



**SUBMISSION TO THE ERA BENCHMARK COST OF DEBT  
SECRETARIAT WORKING PAPER**

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## 1. INTRODUCTION

1.1 This submission contains DBP's response to the Economic Regulation Authority's (ERA) Secretariat Working Paper *On the Benchmark Cost of Debt: Efficiency Considerations (Working Paper)*.

1.2 DBP's submissions relate to:

- some of the final conclusions in regards to the desired policy directions outlined in the paper; and
- the analytical process which has sought to underpin these conclusions. In this regard, DBP submits:
  - a) the Working Paper does not outline with sufficient clarity each of "the estimation methods, financial models, market data and other evidence" to enable stakeholders to not only fully understand what the ERA is currently considering it proposes to take into account in estimating the return on debt but also to undertake a proper assessment against the criteria set out in Rule 87 of the National Gas Rules (NGR);
  - b) the Working Paper does not address all of the criteria that the regulator must apply when assessing the methodologies that the ERA must outline in the rate of return guidelines for calculating the cost of debt
  - c) when the Working Paper seeks to address some of the criteria, particularly efficiency, the analysis is insufficiently robust.

1.3 As indicated at the forum held on 3 July 2013, these are important considerations for service providers, as the rate of return guidelines, while not binding on the ERA, will be a significant factor for both debt and equity financiers in deciding whether, and if so, to what extent, they will invest in covered pipelines like the DBNGP. It will also play a major role in the considerations of credit ratings agencies.

1.4 Some of DBP's particular concerns are as follows:

- The two models outlined in the Working Paper have not been adequately described. DBP understands what the status quo on-the-day approach is and how it operates, but the ERA has made no attempt to describe what kind of a trailing average model it has in mind, nor to assess such a model in detail against the criteria required under the NGR. This makes it difficult to make detailed submissions on the advantages and disadvantages of the different models.
- The Working Paper seeks to assess the two models solely on the basis of efficiency criteria (and not against the criteria for the cost of debt under the NGR).
- These efficiency arguments are not made with adequate analytical or empirical backing.
- The empirical test used to assess prediction success for the different methods - the Diebold-Mariano test - has been misapplied. This test requires covariance stationarity in the underlying data, and this condition does not appear to have been met. This means that the ERA cannot conclude (as it does) that one forecasting method is better than another, and nor can it base any further policy decisions on this conclusion. Moreover, the ERA has applied the test to the wrong dataset; it is the overall cost of debt which matters, not the risk free rate.

- There are several aspects of the Working Paper which advance positions which DBP believes are beyond the requirements of the NGR relating to the rate of return guidelines.
  - The focus solely on the lowest cost of debt as the relevant benchmark, ignoring other practical aspects of debt financing, is likely to lead to decisions which provide poor incentives for investment.
- 1.5 The structure of this submission addresses the above points in more detail. In particular:
- Section Two outlines the statistical errors made in the use of the Diebold-Mariano test
  - Section Three outlines DBP's concerns about whether the ERA's efficiency consideration is consistent with the requirements under the NGR;
  - Section Four outlines issues relating to model description;
  - Section Five outlines the ERA's errors in economic logic in its discussions of efficiency; and
  - Section Six outlines shortcomings in the ERA's apparent understanding of the practicalities of project financing.
- 1.6 Section Seven draws some conclusions.
- 1.7 DBP would be concerned were the contents of the Working Paper to form the basis of the draft guidelines the ERA must issue. DBP calls on the ERA to ensure that, in its draft guidelines, the deliberations on the cost of debt include at least the following:
- 1.8 A comprehensive description of each of the different estimation methods, financial models, market data and other evidence the ERA proposes to take into account; this is particularly the case for the trailing average approach. This includes putting forward appropriate transition mechanisms.
- 1.9 Show how the ERA proposes to assess each method against the relevant provisions in the NGR, giving weight to all of the relevant criteria, and not just to efficiency criteria.
- 1.10 Develop the efficiency arguments that have been posited in the Working Paper so that they are sufficiently robust to form a sound basis for the methodologies to be used in estimating the allowed rate of return.
- 1.11 As a final introductory matter, it appears from the forum held on 3 July 2013 that the ERA is considering using only one methodology in the guidelines for estimating the cost of debt. DBP does not understand why the ERA considers it should be so limited. Rule 87(14)(a) of the NGR makes it clear that multiple methodologies should be used.
- 1.12 Service providers ought to have the opportunity to make use of any of the cost of debt methodologies provided for in the NGR. While the ERA may have a preference for certain methodologies, DBP submits that this preference must be based upon the same robust analysis (and demonstrably so) as the ERA would require of service providers who might seek to deviate from the ERA's preferred position when filing an access arrangement proposal.

## 2. STATISTICAL ERRORS IN THE USE OF THE DIEBOLD MARIANO TEST

- 2.1 Key to the Working paper are the tests of predictive power for the different methods of forming expectations about the average cost of debt over the five-year regulatory period. These form the basis for the ERA making conclusions about which methods of assessing the cost of debt are the most efficient. However, there appear to be substantial issues in the application of the statistical tests used by the ERA.
- 2.2 In order to test predictive power, the ERA makes use of the Diebold-Mariano (1995) test, which examines the differences between the mean squared errors of different forecast mechanisms.<sup>1</sup> The Diebold-Mariano test is a very simple, flexible tool for comparing forecasts, much more flexible than many similar time series econometric tests. In particular, as Diebold (2012) himself points out, even if the error vectors of the individual forecasts are non-stationary, provided a combination of them is stationary (that is, they are co-integrated), the test itself will still be valid.<sup>2</sup>
- 2.3 The ERA has not made available the Bloomberg data that it made use of in the tests referred to in the Working Paper, but DBP notes that when using the daily data on a ten-year Commonwealth Government Security from the Reserve Bank of Australia (which provides data from January 1995 to May 2013, although noting that one must discard the last five years of data to allow for a comparison between predictions and the actual averages over a regulatory period) and following the approach outlined in the Working Paper and further elaborated in the ERA's recent Western Power Decision to construct the error vectors for each method, and looked at a twenty day fixed forecast, a 20-day forecast with annual updating, a sixty version of each, and then a one, five and ten year version of each; ten methods in total of predicting the debt rate during the regulatory period.<sup>3</sup>
- 2.4 This gave rise to 100 different combinations of error vectors (twenty-day fixed minus ten years with annual updating, for example). DBP tested the stationarity of each combination and in all cases, found that the relevant combinations were non-stationary. Since the combinations are non-stationary, this means the error vectors are not co-integrated with each other, and the results of the Diebold-Mariano test are not statistically valid.<sup>4</sup> It is not clear whether similar tests were employed by the ERA on its longer dataset. However, if the same issues arise in that dataset, this means the ERA cannot make the conclusions it makes in respect of the predictive power of the different methods of forecasting it uses. This means further that any conclusions based upon the results of its statistical analysis are invalid. Since the predictive power of different forecasting methods sits at the heart of several of the key conclusions the ERA makes, this represents a substantial weakness in the Working Paper.
- 2.5 DBP is not aware of any "fix" for the Diebold-Mariano test which allows it to work in an environment whereby the data are not covariance stationary, and this implies that the ERA needs to consider a different way of empirically establishing that one method of

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<sup>1</sup> See Diebold, FX & Mariano, RS, 1995, "Comparing Predictive Accuracy", *Journal of Business and Economic Statistics*, 13, 253-63, and a more recent paper, Diebold, FX, 2012, *Comparing Predictive Accuracy, Twenty Years Later: A Personal Perspective on the Use and Abuse of Diebold-Mariano Tests*, available from: [www.nber.org/papers/w18391](http://www.nber.org/papers/w18391).

