Jemena Gas Networks (NSW) Ltd

2015-20 Access Arrangement

Response to the AER's draft decision and revised proposal

Appendix 7.10 - Return on debt response

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GLOSSARY

AER	Australian Energy Regulator
DRP	Debt Risk Premium
JGN	Jemena Gas Networks
Guideline	Rate of Return Guideline
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
RBA	Reserve Bank of Australia
RAB	Regulated Asset Base
RPP	The revenue and pricing principles
SAPN	SA Power Networks
S&P	Standard and Poor's

1.   SUMMARY

1. The method that the Australian Energy Regulator (**AER**) proposes to estimate the return on debt, as set out in its draft decision for Jemena Gas Networks (**JGN**), will not deliver a return on debt that is consistent with the key aspects of the law and rules that underpin the rate of return framework. A return on debt estimation based on the draft decision methodology will not:

   • contribute to the achievement of the rate of return objective, as required by the National Gas Rules (**NGR**),[1]

   • adequately take into account the revenue and pricing principles (**RPP**), or

   • contribute to the achievement of the national gas objective (**NGO**).

2. The AER's approach is affected by critical errors of fact and logical inconsistencies, including the following:

   • **Setting the credit rating.** The AER has erred in its determination of the benchmark credit rating, by:

      − *for all energy networks*—setting the credit rating for energy network businesses at BBB+ contrary to empirical evidence, and

      − *for gas distribution networks*—applying the same credit rating for all energy network businesses on the basis that the risks faced by electricity networks, gas transmission and gas distribution businesses are 'sufficiently similar'. This is not supported by the evidence before the AER. Gas distribution businesses like JGN are more risk exposed than electricity network business and gas transmission pipelines. Further, evidence of actual credit ratings shows that gas distribution networks tend to have lower credit ratings than other energy networks businesses.

   • **Selecting future averaging periods.** The AER has erred in requiring that JGN nominate its averaging periods for estimating the return on debt before the access arrangement period commences rather than adopting JGN's proposed approach to selecting averaging periods. The AER's proposed approach in this regard is in error in circumstances where JGN's proposed approach:

      − minimises any difference between the allowed return on debt and the return on debt of a benchmark efficient entity

      − allows greater debt management flexibility, and

      − reduces the risk of averaging periods, which are commercially sensitive information, becoming known.

      If averaging periods are locked in too far in advance, there is a risk of misalignment between the averaging period that is locked in and the period over which a benchmark efficient entity would refinance its debt (and therefore misalignment between the return on debt that is estimated using the locked in averaging period, and the return on debt of a benchmark efficient entity).

   • **Selecting curves in the future.** The AER has erred by pre-determining that a simple average of fair value yield estimates from Bloomberg and the Reserve Bank of Australia (**RBA**) will provide a better estimate of the return on debt, whereas at the time of estimation that may not be correct. A method that selects the data source that fits reported bond yields at the time of estimation, if there is material divergence between the sources, will better achieve the rate of return objective.

   • **Extrapolating the curves.** The AER has erred in the method proposed for extrapolating the RBA and Bloomberg curves and its proposed method for forecasting inflation.

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[1]   NGR, rule 87(8).

- **Transitioning to the trailing average.** In light of the new analysis and evidence presented in the draft decision in relation to efficient financing practice under the previous regulatory approach, it would be an error for the AER to adopt the rate of return guideline (**the guideline**) approach to transitioning to the trailing average. The guideline approach to the transition would create a mismatch between the allowed return on debt and the required return on debt for the benchmark efficient entity. This mismatch is now significant, as a consequence of changes in market conditions since JGN submitted its original proposal. In particular, this mismatch has been exacerbated by the substantial reduction in debt yields since JGN's original proposal.

- **Adopting a fixed principle for the transition.** The AER has erred by rejecting JGN's proposed fixed principle for retaining the trailing average approach across periods, failing to recognise the benefits to stakeholders of committing to this approach and despite stating its intent (in the guideline) to retain it across periods in any case.

3. Given the AER's findings in relation to efficient debt financing practices under the previous on-the-day approach, the correct approach to estimating the return on debt is as set out in JGN's original proposal and supporting submissions with the revised approach to debt transition as outlined below. That is:

- **Benchmark**—using a 10-year term-to-maturity and a BBB credit rating for estimating the return on debt.

- **Transition**—using a hybrid to trailing average transition which transitions the risk-free rate over a ten year period from the rate on the day to a trailing average, while the debt risk premium (**DRP**) is simply rolled forward as a trailing average.

- **Data source**—using a four step method for selecting the appropriate data source in the first measurement period (Steps (b)–(e) below) and a five step method for selecting the appropriate data source in each future measurement period:

    a) calculate the difference in estimates produced by the extrapolated fair value yield estimates from Bloomberg and the RBA:

    i) if the difference is less than 60 basis points,[2] the estimate produced by the simple arithmetic average of extrapolated fair value yield estimates from Bloomberg and the RBA (extrapolated in accordance with the SAPN method, as recommended by CEG) is used.

    ii) if the difference is 60 basis points or greater, move to step (b)

    b) identify all relevant third party return on debt data series (e.g. Bloomberg FVC or BVAL), the RBA or CBASpectrum)

    c) estimate the return on debt for each data series, and an average of the available data series, for that averaging period

    d) identify relevant bonds to compare each estimate against and their yields over the averaging period that meet the predetermined objective criteria, and

    e) select the return on debt estimate (or combination of estimates) that best fits the sample of bonds identified in step (d).

4. This approach to estimating the return on debt will result in a return on debt which is necessarily and rationally preferable to the AER's approach as it more closely aligns with the rate of return objective, meets the requirements of the RPP and is consistent with the NGO.

