should focus on identifying a broad benchmark return on debt approach (such as a portfolio approach) that is flexible enough to accommodate the specific risks faced by NSPs while still being consistent with the allowed rate of return objective and the broader objectives of incentive-based regulation.

#### Financing practices implied by the current approach

The Issues Paper outlines two financing practices that are considered to be consistent with the current approach for calculating the benchmark return on debt<sup>8</sup>:

1. Firms re-finance the entirety of the debt funded component of their asset base during the averaging period.
2. Firms engage in some other financing practice (such as holding a portfolio of different debt instruments and staggering the refinancing of their debt over time), but enter into hedging arrangements to replicate a borrowing cost structure as if they did refinance their asset base during the averaging period.

Regarding the second option, there are no hedging instruments that can be used to convert the debt risk premium on a portfolio with staggered maturity dates into a debt risk premium that is fixed for the term of the regulatory period. In practice, this makes it impossible to use a debt portfolio to create a cost structure which exactly matches the outcome that would have occurred if the debt was fully refinanced during the averaging period.

The inability to align actual and benchmark debt risk premiums is not trivial. Since 2007 the volatility of the prevailing debt risk premium has risen significantly. In addition, the debt risk premium now makes up approximately 50 per cent of the ten year fixed BBB+ cost of debt compared to less than 20 per cent prior to 2007.

As a consequence, the current return on debt approach is only consistent with the first financing practice outlined in the Issues Paper. Even if some NSPs can adopt the second

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<sup>6</sup> AEMC, Final Rule Determination, p. 86

<sup>7</sup> AEMC, Final Rule Determination, p. 90

<sup>8</sup> AER, Rate of Return Guidelines Issues Paper, p. 31

financing practice, a significant proportion of the actual cost of debt cannot be aligned with the benchmark return on debt as it is currently determined.

### Use of a portfolio approach

QTC supports the use of a benchmark portfolio approach that assumes the staggered issuance of debt and produces a benchmark return on debt that equals a weighted trailing average of the total corporate cost of debt. For the reasons discussed in our response to Question 5, QTC considers this type of portfolio to be consistent with how a firm with stable revenues and long-lived assets would manage its refinancing and interest rate risk exposures in the absence of regulatory constraints.

There may be other portfolio approaches that may be appropriate benchmarks for some NSPs, taking into account their different risk characteristics, and these should be outlined in the guidelines.

The second and third approaches in clause 6.5.2(j) are both portfolio approaches, with the main difference being how the components of the return of debt may be determined. A portfolio of fixed-rate debt with staggered maturity dates is consistent with the second approach. Combining a portfolio of floating-rate debt with staggered maturity dates and an interest rate swap overlay is consistent with the third approach (and the second financing practice outlined in the Issues Paper).

While QTC agrees with the use of a portfolio approach to determine the benchmark return on debt, this should not be restricted to the approach implied by the second financing practice outlined in the Issues Paper. In QTC's view, it would be inappropriate for the guidelines to rule out other approaches which are consistent with one of the options listed in the NER, given that the second option in the Issues Paper cannot be implemented by larger NSPs.

The following sections set out QTC's views on the use of portfolio approaches/trailing averages, which attempt to reconcile the AEMC's view that different approaches may be required based on the NSP's risks, and the concerns raised in the Issues Paper that benchmarks should not attempt to cover all financing practices.

### Relationship between portfolio approaches and trailing averages

The cost of debt produced by a benchmark debt portfolio with evenly spaced maturity dates out to the benchmark debt tenor can be 'replicated' by a properly designed trailing average of the corporate cost of debt. The process of regularly refinancing a maturing debt (which represents a percentage of the total debt) with new debt at the prevailing rate is the same as a trailing average calculation where the oldest rate in the sample is regularly replaced with a new rate equal to the prevailing rate.

For example, a ten year trailing average of the ten-year corporate interest rate (calculated annually) will replicate the cost of debt produced by a benchmark debt portfolio with annually spaced maturity dates from one to ten years.

### *Assessing the suitability of specific trailing averages*

QTC has analysed a number of trailing average approaches to assess their suitability as a benchmark for the return on debt, based on three criteria:

1. whether the outcomes of the trailing average could be closely approximated in practice by a debt management strategy (or strategies)
2. whether the resulting strategy (or strategies) is consistent with prudent and efficient risk management practices, and
3. the level of variation in the return on debt when measured across multiple regulatory control periods.

The first two criteria reflect the requirement in clause 6.5.2(k)(i) of the NER, which was explained in these terms by the AEMC:

*The Commission intends that there is consideration of the extent to which the methodology used is commensurate with the financing and hedging strategy of the benchmark efficient service provider. This means that there should be consideration of the extent to which the methodology matches the funding costs expected to be incurred by a benchmark efficient service provider over the regulatory period, having regard to the debt arrangements the benchmark efficient service provider is likely to already have in place. This matching is based on the benchmark efficient service provider but, this benchmark could vary with the nature of regulated entities and their efficient funding and hedging strategies. Further, the length of any proposed averaging period would need to be considered alongside the benchmark service provider's borrowing profile.'*<sup>9</sup>

The third criteria recognises the importance of not exposing consumers to unnecessary volatility in the cost of debt parameters.

