

21 June 2013



Mr Warwick Anderson

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Australian Energy Regulator

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By email: rateofreturn@aer.gov.au

Dear Warwick

Thank you for the opportunity to provide the EUAA's response to the AER's Rate of Return Consultation Paper, and also initial comments in response to the advice to the AER by Frontier Economics and Professors Partington and McKenzie. The EUAA commends the AER's work in this area to-date, particularly in opening the issues to a broader and meaningful consideration.

The EUAA is very keen to ensure that the AER determines a reasonable allowed rate of return. This is a very significant regulatory parameter in view of its effects not just on profits, but on the expenditure incentive that it provides.

Our main concern, reflecting our long-held views, now confirmed by the advice the AER has received from Frontier Economics, Professor MacKenzie and Associate Professor Partington, is that a narrow and rigid adherence to specific models and theoretical constructs, will not deliver an appropriate calculation of the allowed returns.

After adjusting for differences in the risk free rate, the AER has set allowances for the return on assets that have been higher than the rates determined by jurisdictional regulators in Australia, and also higher, possibly significantly higher, than the rates determined by economic regulators in other countries. We encourage the AER to have particular regard to wider evidence on the decisions of other regulators, and also on the outcomes that network service providers have delivered, in deciding the appropriate return on assets.

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While we appreciate that the AER needs to move quickly to the specification of a guideline, we encourage the AER to find ways to develop an approach that systematically places far greater importance on wider evidence, and to ensure on-going inquiry in this direction.

The attached submission sets out our comments on specific issues raised by Frontier Economics, and in the AER's Consultation Paper. This submission has been prepared to short order and there are many unresolved and incomplete areas. We look forward to further engagement with the AER on these important issues.

At the end of this submission we attached advice to the EUAA from our consultant, on the specific issue of the merits of transition arrangement if the AER choose to introduce a rolling average for the calculation of debt costs. Their advice has been circulated amongst interested stakeholders in this issue and we attach it to this submission for wider circulation.

Yours sincerely

Phil Barresi
CEO

1. Choice of benchmark model – parent company ownership

The AER is proposing a benchmark for the determination of WACC that assumes parent company ownership. We agree with this. It will better account for debt and equity raising costs, and the ability to manage and diversify financial risks, for most privately owned NSPs. As such it will be a more suitable benchmark than the current “stand-alone” assumption.

2. Choice of benchmark - treatment of public and private ownership

The EUAA has long maintained that account needs to be taken of ownership in the determination of the allowed rates of return. The EUAA appreciates that the AER lacks the mandate to discriminate the allowed returns based on ownership, and the EUAA is not pressing this issue in the AER’s guidelines. However, we are concerned about we suggest are errors in Frontier Economics’ advice in this area and for this reason have set out response on this issue here.

Frontier’s report has broached the issue of whether ownership affects the cost of capital. This issue arises not just in the choice of benchmark where the industry is privately owned, but also as to comparisons of the cost of capital under government and private ownership.

Their report cites Brealey (2013) in saying “The company cost of capital is *not* the correct discount rate if the new projects are more or less risky than the firm’s existing business. Each project should in principle be evaluated at its *own* opportunity cost of capital. This is a clear implication of the value-additivity principle ... If the present value of an asset depended on the identity of the company that bought it, present values would *not* add up, and we know they do. (Emphasis in the original.)”

The Frontier Report then draws a conclusion from this, in a footnote, to say that “This is why the cost of capital of a government-owned business is always the same as the cost of capital of an otherwise identical firm in the private sector.”

We disagree with this conclusion and suggest that it does not follow Brealey. Specifically, there are three factors (sovereign risk, income taxes and debt costs) that Frontier has failed to recognize, and that therefore invalidate the conclusion they draw from Brealey.

Sovereign risk

Governments create sovereign risk. It makes no sense for a government to compensate itself for a risk that it creates. So the opportunity cost of capital for a business owned by a government

will be lower than the opportunity cost of capital for the same business owned by a private owner (for whom sovereign risk requires compensation).

Income taxes

Corporatised state government-owned NSPs deliver substantial income taxes to their governments. For example in the year to 30 June 2012, the Queensland Government collected \$354m in income tax equivalents from its three electricity network service providers, compared to \$1,288bn pre-tax profit. The receipt of income tax equivalents raised the value of the post-tax profits by 38%. This is a gain that government receives as a result of their power to tax profits, private owners, by contrast, obviously do not collect such tax income. Accordingly, to achieve the same post-tax return on investment in its network service providers as a private owner would, the opportunity cost of capital should reduce by the amount of the income taxes.