<sup>2</sup> Although a model with non-stationary errors is not a good model, because it means that the model and the actual values are not co-integrated and thus follow different trend paths. Although technically the test works, it is not clear whether discovering that one model is very, very bad, whilst another is merely very bad, is particularly useful.

<sup>3</sup> This is more than the ERA used; we explored some different trailing averages as well.

<sup>4</sup> Technically, the test is predicated upon an assumption of covariance stationarity, which is not met.

forecasting debt rates (actually risk free rates – see below) is superior to another, if it proposes to make use of empirical evidence in this regard.

**Did the era use the right series?**

- 2.6 Quite apart from the issue of the statistical validity of the Diebold-Mariano test, outlined above, an additional issue relates to the underlying data series; is it the right one? The ERA has examined predictability within the context of the risk free rate. However, it is required under the NGR to consider the cost of debt of the efficient benchmark firm. Unless such a firm can borrow at the risk free rate (which it cannot), this means that information about the risk free rate, regardless of the robustness of the econometric techniques used, is of limited value in developing policy associated with the cost of debt of the efficient benchmark firm. DBP submits that what the ERA ought to have considered is the bond rate on what it deems to be an efficient entity. It ought to then have used data on the appropriate bond series (having first established its covariance stationarity) to assess different forecast methods. Since the ERA has access to a Bloomberg terminal, it is unclear why it did not do this.

### 3. HAS THE ERA CONSIDERED ALL OF THE CRITERIA REQUIRED UNDER THE NGR FOR ASSESSING VARIOUS METHODOLOGIES?

- 3.1 While DBP's main focus in this submission to the Working Paper is on the economic and econometric analytical techniques used by the ERA, and their shortcomings, there are several instances where the ERA appears to have ignored or gone beyond the requirements of the NGL and NGR for assessing the estimation methods, financial models, market data and other evidence required to be taken into account by the ERA in estimating the return on debt.
- 3.2 The first issue is that the ERA has assessed the different methods of establishing the cost of debt by reference to, and only by reference to, efficiency considerations, quoting (see paragraph 29 of the Working Paper), the revenue and pricing principles of the NGL.
- 3.3 However, the ERA has ignored the requirements of Rule 87 of the NGR and the other revenue and pricing principles of section 24 of the NGL which set out the following factors which need to be considered in respect to the cost of debt:
- The allowed rate of return objective is that the rate of return for a service provider is to be commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk as that which applies to the service provider in respect of the provision of reference services (NGR Section 87(3)).
  - In determining the allowed rate of return, regard must be had to:
    - a) relevant estimation methods, financial models, market data and other evidence;
    - b) the desirability of using an approach that leads to the consistent application of any estimates of financial parameters that are relevant to the estimates of, and that are common to, the return on equity and the return on debt; and
    - c) any interrelationships between estimates of financial parameters that are relevant to the estimates of the return on equity and the return on debt. (NGR Section 87(5)).
  - In estimating the return on debt under subrule (8), regard must be had to the following factors:
    - a) the desirability of minimising any difference between the return on debt and the return on debt of a benchmark efficient entity referred to in the allowed rate of return objective;
    - b) the interrelationship between the return on equity and the return on debt;
    - c) the incentives that the return on debt may provide in relation to capital expenditure over the access arrangement period, including as to the timing of any capital expenditure; and
    - d) any impacts (including in relation to the costs of servicing debt across access arrangement periods) on a benchmark efficient entity referred to in the allowed rate of return objective that could arise as a result of changing the methodology that is used to estimate the return on debt from one access arrangement period to the next (NGR Section 87(11)).
  - The revenue and pricing principles are the principles set out in subsections (2) to (7).
    - 2) A service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in –
      - a) providing reference services; and
      - b) complying with a regulatory obligation or requirement or making a regulatory payment.

- 3) A service provider should be provided with effective incentives in order to promote economic efficiency with respect to reference services the service provider provides. The economic efficiency that should be promoted includes –
    - a) efficient investment in, or in connection with, a pipeline with which the service provider provides reference services; and
    - b) the efficient provision of pipeline services; and
    - c) the efficient use of the pipeline.
  - 4) Regard should be had to the capital base with respect to a pipeline adopted—
    - a) in any previous full access arrangement decision or decision of a relevant Regulator under section 2 of the Gas Code;
    - b) in the Rules.
  - 5) A reference tariff should allow for a return commensurate with the regulatory and commercial risks involved in providing the reference service to which that tariff relates.
  - 6) Regard should be had to the economic costs and risks of the potential for under and over investment by a service provider in a pipeline with which the service provider provides pipeline services.
  - 7) Regard should be had to the economic costs and risks of the potential for under and over utilisation of a pipeline with which a service provider provides pipeline services (NGL Section 24 – The Revenue Pricing Principles).
- 3.4 Note that allocative and dynamic efficiency are not mentioned in this list. The requirement of Rule 87 that the cost of debt be that for an “efficient benchmark firm” does not include allocative or dynamic efficiency, as these are economy-wide concepts; one cannot speak about a firm, in isolation, being allocatively efficient.
- 3.5 Section 24 of the NGL goes beyond what the ERA refers to as productive efficiency (ie – efficient use of inputs by the pipeline owner) to consider efficient investment in the pipeline and efficient use of its services. These, however, are very narrow components of (respectively) dynamic and allocative efficiency. In other words, the NGL and NGR quite clearly do not envisage assessment of cost of debt methodologies by general concepts of efficiency as might be found in an economics textbook.
- 3.6 In addition, by ignoring factors it is required to consider under the NGR specifically in respect of the cost of debt, the ERA has been remiss in undertaking a proper analysis.
- 3.7 A third issue is the use of the NPV=0 “principle”. This is an issue to which the Electricity Networks Association (ENA) devoted considerable attention in its submission to the AER’s Guidelines process, drawing the AER’s attention to Section 24(2) of the NGL above which, if cast in mathematical terms, would be a principle of  $NPV \geq 0$ .
- 3.8 A fourth issue exists in relation to the ERA’s favouring one particular model, the “on the day” approach (with annual updating). The NGR does not limit the guidelines to outlining only one methodology – to the contrary, Rule 87(14) specifically requires the guidelines to include methodologies in the guidelines.
- 3.9 The NGR quite clearly envisages that a menu of options be available to regulated firms. If it believed that only one option could be efficient, or was superior, the AEMC would have noted only one option. If it wished the AER and ERA to make a determination as to which option was best across the board, it would have instructed them to do so in this clause; whilst it has instructed the regulators to develop guidelines, it has not instructed them to