The suitability of any benchmark return on debt approach depends on the ability of NSPs to achieve an actual cost of debt which is a sufficiently close approximation of the benchmark return on debt, assuming that they choose to follow the benchmark. For example, a trailing average of the ten-year cost of debt based on quarterly observations can still be approximated if the NSP's debts mature less frequently, provided the average tenor of debt used to refinance the maturing debts is close to ten years.

### *Trailing averages that can be replicated in practice*

Based on QTC's analysis, there are two types of trailing averages that can be replicated in practice with a prudent and efficient debt financing and risk management strategy<sup>10</sup>:

1. a trailing average of the total cost of debt (base rate and debt risk premium) which updates annually and is weighted based on the debt profile of the NSP, and
2. a trailing average of the debt risk premium combined with the prevailing base rate at the time of the determination, where the debt risk premium updates annually and is weighted based on the benchmark debt profile of the NSP.

The return on debt produced by the first trailing average can be approximated with a portfolio of fixed-rate debt with equally spaced maturity dates out to the benchmark debt tenor. In practice, the actual debt issuance may be irregular and the tenor may be determined by market conditions, such as pricing, illiquidity or opportunities to issue longer-term debt overseas.

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<sup>9</sup> AEMC, Draft Rule Determination, *Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services*, August 2012, p. 92

<sup>10</sup> For both approaches, the averaging period must be equal to the benchmark debt tenor.



However, differences in timing and tenor of issues should not result in significant differences between the NSP's actual costs and the benchmark return on debt.

The return on debt produced by the second trailing average can be approximated with a portfolio of floating rate debt with staggered maturity dates out to the benchmark debt tenor and an interest rate swap that locks in a fixed base rate for the term of the regulatory period. Similar to the first approach, the actual debt issuance may be irregular and the individual debt issue tenors may vary from the benchmark tenor, but this should not create a significant difference between actual and benchmark debt costs.

Assuming a ten year averaging period, the first trailing average will produce a more stable benchmark return on debt compared to the second trailing average. By only averaging the debt risk premium, the second trailing average is affected by the level of base rate during a short averaging period prior to the start of each regulatory period.

In practice, it is likely that most NSPs could adopt and maintain one of these implied portfolio approaches.

#### *Trailing averages that cannot be replicated in practice*

There are particular trailing averages that cannot be replicated in practice. These include:

- a lagged trailing average where the return on debt is not updated annually during the regulatory period, and
- a trailing average which is not weighted based on the benchmark debt profile.

Calculating the average cost of debt over the five or ten years prior to the start of each regulatory period and locking this value in for the five year term of the regulatory period assumes that:

- all refinancings performed over the next five years can be transacted at the lagged trailing average rate, and
- all increases in the debt balance over the next five years can also be funded at the lagged trailing average rate.

In practice, these transactions can only be performed at the prevailing cost of debt during the regulatory period. For a debt portfolio with staggered maturity dates out to ten years, approximately 50 per cent of the existing debt will be refinanced during each five year regulatory period. Compensating these transactions based on the lagged trailing average rate has the potential to create significant mismatches between actual and benchmark debt costs, which is contrary to clause 6.5.2(k)(1) of the NER.

Compensating increases in the debt balance based on the lagged trailing average will add to the potential mismatch between actual and benchmark debt costs. This may result in investment distortions if the prevailing cost of debt differs from the lagged trailing average.

Similarly, an unweighted trailing average cannot be replicated by an NSP that expects its debt balance to change over the regulatory period, even if the trailing average is updated during the regulatory period. Under an unweighted (or simple) trailing average, new debt is assumed to be raised at the average rate over the preceding ten years, rather than at the prevailing cost of debt. This may also result in investment distortions if the prevailing cost of debt differs from the unweighted trailing average.

The potential for investment distortions should be considered in the context of clause 6.5.2(k)(3) of the NER.

#### *Conclusion on trailing average approaches*

A useful test of the suitability of a trailing average approach (or any other approach) is whether the implied debt management strategy is prudent, efficient and capable of being implemented in practice. Some approaches will fail this test, and it is likely that other approaches can only be replicated by some NSPs. This suggests that a single trailing average should not be mandated in the guidelines, which is consistent with the conclusions reached by the AEMC.

#### **Question 20 – What are the advantages and disadvantages of portfolio approaches compared with the current “on the day” approach to the return on debt?**

The responses to Questions 20 through 22 are based on implementing the return on debt approach put forward by QTC in the AEMC process, which is described in Appendix C. Other portfolio approaches may produce some or all of these benefits, provided these comply with the criteria discussed above. An inappropriately specified portfolio approach may not achieve these benefits and may even increase costs and risks for consumers and NSPs.