Debt costs

In addition to these fundamental factors, there are also significant differences in debt costs between private and government-owned NSPs. The state-governments apply what are called “debt guarantee” or “competitive neutrality” fees to the debt they provide to their NSPs.

Prima facie, the theoretical under-pinning for this seems sound: why should tax-payers underwrite the default risk for loans used to fund the provision of services to electricity users? However the practical application of the approach is problematic. State governments typically assume that if their network businesses were “stand-alone” that their debt would be rated as BBB-. The lower the assumed “stand-alone” rating the higher the debt fee income.

But on closer inspection, this approach is theoretically unsound. Brealey’s advice, cited by Frontier is clear: “The company cost of capital is *not* the correct discount rate if the new projects are more or less risky than the firm’s existing business. (our emphasis)” In other words, Brealey’s advice on the use of the company cost of capital is conditional on the relative risk of the “new projects” compared to the firm’s existing business. The relevant issue therefore, is whether the risk of investment in NSPs is different to the risk of the governments’ other investments and income streams. In this regard the advice of AMP Capital¹ in their submission to the Productivity Commission, is instructive:

“... the state owned (network service provider) companies obtain an advantage from having access to cheaper debt. Capital for funding network expansion of state owned utilities is raised

¹ AMP Capital (2012). AMP Capital Submission to the Productivity Commission: The capital efficiency of Australian electricity distributors.

by retaining some of the business' cash flow and by the issuing of government-guaranteed bonds. Rather than being "ring fenced" in the business unit, both debt and equity risks are effectively socialised over the broad state-wide tax payer base.

The NSW state government, for example, has a AAA credit rating. This provides an immediate arbitrage opportunity between the BBB- debt margins, upon which the regulated returns are based and the AAA margins that the state pays on its general purpose bonds.

The main control on state borrowings is provided by ratings agencies, who may downgrade a state's credit rating in the face of excessive borrowing. However, unlike most government services, utilities produce strong and reliable cash flows which are independent of market cycles, unlike payroll taxes and stamp duties. We would expect that utility cash flows would be favourably considered by ratings agencies and may even allow increased borrowings for other activities."

It is now widely known that the main reason for the significant increase in the prices charged by government-owned network service providers, is the expansion of the regulated asset bases of the government-owned service providers. Privately owned NSPs have expanded their regulated assets at a much lower rate than government- owned NSPs. It is wrong to imagine that the lucrative regulated returns available to state government owned NSPs as a result of undue compensation for sovereign risk, income taxes and debt fees, has not been a significant part of the explanation for higher regulated asset bases.

AMP Capital's submission summarises the situation eloquently:

"Although a state government does not have day-to-day control of its utilities, it exerts shareholder control and can effectively influence behaviour by demanding higher levels of dividends. In the absence of effective capital rationing, management can meet these demands most easily by maximising the capital spend, rather than implementing the degree of operational reform that would be necessary in a private sector-owned utility. A strategy of maximising the RAB also has the advantage of "locking in" future returns, while an operator can only keep operational efficiency gains for five years under the regulatory arrangements. These factors strongly incentivise a state-owned utility to over-invest in their networks, as:

- Dividends increase in proportion to the asset base;*
- The value of the borrowing cost arbitrage also increases as more capital is invested;*
- The apparent cost of expansion is relatively low due to the benefit from the state government debt guarantee;*

- *Income tax payments to state governments generally will increase in proportion to the regulated return on equity dividend payments; and*
- *The very strong resulting cash flows may materially assist the state's credit rating."*

3. The compensation of risks through cash flows

The Frontier Report has identified a number of business and financial risks and provided what might be a taxonomy of those risks. Our reading of their analysis, consistent with their presentation is that in almost all cases the size of those risks to NSPs is "low", and this was confirmed in the presentation of their Draft Report. We understand this to mean that Frontier considers that the compensation to be paid for these risks through the WACC is low, partly because the risks are low (e.g, as monopolies they are not exposed to competition risks) and partly because the risks are compensated through cash flows (expenditure allowances, pass-throughs, re-opener and contingent project provisions and so on). We noted the advice from Professor McKenzie and Associated Professor Partington that it is preferable to compensate risks through cash flows, rather than discount rates.