- remove options from the NGR in the process. That this is the case is abundantly clear from the drafting in Rule 87(14).
- 3.10 The basic issue is not that the ERA prefers one model over another; provided it does not foreclose on choice in the guidelines. It is instead the fact that, in the Working Paper, there is no evidence of a well-developed set of alternatives that have been robustly assessed within a common framework.<sup>5</sup> This raises the risk that, in future regulatory determinations, one party or another will raise a challenge that the ERA has not made proper use of its discretionary powers, and has instead chosen methods it prefers, rather than fairly and completely analysed the advantages and disadvantages of different methods. This, again, has impacts on regulatory certainty.
- 3.11 The final issue relates to the five-yearly true-up. In its submission to the AER, the ENA provides evidence of the extremely pernicious effects of a five-yearly true-up on the stability of prices for consumers, as well as of how such an approach can lead to positive correlation in errors across regulatory periods using 90-years worth of data on interest rates from the US.
- 3.12 However, beyond the issue of the economic wisdom of a five-yearly true-up is its legal standing. In respect to a retrospective updating for changes in the cost of debt after the end of the regulatory period, Rule 87(12) of the NGR does not appear to permit such an approach.
- 3.13 As distinct from other parts of the NGR, which offer different options or regulatory discretion, here it is quite specific; the only updating mechanism which can be used is an annual updating mechanism. Moreover, it must be automatic, operating like the existing CPI adjustments to tariffs, rather than being a re-determination every year on the part of the regulator. Given this, it is not clear what legal standing a five-yearly true-up process has. Nor is it clear why the regulator has concerns about transactions costs when the requirement of the NGR on this point quite clearly envisages an automatic (and only an automatic) mechanism that ought to impose no more administrative costs on the regulator than the current CPI adjustment does.<sup>6</sup>
- 3.14 Having said this, DBP is not suggesting that the ERA ought to necessarily impose any kind of updating process, and note the concerns raised by WA Treasury in this respect at the 3 July forum. Instead, what DBP is suggesting is that, if some form of updating process is chosen, the law may only admit an automatic annual process, and not a five-yearly true-up.

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<sup>5</sup> The AER, in its guidelines process, has devoted much more effort to this issue, and, while we would not agree with all of its conclusions, we would agree that it has demonstrably analysed different debt models.

<sup>6</sup> If the regulator went through and attempted to manually calculate the impacts on tariffs each year as debt rates change, then this may become a large administrative burden, even if it applied exactly the same adjustment process each year. However, this is an argument for the regulator to improve its own productive efficiency, and make use of a model like the one the QTC has developed, to automate the process, not an argument to instead impose a five-yearly true-up requiring only one round of calculations.

#### **4. ISSUES IN RESPECT OF DESCRIBING THE RELEVANT MODELS**

- 4.1 In the Executive Summary of the Working Paper, the ERA asks for stakeholder viewpoints on the costs and benefits of different ways of estimating the cost of debt. However, it does not define them in detail in the Working Paper. DBP submits that in order for stakeholders to be able to provide such views, the models need to be outlined in detail.
- 4.2 DBP assumes that the “on the day approach” represents the ERA’s existing method for calculating the cost of debt. However, the ERA presents nothing more than a straw man construct for alternate models involving a trailing average. There is no understanding of the period over which trailing averages might occur, the weighting on different years (including whether this might change to reflect some kind of “optimization” by a firm). There is also no understanding of how the annual updating process might work, or how any transition mechanism might operate. Unless and until such details are provided, it is not possible to undertake a robust assessment of what the ERA proposes. The basic issue is that general principles are insufficient to make the relevant assessments; each model, and the transition between them, needs to be made clear.
- 4.3 Not only is it not possible for one to undertake a robust assessment given the current state of models as described by the ERA, but it is abundantly clear that the ERA has not undertaken any such assessment itself. The only assessment which it has actually done is an econometric test of predictive power, and, as discussed above, failure to consider technical issues of stationarity mean that the results of this analysis are not valid. The assessments against economic efficiency criteria are crude, at best, as outlined in the next section.

## 5. ISSUES IN RESPECT OF EFFICIENCY CONSIDERATIONS

- 5.1 The main point made by the ERA in the Working Paper is that its current approach provides the most efficient outcome compared to other models permissible under the NGR. However, beyond a flawed econometric analysis (see discussion above) that relates to predictability, the analytical depth of assessments of the relative efficiency of each approach is sorely lacking. Indeed, very little of the discussion under the various efficiency headings in the Working Paper actually addresses how efficient an on-the-day approach is relative to a trailing average, focusing instead on side issues such as how efficient the ERA thinks its approach to estimating the debt risk premium is.
- 5.2 Finally, in order to underpin its discussion on productive efficiency, the ERA introduces the concepts of re-financing risk and mismatch timing risk, and appears to believe that an efficient debt strategy (giving rise to efficient debt costs) is the result of some kind of constrained optimization involving these two factors. However, having introduced these two concepts, the ERA does nothing to develop further a model which might be used to first develop hypotheses about how the interaction of these two forces might influence debt, and then test these hypotheses.
- 5.3 We begin this section by considering, in more detail than the ERA does, the link between predictability and efficiency, highlighting the significant gaps in this analysis. We then address the concepts of refinancing risk and mismatch timing risk, showing how one might actually assess the impacts of each on efficiency, and showing why the latter may indeed be a non-issue from the perspective of the efficient cost of debt. We close by considering two side-issues raised in the ERA's discussion by not germane to the choice of an on-the-day versus a trailing average approach (or a hybrid), but important from the perspective of clearing up errors by the ERA; the NPV=0 concept in respect of a five-year debt horizon, and the ERA's concepts of the links between beta and debt rates.