#### **A portfolio approach reduces risk for consumers**

A portfolio approach based on fixed-rate debt and evenly spaced maturity dates out to ten years will produce a return on debt which is largely protected from short-term volatility in the prevailing cost of debt. Provided that each maturing debt is refinanced with new ten-year debt, only ten per cent of the total debt will be repriced each year.

In contrast, the current approach exposes consumers to large ‘step’ changes in the return on debt every five years as the entire debt balance is repriced using the prevailing cost of debt during an arbitrary 10 to 40 day averaging period. Other approaches, such as combining a portfolio of floating-rate debt with a single interest rate swap overlay, may also reduce risk for consumers compared to the current approach, but not to the same extent as a portfolio of fixed-rate debt.

QTC notes that the protection against short-term volatility in the cost of debt achieved by a portfolio of fixed rate debt with evenly spaced maturity dates out to ten years does not involve an increase in the long-term average return on debt compared to the current approach.

#### **A portfolio approach reduces the potential for windfall gains and losses**

The debt financing strategy implied by the current approach cannot be implemented in practice by the majority of NSPs. As a consequence, the actual strategies adopted by NSPs will typically produce a cost of debt which differs from the current benchmark return on debt. These differences represent windfall gains or losses because they are not due to active decisions made by the NSP in attempting to outperform the benchmark.

If the actual cost is lower than the benchmark, consumers will pay too high a price for the provision of network services. If the actual cost exceeds the benchmark, NSPs may be forced to reduce or delay expenditure to recover the shortfall. Neither outcome is consistent with the National Electricity Objective (NEO) or the allowed rate of return objective.

A portfolio approach will reduce the potential for windfall gains and losses as it is aligned with the efficient debt financing strategies that can be implemented in practice by NSPs.

### A portfolio approach is consistent with incentive-based regulation

Consistent with the previous point, a correctly specified portfolio approach would be based on a benchmark debt profile that could be broadly replicated in practice. Differences between actual and benchmark debt costs would be largely attributable to active decisions made by the NSP in attempting to outperform the benchmark. Some differences may also occur due to temporary market-imposed constraints such as a reduction in the availability of long-term debt.

Under the current approach, luck plays a large role in determining whether an efficiently financed NSP out- or under-performs the benchmark return on debt allowance. This implies that the current approach is an inappropriate benchmark for most NSPs. To use an investment management analogy, the current approach is equivalent to using a small-cap stock index as the performance benchmark for a portfolio manager who is restricted to investing in large-cap stocks. Differences between actual and benchmark performance will not necessarily reflect the quality of the portfolio manager's stock selection decisions.

### A portfolio approach can reduce the potential for investment distortions

Under the current approach, the debt funded portion of any new investment made during the regulatory period is compensated based on the benchmark return on debt determined at the start of the regulatory period. This creates the potential for investment distortions if the prevailing cost of debt differs from the benchmark return on debt, which may have been determined several years prior.

Under a portfolio approach, maturing debts are regularly refinanced at the prevailing cost of debt. Borrowings to fund capital expenditure can be combined with a refinancing transaction to ensure the new investment is also compensated at prevailing rather than historical rates. This reduces the potential for investment distortions compared to the current approach.<sup>11</sup>

### A portfolio approach is likely to produce an efficient cost of debt

It is QTC's view that efficient debt financing costs are the costs produced by implementing and maintaining prudent and efficient debt financing and risk management strategies<sup>12</sup>. The widespread use of debt portfolios in practice by a diverse range of borrowers (both regulated and unregulated) is evidence of the prudence and efficiency of this practice.

In contrast, a benchmark return on debt that is fully reset every five years, or at any other frequency, implies the use of an inefficient strategy for most NSPs that, by definition, cannot be expected to produce an efficient cost of debt.

### Other considerations

Although a portfolio approach will deliver significant improvements and benefits for consumers and NSPs, there are some additional issues that should be considered.

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<sup>11</sup> IPART considered the QTC moving average approach in their December 2012 'Review of method for determining the WACC', and noted that their key concern was the potential for investment distortions. However, this analysis does not appear to have considered the proposal that new debt is incorporated at prevailing rates in the QTC model.

<sup>12</sup> This still requires unbiased estimates of the value of the debt benchmark to be made.

### *Increased calculation complexity and the weighting of new debt*

The calculations required to determine the return on debt produced by a benchmark debt portfolio are more involved than the current approach. However, the calculations are not overly complicated and can be easily performed in a spreadsheet without relying on the use of complex formulas or macros. QTC has developed spreadsheet-based models that illustrate the portfolio approach using both annual and quarterly calculations.

To apply the weighted trailing average that has been put forward by QTC, a choice must be made as to what weight is applied to new borrowings. There are three main approaches.

1. use the actual new debt issued as a proportion of total actual debt on issue
2. use the debt values in the PTRM based on the final determination, or
3. use the actual increase in RAB, multiplied by the benchmark debt to capital, as a proportion of the benchmark debt (eg, 60 per cent of RAB).

The preferred approach should be based on minimising investment distortions.