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2   The 60 basis point value is set to align with the one per cent revenue threshold set out in the NGL. A 60 basis point difference between the two curves means that each curve is either 30 basis points higher or lower than the average of those two curves. Moving from that average to either curve corresponds to a $5.4M annual revenue impact—which is about one per cent of JGN's forecast building blocks revenue. The $5.4M is calculated as $5.4M = 30 basis points x $3B RAB x 60 per cent.

2. REQUIREMENTS OF THE RULES AND LAW

5. The role of the return on debt in the building block framework is to provide businesses with an allowance that is sufficient to provide debt-holders with a return commensurate with the credit risks that they face—for example, default, downgrade, or credit spread risk.

6. Providing this allowance is necessary to ensure that the business:

   • can attract necessary capital to undertake efficient investment, consistent with the NGO,[3] and

   • has a reasonable opportunity to recover at least the efficient costs it incurs in providing reference services— including a return that is commensurate with the regulatory and commercial risks involved in providing those services, consistent with the RPP.[4]

7. Overall, the design of the return on debt estimation method should be consistent with providing effective incentives to promote economic efficiency, consistent with the RPP.[5]

8. JGN identified the key aspects of the NGR and National Gas Law (**NGL**) relating to the return on debt in its original proposal. In summary:

   • **Rate of return objective.** The NGR require that the return on debt for a regulatory year be estimated such that it contributes to the achievement of the rate of return objective. The 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.[6]

   • **Revenue and pricing principles.** The RPP require that a service provider should be provided with a reasonable opportunity to recover at least the efficient costs it incurs in providing reference services and that a reference tariff should allow for a return commensurate with the regulatory and commercial risks involved in providing the reference service to which it relates.

   • **National Gas Objective.** Providing for a return on debt that is consistent with the rate of return objective is necessary to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers, consistent with the NGO.

   • **Relevant evidence and factors.** In estimating the return on debt, the NGR also require that regard is had to relevant estimation methods, financial models, market data and other evidence as well as the following four factors:[7]

     − the desirability of minimising any difference between the allowed return on debt and the return on debt of a benchmark efficient entity referred to in the allowed rate of return objective

     − any interrelationships between estimates of financial parameters that are relevant to the estimates of the return on equity and the return on debt

     − the incentives that the return on debt may provide in relation to capital expenditure over the AA period, including as to the timing of any capital expenditure, and

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[3]   NGL, s. 23.

[4]   NGL, s. 24.

[5]   NGL, s. 24(2)

[6]   NGR, Rule 87(8)

[7]   NGR, Rule 87(11)

    – any impacts (including in relation to the costs of servicing debt across AA periods) on a benchmark efficient entity referred to in the allowed rate of return objective that could arise as a result of changing the method that is used to estimate the return on debt from one AA period to the next.

9. It is in this context that JGN presents its response to the AER's draft decision and revised proposal in relation to the return on debt.

3.   RESPONSE TO AER DRAFT DECISION

3.1   OUTLINE OF AER'S REASONING

10. The AER's decision in relation to the return on debt involves the following steps:

1. the use of a BBB+ benchmark credit rating and a benchmark term of debt of ten years

2. the determination of the actual averaging periods for estimation of the return on debt for each year of the access arrangement period as part of the access arrangement determination—as opposed to permitting the nomination of the averaging periods during the access arrangement period

3. the use of a simple average of estimates using data from Bloomberg and the RBA to estimate the return on debt in each averaging period—as opposed to testing the most appropriate data source to be used in each relevant averaging period

4. a method for extrapolation of data sources to provide a ten year yield estimate, should this be necessary

5. the approach to estimating the return on debt will be transitioned to a trailing average approach over the next two access arrangement periods—the AER considers that an appropriate transition involves estimating the return on debt for the first year of the forthcoming period as an 'on-the-day' rate, and then gradually phasing in the trailing average over a ten year period—as opposed to the appropriate transition (for JGN) from the hybrid approach to the trailing average approach.

11. The reasoning that underpins these steps is based on a number of errors of fact and logic—which are described in detail below. As a consequence of these errors, the AER cannot reasonably be satisfied that the allowed return on debt for the forthcoming access arrangement period will contribute to the achievement of the rate of return objective or provide a reasonable opportunity for JGN to recover at least the efficient costs of providing reference services, consistent with the RPP.

12. For the reasons discussed below, the return on debt derived from the AER's approach will not reflect what is required to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers.

3.2   BENCHMARK CREDIT RATING AND TERM

3.2.1   A TEN YEAR TERM IS APPROPRIATE

13. JGN agrees that a benchmark term of debt of ten years should be adopted.

14. JGN notes that this term-to-maturity assumption is consistent with incentives for infrastructure businesses to issue longer term debt where possible, and also consistent with observed financing practice among regulated businesses. The relevant evidence in relation to financing practices of regulated businesses has previously been provided to the AER. This evidence demonstrates that for infrastructure businesses, such as JGN, efficient financing practice involves issuing long-term debt, with term at issue of around 10 years.[8]

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[8]   Based on a recent review of financing practice of infrastructure businesses in Australia, the UK and US, PwC concludes that infrastructure businesses strive to reduce refinancing risk by increasing the term of debt at issuance and that the average term at issuance for infrastructure businesses in Australia is 10.21 years (PwC, *Benchmark term of debt assumption: Report for the Energy Networks Association*, June 2013).

3.2.2   THE AER'S CONCLUSION ON BENCHMARK CREDIT RATING IS IN ERROR

15. The AER has erred in concluding that an appropriate credit rating for the benchmark efficient entity is BBB+.

16. There are two key errors of fact underpinning this conclusion:

   a) the AER has erred in concluding that the risks faced by electricity and gas businesses are 'sufficiently similar', such that a single credit rating assumption can be applied across all energy network businesses. In fact, the evidence shows that gas distribution businesses are more risk exposed than other energy network businesses, and

   b) the AER has erred in its determination of the credit rating across all energy businesses.