### **Predictive power and efficiency**

- 5.4 The ERA appears to believe that predictive power and efficiency are almost synonymous. It is glibly asserted, both in the executive summary and at paragraph 49 in the main body of the report that, since the on-the-day approach is a better predictor than other alternatives, it is more efficient, without any explanation at all as to why this might be so. It is troubling that the ERA is basing its whole argument on so thin a premise particularly since the premise is wrong.
- 5.5 As shown in Section 2, the ERA has not in fact shown that an on-the-day approach is a better predictor than other methods, because it has ignored the fact that the data it uses is unlikely to be covariance stationary; a technical requirement for the test it uses to be valid. However, even if the test results were valid, the conclusions that the ERA draws from its results about predictive power and its implications for efficiency are simply wrong.
- 5.6 In respect of dynamic and allocative efficiency, the argument is made that, because the on-the-day approach is closer to the rate which prevails during the access period, it improves the incentive for firms to invest at the socially optimal time.
- 5.7 However, the tests are not making the right comparison to draw this conclusion. In each case, what is actually being tested is the prediction made by a particular method of the average over a five year regulatory period. Using the logical process employed by the ERA, for allocative and dynamic efficiency to be met during the regulatory period, the forecast made at the outset would need to match as closely as possible the actual interest rate prevailing at the time an investment decision is made. In simple terms, if the socially

optimal time to invest is year three of a regulatory period, then it is the difference between the regulatory rate and the actual rate in year three that matters, not the average over the five-year period. Since the ERA compares different forecasts with the average over the regulatory period and not actual rates during the period, its test results (even if they were statistically valid) say nothing at all about allocative or dynamic efficiency.

- 5.8 The link between predictive power and productive efficiency is even less robust. Consider a situation where the interest rate this period is five percent and the interest rate next period is known to be seven percent. What the ERA is saying, by linking predictive power to productive efficiency, is that the firm which borrows today at seven percent is more productively efficient than the firm which borrows today at five percent. This is clearly nonsense; in a competitive marketplace, the firm borrowing at five percent today will have run the firm borrowing at seven percent out of business by the time the next period comes around.<sup>7</sup>
- 5.9 The basic problem is that the ERA has not thought through the linkages between predictive power and productive efficiency carefully enough. If the ERA believes that predictive power and efficiency are linked (a belief which we do not share, but about which we are willing to be convinced if the ERA mounts a robust argument), then there are fairly standard processes by which an economist would test such a notion. First, the ERA needs to develop some form of model whereby investment and production occur in different time periods (an issue we return to below in respect of mismatch timing risk) and, within this context, draw conclusions about how better prediction might lead to lower future costs. Such inter-temporal models are commonplace in economics, and it is unclear why the ERA has not made use of one to support its analytical framework. Then, once this model has been developed to put forward the ERA's hypotheses in a formal manner, it needs to test the model empirically. Vague assertions are not enough.

**Mismatch timing risk and developing a testable hypothesis for debt and productive efficiency.**

- 5.10 In respect to productive efficiency, the ERA does begin the process of developing some form of hypothesis about what drives it. It introduces notions of refinancing risk (the risk faced by the borrower that its loans will not be rolled over) and mismatch timing risk (the risk that debt rates prevailing at the time fixed rate debt is taken out to fund investment will no longer prevail when goods and services produced using those investments are sold). It appears to suggest that some kind of tension exists between the two notions, noting in paragraph 54 that prudent managers will stagger debt to minimize refinancing risk, but then in paragraph 55 that greater staggering leads to greater mismatch timing risk.
- 5.11 However, apart from seeming to dismiss refinancing risk by the time it gets to paragraph 61, the ERA does nothing more with the notions of refinancing and mismatch timing risk. This is a pity, because it is potentially (see our concerns below about the concept of mismatch timing risk) the start of a very good idea, and, more importantly, of a way in which to empirically test how different debt-staggering strategies influence efficiency, potentially leading to some empirically verifiable conclusions about whether an on-the-day approach is better than a trailing average approach; as well as allowing, potentially, assessment of the relative efficiency of different trailing averages.
- 5.12 In the tension between mismatch timing and refinancing risk, the ERA potentially has two competing theories. If mismatch timing risk is a dominant concern, then one ought to see

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<sup>7</sup> Moreover, if the regulator forces the firm to adopt such a rate, then it would be causing allocative inefficiencies because it would direct investment away from the firm over which it is able to exercise control.

a negative relationship between efficiency and the degree to which debt is staggered. If refinancing risk is the dominant concern, then the relationship ought to be positive.<sup>8</sup> This can be empirically tested in a modeling framework with two steps:<sup>9</sup>

- Firstly, derive an efficiency frontier using a wide dataset of energy firms, using a technique such as stochastic frontier analysis and a flexible cost function for each firm.
- Secondly, for each firm in the set, regress a number of cost drivers, including the degree of debt staggering, against the distance (in cost terms) of that firm from the efficiency frontier, to test the hypothesis outlined above.

5.13 Outlined above, very briefly, is a process by which the ERA might develop a hypothesis which could lead it to robust conclusions about the relative productive efficiency of different approaches to debt staging, and then empirically test this hypothesis. Note that it does not test regulatory approaches (such as on-the-day or trailing average) directly; we are unsure (save for a large database of different practices by regulators) how such a direct test might be performed, apart from noting that predictability is clearly the wrong test, and suspect that a direct test is impossible. Instead, it does so indirectly; if a particular pattern of debt tranches (including just one tranche of on-the-day debt) is more efficient than another, then this ought to be revealed in a modeling framework such as that outlined above. The notion then is that regulatory practice, seeking to replicate this efficiency, ought to incorporate an averaging process that mimics the pattern of debt tranches which empirical data suggest are efficient.

5.14 The development and testing of hypotheses outlined above, however, is predicated upon the tension between refinancing and mismatch pricing risk being the “right” model to use. Before the ERA concludes that is the case, we would suggest that it may need to look more closely at these concepts; most particularly mismatch timing risk. We present some reasons below which suggest that mismatch timing risk may not be the force the ERA thinks it is, and further consideration of these reasons by the ERA may lead it to conclude that the hypothesis stage in the analytical process outlined above needs to be re-thought, and different hypotheses tested. Two of these are practical, and one is theoretical or principled.

5.15 The first, and most obvious practical reason is that firms do not need to purchase fixed-rate debt or issue fixed rate bonds. If the interest on debt (in whatever form) is floating, then there is no issue about whether or not the rate on debt on the cost side matches the revenue side at a particular point in time, and therefore no issue of mismatch timing risk. Although the ERA has not made this clear, its hypothesis of mismatch timing risk is based on an implicit assumption that may debt that is issued has fixed rates, but it has not given any reason why this might be the case.