The first approach is arguably not a benchmark approach, because the return on debt is driven by the NSP's choice of funding (ie, new debt, new equity or retained earnings). The second approach is the opposite, as it is based on values set out in the determination and does not reflect the actual expenditure. The third approach is based on actual expenditure, but retains the benchmark funding level (ie, it is indifferent as to the actual source of funding used).

Under the second approach, the return on debt is based on forecast expenditure and therefore will differ from the costs of the benchmark efficient firm where expenditure is higher or lower than forecast. An advantage of the third approach is that, if the efficient level of expenditure turns out to be different from the forecast in the revenue determination, the weighted average cost of debt will reflect the actual expenditure.

The potential for investment distortions needs to be considered on the basis that a firm has no foresight over future movements in interest rates. It is sometimes claimed that the trailing average (especially, if it is based on the PTRM forecasts) may result in firms reducing expenditure when interest rates are high, thus having a higher return on debt allowed without incurring the high interest rates associated with borrowing. However, this assumes that firms can predict the way interest rates will move in the future, and that capex will proceed *after* rates have fallen. In practice, NSPs are no more or less likely to correctly predict future interest rates than any other borrower; delaying capex when interest rates are high runs the risk of rates subsequently rising and funding costs thereby exceeding the return on debt allowance. In this regard, the Independent Pricing and Regulatory Tribunal (IPART) recently noted that:

*While economic theory assumes nominal interest rates are in the long run mean reverting, empirical evidence is inconclusive. Recent research on long-term bond yields in a range of countries indicates that they can persistently deviate from their average values and statistical evidence of mean reversion is not strong.'*<sup>13</sup>

When interest rate uncertainty is appropriately taken into account, the potential for investment distortions under the second approach is the same as the third approach. One advantage of the second approach is that it avoids the need to calculate the RAB on an annual basis. There

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<sup>13</sup> IPART, *Review of method for determining the WACC*, December 2012, p. 33

could be a fourth approach, which uses the PTRM figures during the period, but adjusts the rates based on actual RAB, similar to the Roll Forward Model approach.

#### *More frequent measurement of the return on debt*

A portfolio approach will require the AER to estimate the value of the debt benchmark during each regulatory period. For example, the QTC return on debt proposal assumes a quarterly refinancing profile, requiring quarterly estimates of the debt benchmark.

Annually updating the return on debt raises a number of issues that are not present under the current approach, where the return on debt is specified in the determination. The AEMC recognised that:

*'The formula for calculating the updated return on debt must be specified in the regulatory determination or access arrangement and must be capable of applying automatically.'*<sup>14</sup>

Considerations that arise where the return on debt changes during the regulatory period include whether:

1. the requirement effectively precludes the use of particular measurement methods or data sources
2. an approach can be designed that can withstand future changes, for example the discontinuation of a particular data source, and
3. it is possible to specify a method in the determination that can apply automatically.

Estimating the value of the debt benchmark more frequently does not preclude the use of particular sources. The Economic Regulation Authority (ERA) advised in its response to the AEMC's draft rule determination that it did not consider that the draft rule precluded the use of a bond sample.<sup>15</sup> The process may be more complex for a small or narrow bond sample, because the determination may wish to specify that particular types of bonds are excluded (such as callable bonds), however it is clearly achievable in practice.

Although more frequent estimation of the debt benchmark is suited to the use of published data sources such as Bloomberg, a broad sample-based approach such as the approach developed by the Competition Economists Group (CEG) could also be used<sup>16</sup>. In contrast to smaller 'bespoke' samples, where the final estimate is sensitive to the debt issues included or excluded, the CEG approach draws on a much wider range of domestic and offshore debt issues with different tenors and credit ratings. Depending on the selection criteria used, this approach can be implemented using samples comprised of several hundred debt issues.

More frequent estimation of the debt benchmark does involve the risk that the measurement source(s) may be discontinued. For example, Bloomberg may decide to cease publication of particular fair value yield curve maturities. This risk can be mitigated by using more than one measurement source (such as the CEG approach), or by leaving scope to agree a substitute measurement source in the event that the sources agreed in the determination no longer exist. As the AER will continue to issue guidelines every three years, and will continue to regularly issue determinations for electricity and gas networks, it is likely that analysis that considers current return on debt measurement issues will be available.

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<sup>14</sup> AEMC, Final Rule Determination, page 91

<sup>15</sup> Economic Regulation Authority, Draft Rule Determination submission, 4 October 2012, p. 6

<sup>16</sup> CEG, *Estimating the regulatory debt risk premium for Victorian gas businesses*, March 2012

By way of example, a determination could specify the characteristics of the debt benchmark (tenor, credit rating etc) as well as the measurement sources, eg, 'Bloomberg 7-year BBB Fair Value Curve plus  $x$  basis points'. This approach could clearly be applied automatically each year. Alternatively, the determination could specify 'the average yield on the ten year point of a yield curve constructed using the CEG approach and including all Australian corporate bonds with a minimum remaining tenor of one year and a credit rating between A and BBB-'. In this case, the AER would need to take the yield data from individual bonds and calculate the yield curve, which involves more steps than Bloomberg observations, but is still 'automatic'.