In broad, we agree with this analysis. The recognition that risks have already been compensated (in many cases excessively) through cash flows, sits well with the experience of our members in their dealings with NSPs, and it also sits well with our experience in many debates with the AER and NSPs in the design and implementation of regulation. Even more conclusively it is manifest in the premium to RAB that NSPs seem to be valued at in financial markets – as shown in the evidence cited by the AER (the JP Morgan analysis of Trading Multiples in Table D-2 of the Consultation Paper).

The Frontier Report cites several US studies to conclude (on page 16) that "*regulatory climate has a significant effect on the cost of capital*". We agree with this of course, and it is consistent with the advice provided by Professors Littlechild and Yarrow to the AEMC during the AER and EURCC's rule change reviews.

Frontier's analysis, in broad therefore, seems to be that many of the financial and business risks are effectively compensated through cash flows as a result of the regulatory design and the protections provided under it, and hence should affect the determination of the WACC (a lower WACC being needed than would otherwise be necessary).

We do however suggest that it would be very helpful to flesh this analysis out more fully, by defining more precisely the regulatory treatment of the various business and financial risks. We appreciate that this is somewhat difficult since the AER has yet to specify the regulations in its

guidelines. Nonetheless it would be helpful to start with pair-wise comparisons of the various aspects of the regulatory regime in the NEM compared to those in Britain, the US, New Zealand and other comparable developed economies where network economic regulation occurs through explicit controls. We suggest that such pair-wise comparison is essential for a proper understanding of the appropriate specification of many WACC parameters including the return on equity and gearing.

4. Reasonableness checks

We agree that the AER should have regard to evidence from a wide range of sources in assessing the reasonableness of its WACC decision. We propose that the AER commits serious effort to the development of reasonableness checks based on valuations and other information from financial and capital markets, but also particularly on the approaches adopted by other regulators, and the evidence of actual performance. We expand on this in the consideration of wider evidence.

5. The use of ranges versus point estimates

In the Consultation the AER has said that it will use point estimates, possibly from within a range, for the various WACC parameters. We don't agree with this approach for two reasons:

- **The whole may be more or less than the sum of its parts:** In other words, adopting a point from within a range for individual WACC estimates, does not necessarily deliver the same intended result as adopting the point from within a range of the full WACC calculation. It is the full WACC, not its constituent elements that determines prices. Summing up the point estimates of the parameters will not necessarily deliver a level of WACC that represents the appropriate point in the range.
- **There is value in the AER communicating the plausible range for the WACC, not just the plausible range for the constituent element of the WACC.** This provides valuable information on the AER's determination of the WACC relative to its range, and relative to the determination of the WACC (and its range) adopted by other regulators – who typically use ranges for the full WACC

6. The determination of the return on debt

We definitely do not support the proposition that the AER will use a range of possible approaches to the determination of the return on debt, and that these may change from one determination to the next. The potential for gaming with such an arrangement is obvious and we can see no off-setting benefit.

The EUAA has participated in several discussions on the determination of the return on debt during specific revenue/price control determinations and through the AEMC's rule change process. Our views on this are consistent with the Rule Change Committee's proposals and we refer the AER to those. Based on the advice of our consultant (attached in Appendix A) we are not convinced that a case exists for a transition arrangement. On the issue annual updating of the return on debt (versus once at the end of the regulatory control period) we suggest that this is an empirical issue and note the difference in the views set out by CEG (Tom Hird) and QTC (David Johnstone). We are not yet resolved on this specific issue.

7. Methodology for the determination of the return on equity

The AER's advisors, Professors Partington and McKenzie advice is clear: there is no obviously superior approach to the determination of equity returns. Professor Partington's advice that taking the simple average of the discount rates of various models may be better than other approaches, is particularly notable. This advice clearly suggests that undue confidence in the precision of valuation, asset pricing or other models is misplaced. This attests to the importance of the consideration of wider evidence in the assessment of WACC.

8. The consideration of wider evidence

A consistent theme in this submission, is the importance we suggest that the AER should place on wider evidence in the determination of the cost of capital.

In its Consultation Paper the AER rejected the submission from the EUAA and a number of other energy user advocates that the AER have regard to comparisons of allowed returns with those observed in other industries., the allowed rates of return against service providers' actual rates of return over time and comparisons of allowed rates of return set by economic regulators in other countries.

The AER's rejection of this was on the basis that "the incentive framework limits the usability of reasonableness checks based on comparisons of actual rates of return. For example, service providers are incentivised to outperform regulatory benchmarks for opex, capex, debt, tax and service performance. The ability for a service provider to earn an actual return on equity higher than the allowed return on equity, therefore, may be due to the outperformance of these benchmarks. Importantly, outperformance does not necessarily imply that the regulatory rate of return is incorrect".