5.16 It may well be the case that, empirically, firms do tend to issue fixed rate debt, and that they do, in practice, face mismatch timing risk. However, if they do not have to issue fixed

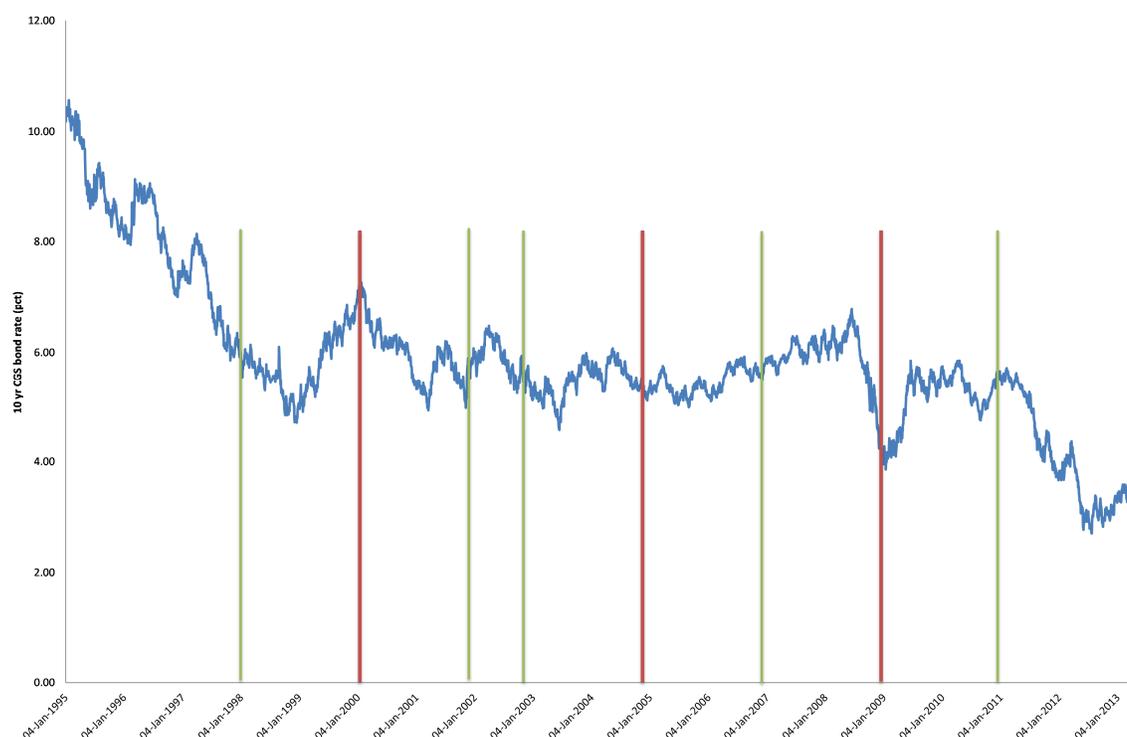
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<sup>8</sup> Friebel, G, Ivaldi, M & Vibes C, 2010, “Railway (De)Regulation: A European Efficiency Comparison”, *Economica*, 77(305), 77-91, show how such a methodological framework could be developed. Their analysis is on the impacts on efficiency of different regulatory measures in European railways, but the same basic approach of developing a efficiency frontier, and using it as the regressand in a regression model with several different driver variables (there, regulation, here debt staggering) as regressors. CEG, in a appendix to the recent ENA submission to the AER’s *Guidelines* process, provides the basic data on debt tranches at more than 100 energy firms.

<sup>9</sup> Friebel, G, Ivaldi, M & Vibes C, 2010, “Railway (De)Regulation: A European Efficiency Comparison”, *Economica*, 77(305), 77-91, show how such a methodological framework could be developed. Their analysis is on the impacts on efficiency of different regulatory measures in European railways, but the same basic approach of developing a efficiency frontier, and using it as the regressand in a regression model with several different driver variables (there, regulation, here debt staggering) as regressors. CEG, in a appendix to the recent ENA submission to the AER’s *Guidelines* process, provides the basic data on debt tranches at more than 100 energy firms.

rate debt, then this choice to do so reflects some optimization process internal to the firm pertaining to its views on the future likely path of debt rates, as well as counter-veiling choices on the part of lenders. In other words, the underlying fundamental forces may not be mismatch timing risk and refinancing risk, leading to a need to consider a different hypothesis above.

- 5.17 The second practical issue relates to the nature of debt rates, and of an on-the-day versus a trailing average approach. An on-the-day approach is essentially one prediction about future interest rates over a period of time, while a trailing average is a combination of several predictions. Whether one prediction is better than a combination of several predictions depends upon the time-series nature of the relevant interest-rate series.
- 5.18 If interest rates are a true random walk, then neither approach will predict accurately, because by definition a random walk is not predictable. If interest rates follow a random walk with a particular linear trend (upwards or downwards), then the information from the several observations in the trailing average is redundant as only the most recent information is useful in predicting where the series will go next. However, if interest rates follow a random walk with a more complex trend (mean-reverting, say, or cyclical) then the greater number of observations in the moving average may actually provide useful information about the future that is missing if only an on-the-day approach is used.
- 5.19 To understand this in a more practical sense, consider Figure XX below, which shows the movement of the 10-year Commonwealth Government Bond rate from 1995, from the Reserve Bank website.



- 5.20 In this (rather contrived) example, consider three regulatory periods, A B and C, where the regulator makes its determination of the on-the-day rate to apply for the next two years, or

has the choice to make use of a trailing average including up to two years of daily data. In the Period A, the fact that the on-the-day approach happens to coincide with a peak in the interest-rate cycle means that the information it provides is less reflective of the next two years than would be information in an average of the past two years (effectively, a trailing average of two-years' worth of daily tranches of debt). In this instance, the average error in daily predictions (that is, the difference between the rate on the day over the two-year regulatory period and the predicted value at its outset) from the on the day approach would have been 116 basis points, whereas the trailing average would have produced an average error of only 20 basis points.<sup>10</sup> The same is true in Period C, although the two approaches are closer together (95 basis points for an on-the-day approach versus 68 for the trailing average).<sup>11</sup> In Period B, by contrast, the on-the-day approach produces an average error of 0.36 basis points and the trailing average approach a difference of one basis point; almost no difference at all.