17. Each of these issues is discussed below.

3.2.3   GAS DISTRIBUTION BUSINESSES ARE MORE RISK-EXPOSED THAT OTHER ENERGY NETWORK BUSINESSES

18. The AER applies a single credit rating assumption of BBB+ for all energy network businesses on the basis that the risks faced by electricity and gas businesses are 'sufficiently similar' for a single benchmark entity to be appropriate in attempting to satisfy the allowed rate of return objective.[9]

19. This finding is not correct and is not supported by conceptual or empirical evidence.

3.2.3.1 Conceptual considerations

20. Gas distribution networks will face a greater risk exposure than electricity network businesses and gas transmission pipelines over the next regulatory period. This implies that, to ensure that the return on debt for JGN reflects the efficient financing costs of a benchmark efficient entity **facing a similar degree of risk** as JGN in the provision of reference services, it is necessary to distinguish JGN's risk profile from that of electricity networks and apply a credit rating which reflects this different risk profile.

21. In its draft decision, the AER considered demand and competition risks to be the two major sources of potentially different systematic risks. As set out in JGN's original proposal and submissions, gas distribution networks face greater exposure to demand and competition risks, including due to:

   • price cap regulation which does not apply to all energy network businesses

   • a greater sensitivity to end user fluctuations in demand, and

   • a greater exposure to customers switching to other fuels as gas in NSW, unlike electricity, is a fuel of choice.

22. JGN considers that that AER has not properly taken into account these differences in its draft decision.

Price cap versus revenue cap regulation

23. Gas distribution businesses such as JGN are generally subject to price cap regulation. In contrast, electricity network businesses are typically subject to revenue cap regulation. The form of regulation applied to a business (including whether a price cap or revenue cap applies) can significantly impact the business' exposure to risk. Businesses subject to a price cap have a much greater exposure to demand risk than those subject to a

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9   Draft decision, [3-131].

revenue cap. As noted by the AER, under revenue caps, service providers can adjust their prices to receive the approved revenue where forecast differs from actual demand. On the other hand, businesses subject to price caps are much more constrained in their ability to adjust prices.

24. This has recently been observed by the AEMC in its submission to the Senate Standing Committee inquiry into the performance and management of electricity network companies. The AEMC notes:

   • price and revenue caps give different risk allocations between consumers and networks, and

   • the AER should take account of variations in the allocation of risk when setting the allowed rate of return.[10]

25. In the draft decision, the AER states:[11]

   The revenue or price setting mechanism (form of control) mitigates differences in demand risk for both gas and electricity service providers. Under revenue caps, service providers can adjust their prices to receive the approved revenue where forecast demand differs from actual demand. Under price caps, service providers may mitigate the risk of forecast error by restructuring tariffs to offset demand volatility.

26. The AER acknowledges that there are different demand risks which apply to gas and electricity providers then notes that service providers under revenue caps can adjust prices to mitigate demand risk. The relevant question, which is not properly addressed by the AER, is whether after engaging these mitigation strategies gas and electricity providers are ultimately exposed to a sufficiently similar degree of demand risk.

27. JGN submits that ultimately, price cap regulation results in a greater degree of risk exposure than revenue cap regulation because businesses under a price cap are unable to adjust prices to recover any revenue shortfall which may arise due to a decline in demand—in short, price cap businesses are exposed to demand risk while revenue cap businesses are not.

Greater sensitivity to fluctuations in demand

28. The demand for capacity on gas distribution networks is directly related to demand from end-users which fluctuates in response to various factors including weather, the final delivered price of gas, and availability and price of substitute fuels. Capacity on gas transmission pipelines is not subject to the same degree of demand volatility and neither are electricity network businesses. For example, gas transmission capacity is often fully contracted and so not subject to short-term fluctuations, while electricity networks under revenue cap regulation can adjust pricing to mitigate fluctuations and are not subject to the same risk of consumers switching to substitute fuels.

29. The AER draft decision simply notes that demand for both gas and electricity is relatively inelastic. Again, the relevant question is not properly addressed by the AER. Demand for both gas and electricity might be relatively inelastic. The relevant question is whether gas distribution service providers are more exposed to demand risk than other energy network businesses.

Fuel of choice

30. Gas in NSW, unlike electricity, is a fuel of choice and customers can and do switch away from gas if, for example, wholesale prices are too high.

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[10] AEMC, AEMC submission to the Senate inquiry into electricity network companies, 18 December 2014, (Submission number 41), p. 6.

[11] Draft decision, [3-300].

31. This issue is discussed in the expert report of HoustonKemp (Appendix 1.1). HoustonKemp notes:[12]

> *The Australian energy sector is undergoing profound change driven in part by the fall in electricity demand placing downward pressure on costs across the supply chain, significant investment in domestic solar PV capacity, and the emergence of a liquefied natural gas export industry in Queensland. While the implications for the electricity sector have been well acknowledged, less consideration has been given to how these factors are affecting the gas sector. In particular:*
>
> • *customers are more aware of the choices they have between energy products and suppliers;*
>
> • *technological, market and policy developments have increased the attractiveness of alternative energy sources for space and water heating; and*
>
> • *the changes in relative prices of electricity and gas are increasing the competitiveness of electricity for many energy consumers.*
>
> *…*
>
> *In short, competition from electricity as an energy fuel for gas consumers is becoming stronger. This is expected to be ongoing, leading to increasing potential for substitution from gas to electricity.*

32. The AER states that while electricity and gas networks compete with one another at the margin, this has not caused major changes in the utilisation levels of existing gas or electricity network assets to date.