Another potential issue that has been raised is the administrative cost of annually indexing the ten-year average.<sup>17</sup> Provided this is a mechanical exercise, as required under the NER, the cost of administration should not be significant, and the administration could be incorporated as part of the annual pricing update for each NSP. More importantly, there are significant benefits for consumers in terms of reduced volatility in the return on debt and for NSPs in terms of improved interest rate and refinancing risk management, which in QTC's view outweigh the administrative costs (which are not listed as a relevant factor in clause 6.5.2(h)).

#### *Ability to seek review of decisions*

Under the current approach, the method used to measure the return on debt and the result from applying that method are set out in the determination, and the outcome may be the subject of merits review. Under a portfolio approach, the method would be specified in the determination but, except for the first year, the results would not be known until subsequent annual updates.

In both cases, the method chosen must produce a reasonable estimate of the return on debt at the time of making the determination. If the method does not comply with the NER based on available information at the time of the determination, it should be reviewable, whether the result is also known at that time or not.

The current approach does not allow the method or the result to be reviewed during the regulatory period if it is no longer considered an appropriate measure of the cost of debt (ie, because the rate is set at the start of the regulatory period).

Under a trailing average approach, there may be situations where the method may need to be reviewed during the regulatory period. This may occur where the measurement sources are no longer available or suitable for the task, or there are concerns over whether the method specified determination is being followed in the annual updates. The likelihood of any reviews occurring could be minimised if the methodology and its application are clearly spelt out in the determination, and if there is a mechanism to deal with changes in circumstances.

#### *Trading issues around the measurement date*

QTC's return on debt proposal is based on quarterly maturity dates out to a ten year-tenor. The issue has been raised that specifying a common measurement date across the industry may create in another form the repricing risks associated with the current approach.

In practice, there is no requirement for an NSP to enter into quarterly transactions to produce a close match between the actual cost of debt and the benchmark return on debt. A single ten-

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<sup>17</sup> IPART, *Review of method for determining the WACC*, December 2012, p. 40

year fixed rate debt issue per year will still produce a reasonably close match with a benchmark which assumes quarterly ten-year debt issues.

The potential mismatch is even smaller for those NSPs who issue floating rate debt as it is only the debt risk premium component that is subject to a mismatch with the benchmark. The base interest rate component could still be hedged during the NSPs averaging period to align with the base rate used in the benchmark return on debt.

#### *Revenue predictability for NSPs*

Variability in allowed revenues and consumer prices has been cited as a potential disadvantage of approaches that require annual updates to the return on debt. However, if the return on debt is measured across multiple control periods, the annual change is likely to be relatively small provided a ten year debt tenor and averaging period are used. This needs to be considered in the context of the current approach, which can result in large step changes in the return on debt at the start of each regulatory period. It is also noted that there is a range of adjustments (CPI, unders-and-overs, STPIS and other schemes) that already impact on NSP revenues and prices on an annual basis.

For NSPs, the use of a trailing average is likely to improve their ability to forecast the return on debt over a longer period. The current approach only provides certainty until the end of the current regulatory period, with the potential for large changes thereafter. Under a trailing average, 50 per cent of the cost of debt over the next ten years is known at any point. For new investments, NSPs can use the prevailing ten-year cost of debt, a significant improvement over the current approach, which provides rate certainty for a few years followed by a full rate reset.

#### *Ability to transition away from a portfolio approach*

A portfolio approach represents a choice to adopt a debt financing and risk management strategy over the long term, requiring the approach to be maintained through multiple determinations.

Subsequent changes to a particular portfolio approach can be made, provided there are suitable transitional arrangements to avoid windfall gains or losses. In particular, the decision to change the benchmark or the averaging period must be applied prospectively. For example, if the credit rating is changed, the new pricing would only impact refinanced or new debt, rather than the yields on existing debt in the benchmark portfolio. This is consistent with market practice, which does not typically result in coupon adjustments in the event of credit rating changes (although these can be a feature of some debt).

It is also possible to change the benchmark tenor or gearing ratio on a prospective basis, provided the adjustments take into account prevailing rates and the impact on the benchmark efficient debt portfolio.

#### *Implications for new entrants*

IPART recently noted that a trailing average approach does not reflect the efficient cost of debt for new investments or new entrants. As noted previously, the QTC model compensates new debt of existing NSPs at the prevailing rate, and not the historical average. For a new entrant NSP, new debt sourced to construct its asset base would be treated in the same way.

For a new entrant that acquires an existing NSP, any difference between the prevailing cost of debt and the existing return on debt will not result in windfall gains or losses. To illustrate this

point, consider an existing NSP with a RAB of \$100, debt with a book value of \$60 and a benchmark return on debt of 7 per cent. If the prevailing cost of debt is 6 per cent, the market value of the existing debt would be approximately \$63. For a new entrant to acquire the NSP, it would need to raise \$103, comprising \$40 to acquire the equity and \$63 to pay out the existing debt. The additional \$3 equals the present value of the difference between the prevailing cost of debt and the higher benchmark return on debt that will be received by the new entrant via the existing allowed revenues.