With respect, we suggest that the AER has missed the point and should reconsider its approach in this area. Specifically, while we agree that there are many possible reasons why a firm may have achieved a better return (in absolute terms and/or the rate of return) than allowed by the regulator, it is nonetheless very useful to know whether the regulated firms have been more or less profitable than expected. Knowing this, it is valuable to understand why this occurred. Is it because the firms reduced expenditure below regulatory allowances or is it because of other factors, including that the allowed rates of return determined the regulator were too generous? We recognise of course that there may often be no simple answer to these questions. But asking these questions and then working hard to answer them can provide very valuable information that the AER should have regard in the determination of the WACC.

We note that other regulators have endorsed this approach. For example, on page 18 of their report, Frontier observes Ofgem's commitment to *"ongoing monitoring and publication of company performance in delivering against primary outputs and of the rewards they have earned from doing so"*.

We think there is great advantage in better quality regulatory decisions through the systematic development and use of such wider evidence. The data that we think would be particularly useful includes:

- Comparison of actual performance against targets. This could include evidence on expenditure and also on taxes, debt costs, and profits
- Comparison of the rate of return allowed in Australia, to that allowed in other countries, not just in Australia, for monopoly network service providers
- pair-wise comparisons of the regulatory design applied in Australia to that elsewhere

Appendix A: CME advice on transition arrangements

The adoption of a rolling average for the determination of the return on debt: is a transition needed?

Bruce Mountain
CME
14 June 2013

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Introduction

The Energy Users Rule Change Committee recommended that the return on debt should be based on a five year rolling mechanism that would be mechanically updated each year of the price control review. Their proposal was that this would address the problem of volatile estimates of debt costs when sampled over a short period of time, and it would also address the problem of windfall gains and losses that arise when there are differences between the embedded and future costs of debt.

The AEMC debated this approach after the EURCC lodged it as proposed rule change in August 2011. One of the sticking points in the debates that the AEMC hosted was whether or not there should be a transition from the current arrangements to a rolling average. A similar debate has arisen during the Better Regulation discussions hosted by the AER.

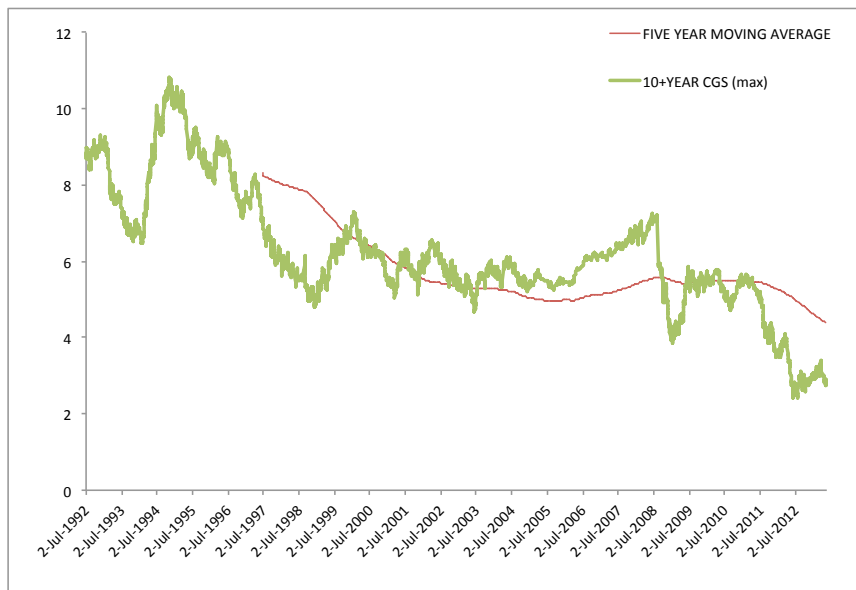
Following a recent AER seminar, we were invited to set out our views on transitional arrangements, having suggested at the seminar that some form of longer term average return on debt measure might be appropriate as a transition. Following this we have reviewed the arguments for transition arrangements, and examine the outcomes that might be delivered through the adoption of a rolling average, rather than the current approach. The conclusion we have reached, is that the arguments in favour of transition arrangements are not robust, and accordingly we see no need for such arrangements. The next section of this note examines what the adoption of a moving average might mean in terms of the allowed return on debt, and compared to what the current arrangements might deliver. The last section reviews the arguments in favour of a transition mechanism.