33. However, simply looking at whether there has been major changes in the utilisation levels of existing gas or electricity network assets due to competition between gas and electricity does not directly address the issue of whether gas distributors face a greater substitution risk, since utilisation levels will be influenced by a number of factors. For example, it might have been forecast that utilisation levels for gas assets would significantly increase through growth of gas hot water penetration. However, due to substitution away from gas, increased solar hot water penetration left existing gas asset utilisation relatively constant. The constant overall utilisation level does not mean that there was little or no substitution risk.

Asset stranding and depreciation risk

34. There is a greater exposure to asset stranding and depreciation risk for gas compared to electricity network businesses.

35. The risk of asset stranding is greater for gas businesses due to greater competition from alternative fuels, and more scope under the NGR for removal of assets from the regulated asset base (**RAB**) where they become redundant.[13] The scope for removal of redundant assets is much more limited under the National Electricity Rules.

36. The AEMC's submission to the Senate Standing Committee inquiry into the performance and management of electricity network companies notes that any asset write downs without compensation, which is a risk under the NGR, would increase the long term required rate of return for future investors. The AEMC noted that this risk should be taken into account when setting allowed returns.[14]

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[12] HoustonKemp, Implications for Jemena Gas Networks (NSW) of Increasing Competition in the Consumer Energy Market: A Report for Jemena Gas Networks, February 2015, pp. ii–iii.

[13] NGR, rule 85.

[14] AEMC, *AEMC submission to the Senate inquiry into electricity network companies*, 18 December 2014, (Submission number 41), p. 6.

37. The AER, again, does not address the comparative difference in risk between gas distribution network providers and other energy network providers and simply states that 'both gas and electricity networks face relatively slow rates of technological change and consequently both face relatively low stranding risks.'

38. The AER's decision does not address the key point that gas and electricity network businesses have different levels of asset stranding risk and cannot equally mitigate asset stranding risks through prudent discount and accelerated depreciation provisions such that they have a sufficiently similar exposure to this risk.

3.2.3.2 Empirical evidence

39. As noted in JGN's original proposal, evidence of actual credit ratings shows that gas distribution networks on average have lower credit ratings than other energy networks, reflecting greater risk associated with the supply of gas network services.

40. JGN has updated its credit rating analysis in Table 3-1 below. This shows that, based on the sample of energy network businesses used by the AER, gas businesses tend to have lower credit ratings than electricity businesses or mixed electricity/gas businesses. Over the period 2015-2014, the median credit rating for gas businesses was BBB-, while for electricity and mixed businesses the median credit rating was BBB+.

Table 3-1: Credit ratings for energy network businesses

Business	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Median
Gas only businesses											
APT Pipelines Ltd	N/A	N/A	N/A	N/A	BBB	BBB	BBB	BBB	BBB	BBB	BBB
ATCO Gas	N/A	N/A	N/A	N/A	N/A	N/A	BBB	BBB	A-	A-	BBB+
DBNGP Trust	BBB	BBB	BBB	BBB	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-
Energy Partnership (Gas)	BBB	BBB	BBB	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-
Envestra Ltd	BBB	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-	BBB	BBB+	BBB-
Median for gas businesses	**BBB**	**BBB**	**BBB**	**BBB-**	**BBB-**	**BBB-**	**BBB-**	**BBB-**	**BBB**	**BBB**	**BBB-**
Electricity and mixed businesses											
ElectraNet Pty Ltd	BBB+	BBB+	BBB+	BBB+	BBB	BBB	BBB	BBB	BBB	BBB+	BBB+ / BBB
SAPN	A-	A-	A-	A-	A-	A-	A-	A-	A-	A-	A-
Powercor Australia LLC	A-	A-	A-	A-	A-	A-	A-	A-	BBB+	BBB+	A-
CitiPower	A-	A-	A-	A-	A-	A-	A-	A-	BBB+	BBB+	A-
United Energy Distribution	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB
DUET Group	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-	N/A	N/A	BBB-
SP AusNet	A	A	A	A-	A-	A-	A-	A-	A-	A-	A-

Business	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Median
SGSP (Australia) Assets	N/A	N/A	N/A	A-	A-	A-	A-	A-	BBB+	BBB+	A-
Median for electricity and mixed	**A-**	**A-**	**A-**	**A-**	**A-**	**A-**	**A-**	**A-**	**BBB+**	**BBB+**	**BBB+**

Source: Bloomberg.

41. This evidence does not support the AER's view that all regulated energy businesses are likely to face a sufficiently similar degree of risk.

3.2.4   THE AER HAS ERRED IN ITS DETERMINATION OF THE BENCHMARK CREDIT RATING FOR ENERGY NETWORKS

42. Even if risks were sufficiently similar across energy network businesses to apply a single benchmark credit rating, the empirical evidence referred to by AER in support of a BBB+ rating correctly applied and interpreted supports a BBB rating across electricity and gas network businesses.

43. The AER notes that its own analysis shows some support for a BBB rating and that the expert report by Associate Professor Lally found a rating of BBB to BBB+ rather than a BBB+ rating.[15]

44. The analysis submitted with JGN's original proposal shows that an appropriate credit rating for energy network businesses is BBB. JGN noted that for the AER's sample of energy network businesses, the median credit rating each of the last five years has been BBB.

3.2.5   CONCLUSION ON CREDIT RATING

45. JGN considers that BBB is the most appropriate credit rating assumption when estimating the return on debt for the benchmark efficient entity for the next AA period. This rating better reflects the degree of risk faced by JGN in the supply of reference services.

46. Using a credit rating higher than BBB would lead to JGN not being adequately compensated for the efficient financing costs of a benchmark efficient entity facing a similar degree of risk as that which applies in respect of the supply of reference services. In short, JGN would be inadequately compensated for efficient financing costs, creating a risk that JGN cannot attract capital required to undertake efficient investment.