- 5.21 What is happening is that the localized behavior of the interest rate series is different during each of the windows. Beginning in January 2000, the series follows a largely downward trend over the two-year period. Beginning in January 2005, it has no discernible trend, and, beginning in January 2009, it has a sharp movement upwards, followed by a period without a discernible trend.
- 5.22 Given the problems of covariance stationarity in the data, we do not make conclusions about whether a trailing average or an on-the-day approach is statistically better in any of Periods A, B and C, but rather make the observation that, from the perspective of pricing, regulated firms would have preferred an on-the-day approach in January 2000, customers would have preferred an on-the-day approach in January 2009, and each party would have likely been indifferent between the two approaches in January 2005. However, from the perspective of a debt rate which limits mismatch timing risk, it appears likely that a trailing average would have been better (on average) in Periods A and C, while there would be no real difference between the approaches in Period B. On this basis, we believe that the ERA's conclusions about mismatch timing risk are based largely on the fact that we are currently in the window from January 2011, where the trend is downwards. For its general conclusions that staggered debt increases mismatch timing risk to be accepted as being accurate, it would need to demonstrate that the conclusion holds regardless of which window of observations are chosen. Again, we believe that the ERA has drawn conclusions without adequate analysis.
- 5.23 The final issue associated with mismatch timing risk is whether it has any validity from a theoretical or principled perspective. The notion put forward by the ERA is that mismatch timing risk occurs when the interest rates at the time at which debt rates are set (and fixed to maturity) do not match the rates prevalent at the time goods and services are sold. However, this only makes sense in a very narrow context. To motivate this, consider first the case of a pure monopoly, then clearly the interest rates prevailing at the time of sale of goods and services are (almost) totally irrelevant, as the firm has pricing power. Indeed, it is precisely this pricing power which regulation aims to prevent.
- 5.24 Consider now the case of pure competition, where there are no fixed costs from one period to the next. Here too, mismatch timing risk does not exist, because there is effectively no "investment" that links one production period to the next; pricing is always at marginal cost.

<sup>10</sup> Both in absolute value terms; the on-the day approach over-estimates and the trailing average underestimates the true rate, on average. Note also that we are comparing the rates on each day, rather than the average rate over the two-year regulatory period, as in the Working Paper.

<sup>11</sup> The trailing average is closer for most of the time period, but its large errors are the outset mean the average through the whole period is closer to the on-the-day approach than daily errors after the first couple of months.

- 5.25 In order for there to be mismatch timing risk, then, there needs to be some degree of fixed cost, and some degree of inter-temporality; at least some production needs to occur in a period other than the investment period. However, even here, the contexts in which mismatch timing risk could arise appear to be very narrow.
- 5.26 If an incumbent firm needs to invest this period and can only produce next period, but it faces a competitor who can enter, invest and produce next period, then the incumbent faces a mismatch timing risk; it might invest today, but not cover its costs next period (when it pays interest) if the newcomer is able to borrow at a lower rate and thus lower provide lower prices. However, if the newcomer also faces the same constraint of having to invest before it can produce, then the incumbent does not face any mismatch timing risk; unless of course its capital stock is exhausted over two (or more) periods.
- 5.27 What the ERA is effectively arguing, therefore, is that there are industries where incumbents have to invest in one period and produce in the next, whereas newcomers can invest and produce in the same period. At the same time, it is arguing that the production technology available to newcomers is not available to incumbents. It is only under these circumstances that the mismatch timing risk discussed by the regulator could arise. We struggle to understand where this very perverse kind of industry exists.
- 5.28 The essential problem is that the ERA has introduced a concept that it has not developed properly. As with the discussion above on predictive power and efficiency, what it actually needs to do is develop an inter-temporal model (or use a pre-existing one) which allows it to incorporate a mismatch timing risk, and then explore the situations where this might arise. If the model can only produce perverse situations like that above, then the notion of mismatch timing risk is irrelevant from the perspective of understanding efficient debt financing.<sup>12</sup>

### **The ERA's discussion on productive efficiency and refinancing risk**

- 5.29 There is a heading in the Working Paper underproductive efficiency that refers to refinancing risk, but in paragraphs 56 to 60 of the Working Paper, the ERA makes no reference to the impacts on productive efficiency of refinancing risk. We are merely told, in paragraph 54 that firms adopt a staggered risk portfolio to avoid it. Again, as noted above, if re-financing risk is to be discussed in the context of productive efficiency, what is required is an empirical examination of its impacts. We have suggested how such an empirical examination might occur (see above), and suggest that no meaningful conclusions can be drawn about refinancing risk and its impacts on efficiency before such work is undertaken.
- 5.30 The discussion in paragraphs 56 to 60 is confused, and does not appear to be making direct reference to efficiency and the extent to which it is impacted by different approaches to debt. However, we address the arguments made in the hope that doing so will improve the clarity of the ERA's arguments in future iterations of its thinking.
- 5.31 The basic flaw, insofar as we can understand the argument the ERA is trying to make, is to link default risk with re-financing risk in the way that the ERA has done. Default risk is something borne by the lender, and reflects the fact that its debt might not be repaid. Refinancing risk is something borne by the borrower, and reflects the risk that it might not find another lender once the current debt expires. A lender will price the current debt

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<sup>12</sup> That is not to say that empirically, firms do not invest with fixed cost debt over several periods, and face a risk as a consequence of this decision. However, as with the discussion on fixed versus floating debt above, where this occurs, it is likely to be reflective of some more fundamental forces driving the firm that are not revealed by focussing on this notion of mismatch timing risk.

- based upon its expectation of the likely default risk during the current lending period. However, refinancing risk relates to the risk of default during the next lending period; if that risk increases then the next tranche of debt might not be forthcoming. Moreover, the argument about management costs (if indeed this is the argument the ERA is making; this part is very unclear) as being a determining factor seems poorly made, when the ERA's own consultant suggests that the total costs of raising new hedge instruments (including management costs) are negligible. If this truly were a concern, it would seem likely that the "equilibrium" number of tranches would be very high indeed.
- 5.32 As a final point, the ERA talks repeatedly about "averages" within a sample of firms it is using as part of the formation of a cost of debt. However, the conclusions that it draws in paragraph 59 about how firms might be expected to have a credit spread equal to or less than the average in their sample size suggests that the ERA fundamentally misunderstands the application of Section 87(3) of the NGR and the use of benchmarks facing a "similar" level of risk.
- 5.33 In applying Section 87(3), if "similar" was taken to mean "exactly the same", then there would be no need to average; by the law of one price in a competitive market, every (efficient) firm in the sample set facing the same level of risk as the regulated firm (in respect of providing reference services) would pay the same price for its debt. However, it is unlikely that such a strict definition of "similar" could be applied and still result in a comparison set that is not empty, and thus the definition has to be loosened somewhat to admit more data. The basic aim is still the same; to use data about these comparison firms to draw inferences about the cost of debt for a firm which faces the same level of risk as the regulated firm, but there is an acknowledgement that the data are imperfect.
- 5.34 This is a straightforward application of statistical inference;<sup>13</sup> using several different sources of information with some degree of imperfection in each one in order to understand the underlying "true" values. Thus, what the regulator is actually doing is establishing a distribution around the most likely cost of debt, based upon the statistical information on cost of debt as it is associated with levels of risk, drawn from the sample of market data. It is statistical nonsense to only take the lower half of a distribution formed in this manner. The analyst may take the mean (or the mode or median) as the "best" estimate, or she may develop a confidence interval and make statements such as "there is a 95 percent chance that the true answer is less than X". However, in a statistical sense, what the ERA is saying is that it ought to use an estimate that it is less than 50 percent sure represents the upper bound of the distribution of likely results, given the input data. Not only is this statistical nonsense, but it also violates Section 24(2) of the NGL, which states that the regulated firm ought to be "provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs..."<sup>14</sup>

### Issues in respect of the NPV=0 criterion

- 5.35 The discussion above on efficiency covers the main points of this section, but two remaining points, neither of which are germane to the choice of an on-the-day over a trailing average approach, require some further response. The first of these is the NPV=0

<sup>13</sup> An examination of the process of assessment used by a more mature regulator such as FERC (see [http://elibrary.ferc.gov/idmws/file\\_list.asp?document\\_id=14099729](http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14099729)) makes this process of inference very clear, even though the process is not strictly statistical in this case.