This is a working paper. It is intended as an aide to discussion and resolution, and does not purport to represent the view of the EUAA.

What will the adoption of a moving average mean in practice?

To obtain an approximate sense of what the adoption of a moving average might mean (compared to a 20-day average close to the start of the regulatory period) we have examined data of the yield to maturity of Commonwealth Government Securities with at least 10 years to mature. The results (derived from data on the RBA's website) is set out in Figure 1 below.

Table 1. Yield to maturity on Commonwealth Government Securities since January 1992



A five-year moving average would give a rate of 4.38% on 17 May 2013. A 20-day average to the same date would give a rate of 2.91%. By way of comparison the maximum, minimum, average and median risk free rate used in all AER, ACCC and (NEM) jurisdictional regulator electricity and gas network service provider revenue or price control decisions (61 decisions in total) is (6.81%, 2.95%, 5.38% and 5.49%).

Of course to this estimate of the risk free rate, would need to be added a debt risk premium to determine the return on debt. For "A" rated bonds we understand this premium is around 100 basis points and is currently perhaps twice that for "BBB" bonds, although the gap was substantially lower before mid 2008. In broad, while the risk free rate has varied considerably over the period from 1992 to 2013, adding a debt risk premium to this will somewhat attenuate the difference (before and after mid-2008).

In comparing the return on debt that might be calculated using a 20-day moving average versus a five year moving average it is important to specify the comparison clearly:

- For the “20-day” calculation, we assume the current arrangement of a 20-day average, using the value on the period to 17 May 2013 (2.91%), which is then fixed for all five years of the regulatory control period.
- For the five-year rolling average we assumed the approach proposed by the EURCC – return on debt should be based on a five year rolling mechanism that would be mechanistically updated each year of the price control review.

The table below summarises the difference in the return on debt (expressed as an average annual difference, in basis points, in the last column) assuming various outcomes for the average annual value of the risk free rate during the regulatory control period (in the first column).

Table 2. Comparison of “20-day” versus “rolling average”

Assumed average annual risk free rate during the control period	Average annual risk free rate assuming AER uses 20 day average at start of period	Average annual risk free rate assuming AER uses 5-year rolling average (%)	Average annual difference between 20-day and 5-year rolling average (basis points)
2.00%	2.91%	3.43%	- 52
2.50%	2.91%	3.63%	- 72
3%	2.91%	3.83%	- 92
3.50%	2.91%	4.03%	- 112
4%	2.91%	4.23%	- 132
4.50%	2.91%	4.43%	- 152
5%	2.91%	4.63%	- 172

The table shows that if the average annual risk free rate for the next five years declines to 2% per annum, then the average annual difference in the allowed return on debt between the two methods is 52 basis points. This rises to 172 basis points if the average annual risk free rate during the control period rises to 5%.

Clearly for regulatory decisions made today, users would be better off with a 20-day average rather a five-year moving average and the gap in outcomes becomes quite large if the average annual spot rate rises back up to circa 5% where it has been on average for much of the last 20 years. This would be the reverse of what happened for regulatory decisions in 2009 to 2011 where the use of 20-day averages has locked in windfall gains for NSPs.

It should be noted that if the AER decides to apply the rolling average approach the first time in which this approach will take effect, will be made from 1 July 2015 – four years after the Energy Users Rule Change Committee (EURCC) proposed it. The value of the five year rolling average calculated then might be considerably different from what it is today.

What are the arguments for “transitional arrangements”?

The industry’s arguments

QTC has conditionally suggested that transitional arrangements might be needed to address possible concerns over the potential for “gaming”. We don’t understand their concern: a change in methodology does not of itself create an opportunity for gaming, and so it is not clear why a transition arrangement should be introduced on this basis.

A review of NSP submissions to the AER’s issues paper does not suggest any clear articulation of transitional arrangements.

In forum discussions organised by the AEMC in response to the EURCC’s proposed rule changes, there was some discussion by some network service providers and some state treasury officials about the need for transitional arrangements. We can not recall a clear articulation in writing of these arguments, and our recollection is that the argument, general though it was, was framed around the proposition that a rolling average was a change from the current arrangement and so some form of transition was necessary.

The AER’s arguments

The AER (in its Issues Paper) suggests two bases to justify transition arrangements:

- The first is their view that it is “*important to manage the transition so that both consumers and service providers are not unduly impacted*”. Later in the Issues Paper, the AER clarifies this by saying that “*the basis to deciding on whether transition is required will be the impact of the change of approach on the service provider’s cash flows in the PRTM, and on the allowed revenue profile*”.
- The second is their view that any transition between two approaches should satisfy the NPV=0 condition, so as to mitigate the scope for sub-optimal outcomes in moving from one approach to the other”.