3.3   AVERAGING PERIOD SELECTION

47. The AER draft decision is that JGN's averaging periods should be determined before the access arrangement period commences on the basis that this:

- allows the AER to substantively assess the proposal and avoids the practical difficulties with either:
  - creating a new process for approving averaging period proposals, or
  - assessing averaging periods during the annual tariff variation process

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[15]   Draft Decision, [3-130]–[3-131].

which is meant to be a compliance check that takes place over a short time frame.[16]

- is consistent with the rate of return objective on the basis that it:[17]

    − provides sufficient flexibility for service providers to organise their financing arrangements by allowing the length of the averaging period to be nominate within 10 consecutive business days and 12 months

    − provides sufficient certainty for service providers to organise their financing arrangements in that no matter how interest rates change service providers will be compensated for the return on debt during the averaging period by reflecting those interest rates

    − results in an unbiased outcome through advance nomination

    − assists in updating service providers' return on debt by automatic application of a formula.

48. The AER noted that by adding an additional process each year to determine its averaging periods JGN's proposal adds further complexity and costs to the administration of regulation. The AER was not satisfied that the benefits of JGN's proposed period nomination process would outweigh the additional complexity and administrative costs.

49. The AER also stated that it was 'not clear' that adding another process which requires judgement and assessment is consistent with the rule requirement for the change in revenue from the annual update to result from the automatic application of a formula specified in the determination.[18]

50. As set out below, the propositions which the AER relies on to conclude that their approach is consistent with the rate of return objective are either incorrect or actually lead to outcomes which are inconsistent with that objective. The AER's approach is in fact likely to lead to a greater risk of mismatch between the efficient financing costs of the benchmark efficient entity and the allowed return on debt.

51. In contrast to the AER's proposed approach, JGN's approach is consistent with the rate of return objective the RPP and the NGO. It is also far superior in terms of promoting efficient debt management practices. JGN's proposal:

- provides real flexibility for service providers to align the averaging period with efficient refinancing requirements

- reduces the risk of the averaging periods, which are commercially sensitive, becoming known

- provides greater certainty and reduced risk of mismatch between efficient financing costs and the allowed return on debt

- provides outcomes that are less biased than the AER's approach in terms of the possibility of gaming by the service provider and in terms of mis-forecasting when the benchmark efficient entity would refinance its debt, and

- does not introduce unwarranted additional complexity and is consistent with the requirement that changes in total revenue resulting from annual updates are effected through the automatic application of a formula specified in the determination.

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[16]   Draft decision, [3-156].

[17]   Draft decision, [3-157].

[18]   Draft decision, [3-158].

3.3.1 THE AER'S APPROACH IS NOT CONSISTENT WITH THE RATE OF RETURN OBJECTIVE, THE RPP OR THE NGO

52. As discussed in JGN's original proposal, our proposed approach to nomination of averaging periods is principally directed at minimising any difference between the allowed return on debt and the return on debt of a benchmark efficient entity referred to in the allowed rate of return objective. Under the AER's new approach with multiple return on debt estimates which are different for different regulatory years, the gap in timing between the averaging period being determined by the AER and when that averaging period occurs is much larger compared to the gaps in timing that typically existed under the previous on-the-day approach. Consequently, it results in a much greater risk of mismatch between efficient financing costs and the allowed return on debt.

53. The greater the timing gap, the less information the service provider has available to it when nominating the averaging period over which it is supposed to finance or refinance its debt. For instance, the service provider will have less information/certainty about relevant market conditions, debt instruments available, its spending requirements etc. This increases the risk of mismatch between the allowed return on debt and the return on debt of a benchmark efficient entity referred to in the allowed rate of return objective and does not facilitate efficient financing practices. A likely outcome is that the service provider either ends up raising the debt at a greater than the efficient cost and/or not raising debt during the averaging period, thus giving rise to a risk of mis-match.

54. The reason that businesses are given an opportunity to nominate future averaging periods is so that they can align their actual debt costs with the return on debt allowance by managing their borrowing and hedging arrangements (where they have such arrangements in place) around the averaging periods.[19] It is good practice to do this as it reduces exposure to interest rate risk, which would otherwise arise if actual debt costs and the return on debt allowance were misaligned. Under the previous approach, the time gap between when the averaging period was determined by the AER and the occurrence of the averaging period was at most one year. Under the new approach the gap could be up to five years.

55. Whilst the AER's new approach provides flexibility in the chosen length of the averaging period—i.e. between 10 consecutive business days and 12 months—this flexibility is minimal and is not sufficient for service providers to organise their financing arrangements as claimed in the draft decision.

56. JGN's approach allows the benchmark entity the flexibility to align the timing of future averaging periods with expected (and required) debt management practices in the proposed averaging period. The later this period is set, the better informed we—or a benchmark entity in our circumstances—will be about these expected practices and therefore the appropriate timing of the averaging period to align with these practices—promoting efficient debt management practices. On the other hand, if averaging periods are locked in too far in advance (e.g. five years in advance), there is a risk of misalignment between the averaging period that is locked in and the period over which a benchmark efficient entity would refinance its debt—and therefore misalignment between the return on debt that is estimated using the locked in averaging period, and the return on debt of a benchmark efficient entity.

57. This flexibility is particularly relevant for small firms like JGN because we—or a benchmark entity in JGN's circumstances—cannot effectively issue debt evenly over time to mimic the trailing average benchmark. That is, it is impractical and costly for us to issue 10 per cent of our debt each year and to do so during an averaging period that is nominated far in advance, especially as financing needs change. Instead, both debt issuing and hedging strategies are combined to mimic the trailing average benchmark as best we can—and to do this effectively we need flexibility to nominate averaging periods at a time closer to the start of those periods so that we can incorporate changes in:

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[19] See, for instance, AER, Final decision: APA GasNet, March 2013, Part 3, p. 45.

- market conditions—including changes in market sentiment and the products available for efficient debt management, and

- our debt refinancing and new issue requirements—including due to changes in capital expenditure needs or early refinancing requirements set by rating agencies such as Standard and Poor's (**S&P**).