**Question 21 – How do these approaches align with the principles of an efficient financing benchmark, as set out in section 4.2?**

In the response to Question 5 we presented evidence to support our view that maintaining a debt portfolio with staggered maturity dates out to ten years (or longer) in order to manage refinancing risk is prudent and efficient practice for a firm with long-lived assets and above-average gearing. We also expressed a view that implicit in the definition of a benchmark efficient entity is an assumption that the entity is efficiently financed. QTC therefore considers a portfolio approach, where maturing debts are regularly refinanced with long-term debt, to be consistent with the principles of an efficient financing benchmark.

**Question 22 – What are the characteristics of efficient and prudent financing practices that should be taken into account under a benchmark framework?**

The characteristics outlined in our response to Question 5 should be taken into account under a benchmark framework. Specifically, the debt benchmark and the benchmark return on debt approaches should allow all NSPs to use a debt portfolio with staggered maturity dates out to ten years to align their total cost of debt with the benchmark return on debt. This will also allow NSPs to keep refinancing risk at a level that supports the ongoing funding of long-lived assets and above-average gearing in the capital structure.

A benchmark framework should take into account the expected volatility of the return on debt produced by different debt financing practices when measured across multiple regulatory periods, as well as the expected return on debt.

QTC considers that a benchmark debt portfolio funded with fixed-rate debt and equally spaced maturity dates out to a ten-year benchmark debt tenor is broadly reflective of how an infrastructure service provider with long-lived assets and stable revenues would manage refinancing and interest rate risk in the absence of regulation. However, some NSPs have indicated that they are better able to manage interest rate risk by entering into an interest rate swap during each averaging period to lock in a fixed base interest rate for the term of the regulatory period. The underlying borrowings would be based on a portfolio of floating-rate debt and the same ten-year benchmark debt tenor.

Both implementations are consistent with a broad benchmark portfolio based approach and will achieve a common outcome of allowing all NSPs to align their total cost of debt with the return on debt allowance. This will significantly reduce the potential for windfall gains and losses, as any difference between actual and benchmark costs is more likely to reflect the active decisions made by the NSP in attempting to outperform the benchmark. Furthermore, these two implementations of a portfolio approach are consistent with the second and third approaches outlined in clause 6.5.2(j) of the NER.



## Appendix A – Early issuance of new debt

In a recent report by Standard & Poors the following observations were made about the refinancing practices of several regulated utilities:

*'The company [ETSA Utilities Finance Pty Ltd.] is likely to **complete its refinancing of its A\$255 million bank facility maturing in April 2013 by the end of December 2012 at the latest.**'*

*'ElectraNet's next major debt maturities occur in **June 2013 and August 2013** when a combined A\$400 million matures. **We expect the company to complete [the] refinancing some time by the end of the first-quarter 2013 to maintain liquidity and reduce refinancing risk.**'*

*'Recent debt issuance by SP AusNet leaves the group well placed to manage the **March 2013** refinance of the A\$775 million syndicated bank debt facility. At the end of **September [2012]** the group had more than A\$1 billion in cash and undrawn bank lines.'*

These practices are not restricted to regulated utilities:

*'Sydney Airport has raised approximately A\$1.1 billion of new senior debt facilities which has addressed all 2013 debt maturities and provided additional liquidity to extend funding of the forecast capital expenditure programme. As part of the refinancing process, each of the three ratings agencies has reaffirmed Sydney Airport's BBB or equivalent credit rating.*

*Chief Executive Officer, Ms Kerrie Mather, said, "During the refinancing process, Sydney Airport received very strong support from both international and domestic bond and bank markets. **It is very pleasing to address the 2013 maturities 12 months in advance**, extend the average maturity of the debt portfolio and achieve all-in pricing well inside the existing average of 6.5%."* - ASX release

*'Transurban has continued to have success in refinancing activities in the last 12 months:*

***May 2011** - Issued \$200 million of domestic medium term notes, to partially fund \$300 million existing notes maturing in **September 2011.**' – ASX release*

*'Transurban's corporate debt portfolio consists entirely of bullet maturities, and has **a solid track record of refinancing its debt well in advance of maturity.**' – Fitch comment*

The same strategy is used by state government borrowers such as QTC. QTC's liquidity policy requires one sixth of the amount outstanding in a benchmark bond line to be progressively refinanced over a six month period prior to the scheduled maturity date<sup>18</sup>. The proceeds from the newly issued debt is invested in cash and high quality (and hence low yielding) discount securities until required to repay the maturing bond line.

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<sup>18</sup> Some bonds may be purchased from investors and cancelled prior to and during the six month refinancing period.