<sup>14</sup> This is perhaps a little unfair. The ERA may instead not be making a statistical argument at all, but rather suggesting it can estimate required costs of debt with reference to risk levels with absolute perfection, in which case an argument could be made for points below the mean in its sample. If this is the case, however, apart from it implying unique abilities within the ERA unmatched anywhere else in the world, it would also militate against having a sample at all, because perfection in estimation would mean it can always choose the right proxy.

“principle”. There are two issues in respect of this. The first is that, as noted in Section 3 the relevant mathematical expression which meets the requirements of Section 24(2) of the NGL is  $NPV \geq 0$ .

- 5.36 The second is more fundamental, and relates to the assertion that the term of debt ought to match the regulatory term. The ERA notes in its appendices, that a “range of studies” support its conclusions that the risk-free rate and cost of debt ought to match the regulatory period. However, the literature cited is not particularly relevant for the ERA’s case, as it all applies to rate of return regulation, and not price cap regulation, which has different incentives.
- 5.37 The paper by Mashall et al (1981) makes not statements about the risk free rate matching the regulatory period, but instead has as its main focus a desire to cut through some of the circularity problems associated with regulation, by making use of the CAPM.<sup>15</sup> Indeed, one of its important conclusions is to show how regulators who focus solely on rates of return, rather than price and capital stock, produce an Averch-Johnson (1962) effect.<sup>16</sup>
- 5.38 Schmalensee (1989) is likewise not focused on the term of regulatory determinations, but instead aims to show that, if firms are able to earn their actual one-period rate of return, then all methods of calculating depreciation will result in an NPV of zero for investments; his “Invariance Proposition”.<sup>17</sup> Note that his context is US-style rate of return regulation, where the earnings of a regulated firm in each period are depreciation and a cost of capital, which they earn with certainty.
- 5.39 Although, Schmalensee (1989) is writing within the context of a US-style rate of return regulatory system, he does seem to offer support for using long-rated debt, and, indeed, for the use of a trailing average approach, noting that:

“For a single project, fairness would also be ensured for any depreciation schedule if the rate of return were set equal, once and for all, to the T-period long rate, since long-term interest rates reflect expected short rates. To the extent that bonds are issues to finance specific large investments, so that the yield to maturity at the time the debt is issued reflects expected short-term rates over the investment’s lifetime, this provides some weak defense for using the embedded cost of long-term debt, rather than its current yield, along with historical average costs of equity capital, to compute the allowed rate of return (ibid, p296)”

- 5.40 Schmalensee notes in a footnote that “One should not make too much of this point”, as others have pointed out that fairness to suppliers of equity capital cannot be ensured unless long term debt is amortised at the same rate as the asset is depreciated. We would note further that its relevance in the context of price cap, rather than rate of return regulation, is likely to be further limited. However, if Schmalensee’s arguments, through the filter of Lally (2007), are to be used to support one part of the debt-determination process, then they ought to be given weight elsewhere.<sup>18</sup>

<sup>15</sup> Marshall, WJ, Yawitz, JB & Greenberg, E, 1981, “Optimal Regulation Under Uncertainty”, *Journal of Finance*, 36(4), pp909-21.

<sup>16</sup> See Averch, H & Johnson, LL, 1962, “Behavior of the Firm Under Regulatory Constraint”, *American Economic Review*, 52(5), pp 1052–69.

<sup>17</sup> Schmalensee, R, 1989, “A Expository Note on Depreciation and Profitability Under Rate of Return Regulation”, *Journal of Regulatory Economics*, 1, 293-8.

<sup>18</sup> Lally, M, 2007, “Regulation and the Term of the Risk Free Rate: Implications of Corporate Debt”, *Accounting Research Journal*, 20(2), pp73-80.

- 5.41 Thus, out of the literature cited by the ERA in its appendix, we are left only with papers by a single author, Lally, in support of the ERA's perspective. Lally's position is not without controversy; in a recent submission to the AER's guidelines process, Incenta (on behalf of the ENA) note (among many other points) that when the New Zealand Commerce Commission examined this point recently, two of the three members of the expert panel (Professor Stewart Myers at MIT and Professor Julian Franks from the London Business School) disagreed with Lally's position and only one (Associate Professor Lally himself), agreed.
- 5.42 We do not seek to explore whether Lally's analysis, within its context, is correct or incorrect. However, we would suggest it is not relevant in the regulatory context applied in Australia. Lally (2007) notes, in each of the four cases that he examines, that revenue in a given year is the sum of depreciation and the cost of capital. Differences that result in each of his four cases arise because of different interest rates applied to the cost of capital. This is a straightforward representation of revenues as used in Schmalensee's (1989) paper, which Lally seeks to extend. Moreover, when applied in the same context as used in Schmalensee (1989), a US-style (historically at least) rate of return regulatory system, it is correct. However, it is not correct as a representation of the revenues earned by regulated firms under a price-cap regime.
- 5.43 Regulators in a price cap regime set a regulatory price, and firms take the demand risk, earning a revenue equal to the price cap multiplied by the number of units of the good or service sold. Moreover, each time a regulator resets the price cap, it re-estimates expected future demand and derives a (new) price cap which sets expected revenues equal to expected costs, but it does not go back and either compensate the regulated firm where demand was less than expected nor penalize it if it was higher; this would violate the basic premise of incentive-based regulation. This is fundamentally different from the framework examined by Schmalensee (1989) and extended by Lally (2007), meaning that their models, whatever their merits in the context of rate of return regulation, are of limited relevance for price cap regulation, which requires a different formulation of the revenue streams of regulated firms.
- 5.44 In its submission to the AER's guidelines process, the paper cited above from Incenta (on behalf of the ENA) makes a number of other salient points, regarding inconsistencies in the use of one term in the market risk premium and another in the risk free rate, as well as issue with the implicit assumption in Lally that the return to equity holders is effectively like a bond in its certainty; a point very similar to our point about demand risk above. We would also note the submission by CEG (again on behalf on the ENA) to the same AER process which shows the actual debt term spread used by more than 100 energy utilities around the world. Lally (2007) states that, unless regulated firms match their own debt duration to the regulatory cycle, equity holders will earn a negative net present value. Very few of the energy utilities in CEG's dataset issue very much debt which matches their regulatory cycles, which means that they are either earning negative returns for their equity-holders, or Lally is missing something. Usually, when theory is very different from empirical observation, it is the former that is incorrect.<sup>19</sup>