58. For businesses like JGN, there is considerable uncertainty around when refinancing will need to occur. Even where the maturity of existing debt is known, the exact timing of refinancing that debt is subject to market conditions around the time of maturity and credit rating agency requirements.

59. The implicit and erroneous assumption in discounting the substantial flexibility benefits of JGN's proposal is that the benchmark efficient entity—an efficient entity with a similar degree of risk as that which applies to JGN in respect of the provision of reference services—would not need this greater degree of flexibility in conducting efficient debt management practices. This assumption could only be true if the benchmark entity did not face a similar degree of risk or uncertainty as that applying to JGN.

60. This is clearly not the case, as by definition the circumstances facing this benchmark firm—like those facing JGN—involve uncertainties that no one can perfectly predict. It would be an error to assume that the benchmark firm unlike JGN has perfect foresight and so can line up its financing requirements up to five years in advance.

61. Such circumstances include capex required to meet future (unknown) demand, replacement requirements, and safety or other obligations; and future conditions in the market for debt funds. The experience of JGN and service providers in general is that the quantity and timing of capital expenditure requirements—and therefore the efficient debt management requirements—cannot be perfectly predicted in advance of the regulatory period over which they apply. Economic conditions may change, the priority of different capex projects may change, new projects may be required etc.

62. Given this uncertainty around future spending and when refinancing will need to occur over the course of the next access arrangement period, it would be imprudent to 'lock in' averaging periods. Locking in averaging periods may lead to inefficient debt management practices if the business seeks to undertake refinancing in accordance with averaging periods that were locked in five years in advance and, rather than to reflect changes in market conditions or refinancing requirements over the course of the next AA period. For example, businesses may undertake refinancing earlier than would be efficient, in order to align with the averaging period that was locked in five years prior. It may also be that locking in averaging periods too far in advance leads to the return on debt allowance being higher than if the averaging period had been chosen closer to the time of refinancing—that is, the return on debt may well be higher in the pre-determined averaging period, compared to the period that would have been chosen to align with efficient debt management practice.

63. Therefore, JGN considers that the AER's proposed approach is not consistent with the rate of return objective. JGN's approach—which allows for better alignment of averaging periods with efficient financing practice—better promotes the NGO and is more consistent with the RPP.

3.3.2   JGN'S PROPOSAL DOES NOT RESULT IN BIAS

64. One of the reasons for the AER's draft decision that JGN's averaging periods should be determined before the access arrangement period commences is that, in the AER's view, this results in an unbiased outcome.[20] The AER refers to advice from Professor Lally that if a regulated business can select an averaging period by looking at historical yields, it may introduce an upward bias.

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20   Draft decision, [3-157].

65. It is not clear from the draft decision whether the AER considers that JGN's proposal would introduce bias. If not, then the fact that the AER's proposal would result in an unbiased outcome is no reason to reject JGN's proposal.

66. To be clear, JGN's proposal will also result in an unbiased outcome. JGN's proposal (like the AER's) involves averaging periods being nominated well in advance of them occurring. Therefore there is no risk of JGN gaming the selection of averaging periods, or introducing a risk of upward bias. In this regard, the advice from Professor Lally that is referred to by the AER is not relevant – JGN will not be able to look at historical yields and select a past period which provides for a favourable return on debt allowance.

3.3.3   JGN'S PROPOSAL DOES NOT INTRODUCE 'ADDITIONAL COMPLEXITY'

JGN's proposal is not biased, nor is it overly complex. JGN has set out a clear and simple process in its proposed AA for approval of future averaging periods. This process involves:

- nomination by JGN of each proposed averaging period at least 50 business days prior to the start of the financial year in which it is to occur,[21] and

- a 20 business day period for AER to decide whether to approve   the proposed averaging period, by reviewing it against the clear and simple objective criteria of whether:
  - it is a period of at least 10 consecutive business days, and
  - it falls entirely within the financial year immediately prior to the financial year for which it is to be used to calculate the annual return on debt observation.[22]

67. The AER has not raised any specific concern in relation to the complexity or administrative burden associated with any aspect of this process, and it is not clear to JGN how such a simple process could be seen to introduce 'additional complexity'.

68. JGN's process addresses the AER's stated reason for having the averaging periods chosen prior to commencement of the AA period. The AER will be able to substantively assess the proposed averaging period during the annual tariff variation process and this will in fact be a 'compliance check'.[23] The process under JGN's proposal, would only involve three simple steps:

- an email from JGN to AER staff proposing a period

- AER staff doing a 'compliance check' of the proposed period against the clear and objective criteria set out in the AA—which does not require any exercise of discretion or judgment, and

- an email from the AER to JGN notifying it of the AER's approval of the proposal, if the criteria are satisfied.

69. In any event, any perceived complexity does not impact the reliability of this approach or its desirability as against other approaches in its ability to ultimately achieve the rate of return objective, satisfy the requirements of the RPP and promote the NGO.

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[21]   Proposed Access Arrangement, clause 5.4.

[22]   Proposed Access Arrangement, clauses 5.4 and 5.5.

[23]   AER, DD, Table 3.34 , [3-156]

3.3.4 JGN'S PROPOSAL IS NOT INCONSISTENT WITH THE REQUIREMENT FOR 'AUTOMATIC' UPDATING

70. The AER states that:[24]

> it is not clear to us that adding an additional process that requires judgement and assessment is consistent with the rule requirement for the change in revenue from the annual debt update to result from the automatic application of a formula that is specified in the determination.

71. JGN does not consider that the rule requirement referred to by the AER in any way precludes the use of an averaging period nomination process such as that proposed by JGN.