# Appendix B – Debt maturity profiles

Sydney Airport Corporation

## Debt Maturity Profile



Diversified capital structure with further opportunity to spread maturity

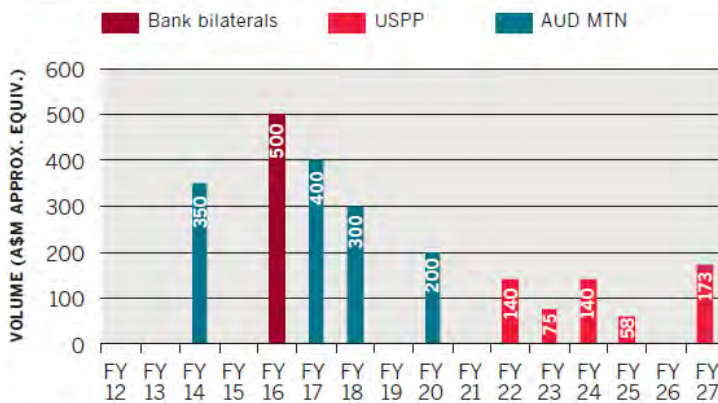


1 Debt maturity profile as at 30 June 2012  
 2 The principal repayable on Capital Indexed Bonds (CIB) maturing in 2020 (A\$889m) and 2030 (A\$342m) increased through to maturity linked to the rate of inflation CPI. The annual fixed interest charge on the CIBs is calculated on the increased liability  
 3 Undrawn debt of A\$115m for FY2013, A\$0m for FY2014, A\$270m for FY2015, A\$152m for FY2016 and A\$337m for FY2017  
 4 Funding already raised to redeem A\$270m of bonds maturing in October 2012

Source: Sydney Airport – AUD, CAD & US144A Debt Investor Update, 19 September 2012

Brisbane Airport Corporation

## DEBT MATURITY PROFILE

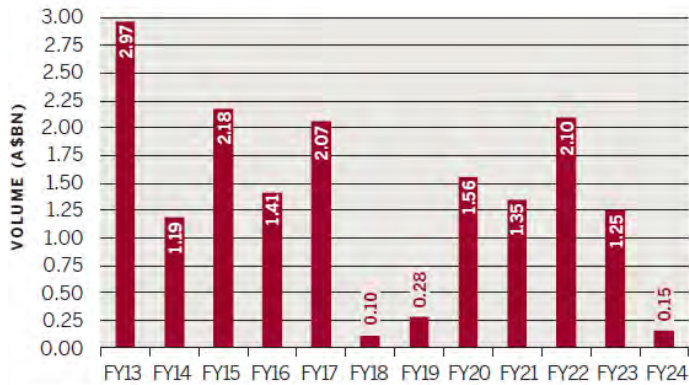


USD borrowings converted to AUD by KangaNews at issue date FX rates.