### **Issues in respect of beta**

- 5.45 We close this section with one final point. At the conclusion of its discussion on mismatch timing risk (paragraphs 63 and 64), the ERA suggests that the cost of mismatch timing

<sup>19</sup> Alternatively, they could, as the ERA suggests Lally notes in its appendix, engage in interest rate and credit default swaps. However, although Lally (as quoted by the ERA in its appendix) appears to believe this can mitigate risk, the ERA's own consultants, Chairmont, note that some residual risk still remains, meaning Lally's (2007) conclusions are negative NPV would still stand, although the numbers involved would be smaller.

risk is increased volatility in cashflows, and this results in a higher beta. Conversely, in the July 3rd workshop, the ERA noted that allowing a trailing average approach would mean that the cost of debt would effectively be passed through to customers, and thus a trailing average approach ought necessarily be associated with the equity beta being brought down considerably, potentially to the level of the asset beta.<sup>20</sup>

- 5.46 In both cases, the ERA is wrong. It is not the volatility of cashflows which matter for beta, but the covariance of cashflows with the market that determines beta. As Partington & McKenzie (2013) make clear in their recent advice to the AER, it is not necessarily the case that increased volatility in cashflows (or, conversely, a decrease) will lead to a different beta, but rather that it is only increased (or decreased) covariance that does so.
- 5.47 It is therefore false to suggest that the regulated firm is compensated as a matter of course for any increase in volatility through mismatch timing risk, and if the regulator intends to reduce beta to reflect an increase in cost pass-through of debt through a trailing average approach, it will first have to demonstrate that the decrease in cashflow volatility is in fact correlated with market returns.

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<sup>20</sup> Alternatively, they could, as the ERA suggests Lally notes in its appendix, engage in interest rate and credit default swaps. However, although Lally (as quoted by the ERA in its appendix) appears to believe this can mitigate risk, the ERA's own consultants, Chairmont, note that some residual risk still remains, meaning Lally's (2007) conclusions are negative NPV would still stand, although the numbers involved would be smaller.

## 6. ISSUES ASSOCIATED WITH FINANCING

- 6.1 We have no particularly pressing issues associated with the Chairmont Report, nor (the issues around mismatch timing risk discussed in the previous section notwithstanding) with the use of this information by the ERA. We do have a concern, however, with the ERA's seeming lack of understanding of how debt financing works. Its focus just on the minimum cost of debt makes it appear as though the ERA believes that funding multi-billion dollar energy infrastructure assets is something like funding a home loan, albeit at a larger scale.
- 6.2 This is obviously not the case, and it is important to incorporate several key practical aspects associated with debt financing into an analysis, rather than simply assuming that a particular interest rate is a generalisable indication of the efficient level achievable by all firms. Some key aspects include:
- There are issues in respect of liquidity, and how many swaps can be written on a daily basis in the Australian domestic market. However, above and beyond this, the market is not perfect, and if banks and other lenders know that a utility needs to write a certain number of swaps over a certain period to meet their regulatory obligations, this will influence pricing. In particular, each of our banks (as would be the case for any banks of regulated entities) require disclosure about what is transpiring with the regulator, and would thus have full visibility of our hedging requirements.
  - Although there are more than 30 domestic banks with whom we might conceivably write hedging contracts, in reality, our relationships with our existing banks mean that we are restricted to them. It is not the case that we could easily go to the market place and write a \$100 million swap with someone who knew little about us, without facing higher prices and collateral requirements.
  - Although one bank might have the lowest lending rates, we would not make use of just one bank (nor would any utility), because of a need for diversity of funding sources. Similarly, we would not make use solely of bank debt financing or bond financing just because it is the cheapest; the domestic market is simply not big enough to do this cost and risk-effectively, and we thus diversify.
  - Like all companies, we face a price and tenor trade-off in respect of maintaining our debt portfolio. It might be cheaper to borrow money for only a year, but failure to lock in at least some of our debt over longer periods of time, means that we are much more subject to short-term interest rate fluctuations and refinancing risk. This influences our credit rating as well; if all our debt was short-term, then it is likely our credit ratings would fall, and we would pay more for our debt. As the CEG report on actual debt tenors on energy utilities around the world, provided as part of the ENA submission to the AER's guidelines process makes clear, when they have the opportunity to do so, utilities take on long term debt as a means of mitigating credit risk.<sup>21</sup>
  - It is not usually possible for us, or any firm, to simply re-finance as debt rates go down. Bonds generally have "make whole" clauses in them whereby buying back the bonds early requires us to pay bondholders both the principal and the foregone interest (at the higher rate). Bank debt can be more easily pre-paid, but also contains penalty clauses, which increase the earlier the payback. There are, additionally, transactions costs associated with refinancing, which can reach several million dollars per transaction.

<sup>21</sup> This flies in the face of the ERA's assertion in paragraph 61 of the Working Paper that mismatch timing risk is the major risk for regulated businesses in respect of their debt.

## 7. CONCLUSIONS

- 7.1 Our discussions above have focused mainly on the analysis undertaken by the ERA, rather than its conclusions. Although we are in disagreement with some of its conclusions, such as the use of a five-year risk-free rate and the correctness of the ERA's bond-yield approach, and we would maintain that the choice of options in Section 87(10) of the NGR in terms of on-the-day versus trailing average approaches to estimating the cost of debt is important, we do not believe that the ERA's favouring of an on-the-day approach is necessarily fundamentally unsound. What concerns us, rather, is the way in which the arguments have been made.
- 7.2 The case for an on the day approach has been poorly made in the Working Paper. The statistical tests used to assess predictive power appear to have been mis-applied, the efficiency arguments are poorly made and either ignore or misconstrue some basic economic concepts, several key criteria from the NGR have been ignored and the ERA appears to be ignoring some of the practical, non-price aspects of corporate financing. All of this has led to a weak set of arguments. This, in turn, means that they are unlikely to survive legal challenge when applied in an access arrangement, with the result that all firms regulated by the ERA will lose certainty about what the rules of the game in the future might be. We would prefer to avoid this uncertainty by the ERA making robust arguments in support of defensible positions in respect to debt. To this end, we have made several suggestions for improving the analytical process.
- 7.3 We look forward to the next round of the process of establishing guidelines for calculating the efficient cost of debt, and to seeing the development of robust arguments that might support future guidelines.