On the AER’s first claim: what does it mean to say that impacts are “undue” or “sub-optimal”. If the reason for changing the arrangements for the return on debt is that the current arrangement is flawed, and that a rolling average is a better solution (both propositions now widely accepted) how can any change resulting from the correction of a flawed arrangement be “undue” or “sub-optimal”, and hence deserving of a transition arrangement? Furthermore the suggestion that the criterion for transition

should be to avoid “undue” or “sub-optimal” changes seems to defy well-accepted principles of public policy in Australia: that changes in law should not automatically provide a right to compensation (to either producers or consumers).

The AER’s second claim is that transition should satisfy the “NPV=0 condition”. It is not precisely clear what the AER means by this, but we understand it to be short-hand for the idea is that over the life of an asset, if the allowed (regulated) return on debt is to be periodically reset, this should be done on a consistent basis so that in present value terms, the owners of an asset do not obtain a higher or lower return than if the allowance for the return on debt was set once for the life of the asset. This seems to be a theoretically sound objective. Unfortunately it is practically meaningless. NSP asset are typically long-lived (40 years or more) and have never been funded through debt whose maturity matches the asset’s economic life. As such establishing the benchmark for the “NPV = 0” criterion is at best highly speculative. On top of this, and perhaps more importantly, NSPs have been through substantial change (privatisation for some, corporatisation for others) which has changed the basis of their funding and their asset valuations. Appealing to a theoretical construct that ignores this reality does not seem to be a plausible justification for transition arrangements.

Smycznski and Popovic’s argument

Smycznski and Popovic in their paper “Estimating the cost of debt: A way forward” suggest that *“transitional arrangement should be introduced for all of firm’s cost of debt in order to ensure the regulated business and consumers are not adversely affected by the change in methodology. This is because the portfolio approach assumes businesses have entered into debt positions in the past. For example, at the start of the access arrangement the approach with a 5-year cost of debt assumption supposes regulated business have a 20 % exposure to 5-year debt that was entered into one, two, three and four years prior to the commencement of the access arrangement. However, regulated business may not have these exposures at the start of the first access arrangement when the new approach is introduced, as its actual debt issuance may be geared towards reflecting the previous regime. Instead, regulated businesses may still hold 5-year bonds issued during the previous access arrangement.*

It is necessary to deconstruct the argument to get to its essence. They suggest:

- (a) NSPs will have structured their “actual debt issuance” based on the current regime (which assumes that NSPs refinance their debt at every reset); and
- (b) The “portfolio” approach assumes businesses will have *“a 20 % exposure to 5-year debt that was entered into one, two, three and four years prior to the commencement of the access arrangement”*

Smycznski and Popovic conclude that there will be a difference between (a) and (b) and so transition arrangements are justified. Smycznski and Popovic’s arguments seem to have two main problems:

- First, and fundamentally, the specification of a regulatory control – whether for the cost of debt or equity, capex, opex or service standards can not be taken to imply that NSPs are required to run their businesses according to those controls. To the contrary regulatory controls establish incentives and NSPs have every reason to look for innovative ways to beat those controls. The regulator has no basis to suggest that an NSP *should* structure its operations to reflect regulatory benchmarks. If they have, that is a matter for them, and should not affect regulatory perspectives on the changes to regulatory methodologies.
- Second, there does not seem to be evidence that NSPs have structured their actual debt issuance based on the current regime. Specifically there is no evidence that NSPs completely refinance their debt every five years at the time of every rest. To the contrary, as far as we are aware, all NSPs have a portfolio of debt of various maturities, as one might expect. It might be the case that some Government-owned NSPs structure their hedges with their State Treasury lenders based on the regulatory controls, but why is this significant: these are merely internal, related-party transactions – the relevant issue will be whether the Treasuries hedge their NSP-related debt (in the markets in which they source their debt) based on the AER's controls. Again, as far as we are aware there is no evidence for this. Likewise, we suggest that there is no reason to believe that with a rolling average cost of debt, NSPs will necessarily issue debt to match the rolling average calculation.

More generally, we refer again to the well-accepted maxim of public policy in Australia: changes to laws and regulation do not carry a right to compensation for the losers. Smyczynski and Popovic's analysis does not appear to be consistent with this.