SOURCE: BRISBANE AIRPORT CORPORATION SEPTEMBER 30 2012

Source: KangaNews issuer profile

**DEBT MATURITY PROFILE**

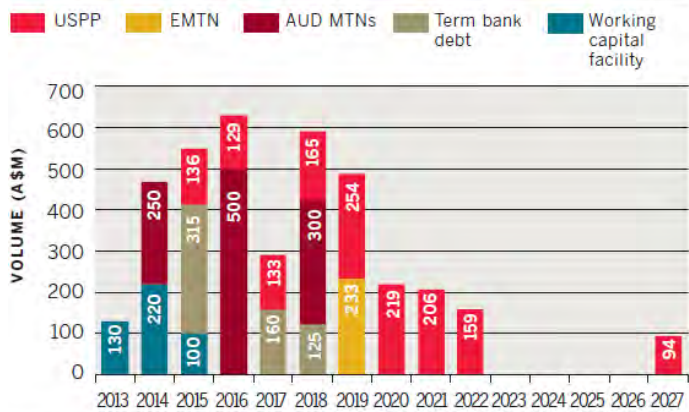


SOURCE: TELSTRA CORPORATION JUNE 30 2012

Source: KangaNews issuer profile

Transurban

**DEBT MATURITY PROFILE**

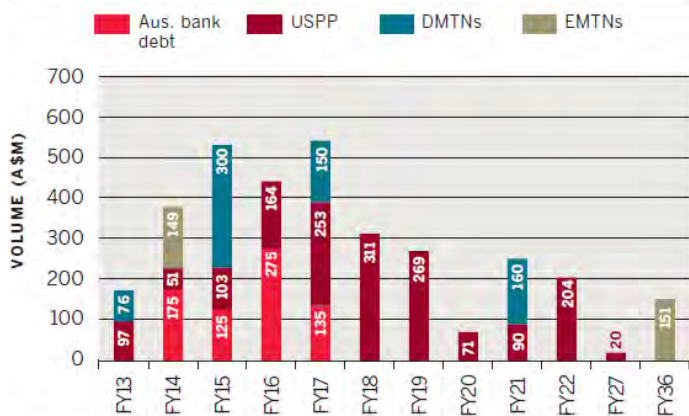


SOURCE: TRANSURBAN JUNE 30 2012

Source: KangaNews issuer profile

Stockland

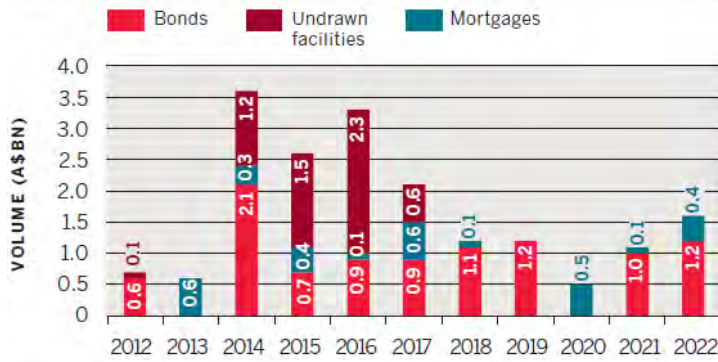
**DRAWN DEBT MATURITY PROFILE**



SOURCE: STOCKLAND JUNE 30 2012

Source: KangaNews issuer profile

**DEBT MATURITY PROFILE**



SOURCE: WESTFIELD GROUP 2012

Source: KangaNews issuer profile

**Rio Tinto**



- Aim to maintain a single A credit rating
- Long term and smooth debt maturity profile
  - Weighted average maturity of over nine years
  - \$5.5 billion of bonds issued in 2012 with a weighted average maturity of around 12 years and coupon of 3.6%
  - \$1.7 billion of bonds falling due over next 18 months
- Approximately two thirds of gross debt at fixed interest rates

<sup>1</sup> 30 June 2012 maturity profile adjusted for \$3 billion bond issue August 2012 and \$0.5 billion bond maturity September 2012

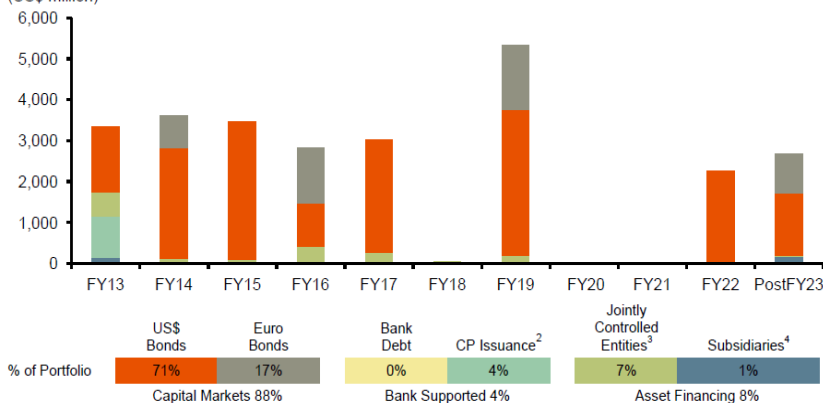
**RioTinto**

Source: Rio Tinto Investor Seminar, London/New York, 9 October 2012

**BHP Billiton**

**Maturity Profile Analysis**

Debt repayments<sup>1</sup>  
(US\$ million)



1. Based on debt balances as at 30 June 2012.

Source: BHP Billiton Credit Summary as of 30 Jun 2012

## Appendix C – Summary of QTC’s benchmark return on debt proposal

The QTC return on debt proposal is based on a benchmark portfolio of fixed-rate debt with quarterly spaced maturity dates from three months out to ten years. To maintain this profile, each maturing debt is refinanced with new ten year fixed rate debt at the prevailing rate.

Increases in the debt balance are incorporated into the benchmark portfolio at the prevailing ten-year rate. This ensures that new investment is not incorrectly compensated at historical rates. A number of potential weighting approaches are outlined on page 17.

The quarterly debt maturity profile requires quarterly estimates of the prevailing ten-year corporate cost of debt. These estimates can be based on end of quarter values or daily averages for the months of March, June, September and December.

The cost of debt produced by the benchmark portfolio can be replicated by a ten-year weighted trailing average of the ten year fixed corporate cost of debt.

### Annual updating of the benchmark return on debt

The benchmark return on debt is calculated quarterly and updated annually to allow a single rate to be used for the upcoming regulatory year. This rate can be determined after the December or March quarter benchmark refinancing transaction.

Any differences between the return on debt at the start of the regulatory year and the prevailing rates that apply to the refinancing and new borrowing transactions during the regulatory year will be reflected in the return on debt for the following regulatory year (similar to a true-up).

### Weighted average vs. internal rate of return

The benchmark return on debt can be calculated as a weighted average or an internal rate of return (IRR). Both methods will produce the same long-term average return on debt, although differences are likely to occur on a year-by-year basis.

To reduce the potential for windfall gains and losses, the method used should be consistent with how the NSP’s debt servicing charges are determined. This will not result in compensation being provided for actual debt costs because both methods use the prevailing benchmark cost of debt to compensate all refinancing and new borrowing transactions.

### Transitional arrangements

To address concerns over the potential for gaming, the QTC proposal included a transitional arrangement whereby the prevailing rates during an NSP’s next averaging period are used to determine the starting value of the benchmark return on debt.

However, if an NSP can demonstrate that its current debt portfolio was efficiently issued over the last ten years, it may be appropriate to transition to the trailing average using historical rather than prevailing rates.