72. The relevant rule requirement is that where the return on debt is to be estimated such that allowed return may be different in different years of the access arrangement period, then any resulting change to total revenue must be effected through the automatic application of a formula that is specified in the decision on the access arrangement.[25] JGN does not consider that this requires all averaging periods to be nominated in advance, for two reasons:

- **Only revenue must update through a formula.** As noted above, the formula that is required to be specified under the NGR is a formula to effect resulting changes to total revenue, where the return on debt is different between years. It is not necessary for all future averaging periods to be nominated in advance of the commencement of the access arrangement period, in order for the calculation of the return on debt for each year to be specified in a manner that will allow any resulting change to total revenue to occur through the automatic application of a formula. The averaging period simply determines when one input into the calculation of the updated return on debt is to be estimated. Provided this period is nominated in advance of it occurring, and that it takes place sufficiently ahead of the resulting change to total revenue needing to occur, there is no reason why it would prevent updating of total revenue through application of a formula.

- **Our proposed calculation process is automatic.** Further, a calculation process can be automatic, without the need for all inputs into that calculation (or their measurement periods) to be pre-determined. In fact, this is exactly how the AER will estimate the cost of debt under its proposed approach, as set out in the draft decision—under the AER's approach a number of key inputs into the annual return on debt calculation are currently unknown and will need to be determined at the relevant time. For example, the set of fair value curves that will be available in each future averaging period is currently unknown. JGN's proposed access arrangement does set out automatic formulae for updating of the return on debt—the trailing averaging formula—and for consequential changes to total revenue and tariffs—the tariff adjustment formula. All that is to be determined through the averaging period nomination process is the measurement period for one input into the return on debt update process.

73. Therefore, it is clear that JGN's proposed averaging period nomination process is not precluded by the requirements of the NGR for automatic updating of total revenue.

3.3.5 CONCLUSION

74. For reasons set out above, JGN considers that its proposed nomination process is clearly preferable to (unnecessary) pre-determination of all future averaging periods, in terms of contributing to achievement of the rate of return objective.

75. However, if our revised proposal to retain the averaging period setting mechanism is not accepted, JGN submits that the future averaging periods set out in Appendix 7.11 should be adopted.

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[24] Draft decision, [3-158].

[25] NGR, rule 87(12).

3.4   SELECTION OF DATA PROVIDER

76. JGN agrees with the AER that independent third party data series should be used to estimate the return on debt and these curves should be extrapolated, where necessary, to the benchmark term to maturity of 10 years.

77. However, JGN considers that there is no reasonable basis in the draft decision for rejection of its proposed approach to selection of data sources for estimating the return on debt over future averaging periods.

78. The AER's approach in the draft decision is to assume that a pre-determined simple arithmetic average of extrapolated fair value yield estimates from Bloomberg and the RBA will provide a better estimate of the return on debt for each of the next five years than a method that selects the relevant data source each regulatory year that best fits a sample of observed bond yields.

79. The implicit assumption that a simple arithmetic average of fair value yield estimates from Bloomberg and the RBA—extrapolated to 10 years—will provide a better estimate of the return on debt in respect of each year of the forthcoming access arrangement period is flawed. Indeed, the very reasons that the AER lists as to why a simple average should be used over a single curve actually support JGN's more flexible within period estimation approach. For example, the AER's draft decision notes:[26]

    …in some market circumstances, the RBA criterion may result in a sample that better reflects the circumstances of the benchmark efficient entity, but at other times the BVAL criterion may be superior.

    As we will annually update the return on debt estimate, it is important that we identify a curve or combination of curves **that will give ongoing estimates that are appropriate in differing market circumstances throughout the regulatory period**. *For this reason, we are satisfied that the differences between the two curves' bond selection criteria support a combination of the curves, rather than selection of one or the other.*

    As a result, there is scope for the choice of one curve or the other to have substantial implications for the return on debt depending on the selection of an averaging period. That is, if we were selecting a curve only for the averaging period for July 2013 when the estimates were very similar, we may conclude that the choice of curve is not material. However, the same consideration undertaken in 2014 would lead to a different conclusion. For example, between January and June 2014, there is an average difference of 55 basis points between the two curves. [emphasis added]

80. Experience and past cases in relation to the selection of data series for the estimation of the return on debt also show that there is no one unambiguously correct way to determine ahead of any particular averaging period the best data source in estimating the debt risk premium that should be allowed to the service provider. The answer may change (and in fact has changed) over time, with changes in the construction of the relevant curves, economic events affecting bond activity and data availability.

81. As noted by the Tribunal in JGN's last access arrangement review:[27]

    …there is no one unambiguously correct way to determine the best curve on a priori grounds. The curves must be subjected to the ultimate test – that of the relevant data.

82. In that case, the Tribunal found that the Bloomberg curve provided a much better fit to the observed bond data than either the alternative curve at the time—the CBASpectrum curve—or an average of the two. The Tribunal concluded:[28]

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[26]   Draft decision, [3-142].

[27]   *Application by Jemena Gas Networks (NSW) Ltd (No 5)* [2011] ACompT 10, [88].

> *The Bloomberg fair value curve is a much better fit than the CBASpectrum curve. The latter is so poor a fit to the data that it would not even be appropriate to consider averaging it with the Bloomberg curve.*

83. JGN's within period estimation method is designed to address the risk that market conditions—and therefore the fit of the pre-determined curve to relevant data—may change during the access arrangement period. JGN's approach allows the data sources to be tested against the observed bond data each time the data is to be sourced (i.e. yearly) rather than locking in a particular data series prior to the commencement of the regulatory period.

84. JGN therefore maintains its view that it is appropriate for there to be a process for testing the performance of each data source at each relevant time and selecting the source that best fits the data. However, in response to the draft decision, JGN has amended its proposal as follows:

   • **Default estimate**—an average of available yield curves will be the default for estimating the prevailing return on debt in each year. This default position will apply unless the available yield curves diverge materially (by more than 60 basis points). Where the available yield curves do diverge materially, the goodness-of-fit test will be applied to identify the yield curve that best fits the observed bond yield data; and

   • **Average of curves**—where a goodness-of-fit test is applied, an average of the available yield curves will be included in the set of yield curves to be tested. If the average provides the best fit to the observed bond yield data, then it will be used to estimate the prevailing return on debt for that year.

85. JGN considers that this revised approach is consistent with the AER's preference for use of an average, while addressing JGN's concern that an average may not be appropriate in all circumstances. In particular, where yield curves diverge materially, this may reflect anomalous behaviour by one curve. JGN's revised proposal provides for a 'circuit breaker' to address the risk of anomalous behaviour by one or more of the available yield curves over the course of the access arrangement period. In circumstances where relevant averaging periods are some years away, and in light of recent history with the use of yield curves, JGN maintains that it is appropriate to include a circuit breaker in the event of unexpected events occurring. In short, JGN does not consider that it is possible at this point in time to be certain as to what data source or data sources will provide an estimate of the return on debt that contributes to the allowed rate of return objective, at least in respect of years 2 to 5 of the access arrangement period.

3.4.1 THE AER'S ANALYSIS DOES NOT SUPPORT THE PRE-DETERMINED USE OF AN AVERAGE FOR EACH WITHIN PERIOD ESTIMATION DURING THE PERIOD

86. Based on the analysis undertaken by the AER, it cannot reasonably be satisfied that an average of the (extrapolated) RBA and Bloomberg curves will provide for the best estimate of the return on debt—and specifically the debt risk premium—at each future point in time when the return on debt needs to be measured (i.e. in each of the future averaging periods). The AER's analysis is necessarily based on past performance of these curves, and hence provides at best limited information on their likely future performance.

87. The AER's decision to adopt a simple average of the two curves is based on the following:[29]

   • based on analysis of the bond selection criteria and curve fitting methodologies, the AER is not satisfied that either curve is clearly superior

   • the fact that the two curves have regularly produced substantially different results at particular points in time suggests that it may not be appropriate to use one in isolation

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28   *Application by Jemena Gas Networks (NSW) Ltd (No 5)* [2011] ACompT 10, [86].

29   Draft decision, [3-135].

- advice from Associate Professor Lally that it is reasonably likely that a simple average of the curves would produce an estimator with a lower mean squared error than using either curve in isolation

- a simple average of the two curves will reduce the likely price shock if either curve becomes unavailable or produces erroneous estimates during the period, and

- a simple average , in these circumstances, is consistent with the Tribunal's decision in the ActewAGL matter where the Tribunal concluded that:[30]

   if the AER cannot find a basis upon which to distinguish between the published curves, it is appropriate to average the yields provided by each curve, so long as the published curves are widely used and market respected.

88. JGN considers that the approach taken by the AER to assessing the likely performance of the two curves is 'indirect'. Rather than allowing for an assessment of the curves' relative performance against relevant data at the time the return on debt is required to be estimated, the AER has sought to infer from indirect evidence— curve fitting methodologies and past performance—the likely future performance of the curves against the data relevant at the required time of estimation.

89. As to the second bullet point above, divergence in the curves over time might actually mean that an average of the curves is **not** the most appropriate approach. One curve may provide a significantly better estimate compared to the other, as was the case in JGN's last access arrangement review.[31]

90. In its decision in relation to JGN's last access arrangement review—which followed the *ActewAGL* decision referred to by the AER—the Tribunal noted that simple averaging of data sources requires careful consideration. It was noted that:[32]

   In ActewAGL the Tribunal found that in the absence of an objective basis for distinguishing between two significantly different curves, "it is appropriate to average the yields provided by each curve [the Bloomberg and the CBASpectrum curves], **so long as the published curves are widely used and market respected***" [our emphasis]. The Tribunal's reasons for this conclusion warrant careful consideration. An average is a blunt instrument unless careful thought is given to the individual components and whether each should be given the same consideration, or weight, in the calculation of the average. A simple unweighted average gives each component the same weight. This will not always be appropriate, especially where (as here) the two fair value curves differ considerably over the relevant periods to maturity.*

   We have noted that we do not know the basis for the construction of the two fair value curves. Their underlying models, which are proprietary information, may be such that for the purpose of estimating the debt risk premium, one is far more relevant than the other (and thus should be accorded a greater weight), even though they both contain pertinent information. That is, a simple arithmetic average, without more thought, may not give emphasis to the right components.

91. As noted above, in that case the Tribunal found, based on testing of the curves against relevant bond data that use of Bloomberg alone would provide for the best estimate of the return on debt. It was found that the CBASpectrum curve was such a poor fit to the bond data that it would not even be appropriate to consider averaging it with the Bloomberg curve.

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[30] *Application by ActewAGL Distribution* [2010] ACompT4, 17 September 2010, [78].

[31] *Application by Jemena Gas Networks (NSW) Ltd (No 5)* [2011] ACompT 10.

[32] *Application by Jemena Gas Networks (NSW) Ltd (No 5)* [2011] ACompT 10, [62].

3.4.2 THE AER'S ANALYSIS FAILS TO GIVE PROPER WEIGHT TO ASSESSMENT AGAINST UNDERLYING DATA

92. The AER seems to suggest that JGN's approach is an 'indirect' way of assessing which curve is preferable and that this is inferior to the AER's 'direct' approach of examining the bond selection and curve fitting attributes of the services. This is incorrect. JGN's approach in fact provides for a direct—and objective—test of the performance of the available data sources at the relevant point in time, whereas the AER's approach is to rely on indirect evidence as to the *likely* future performance.

93. In JGN's last access arrangement review, the Tribunal noted that in assessing the different data sources the AER could consider:[33]

    • the technical aspects (including bond selection and curve fitting)

    • past performance, and

    • a contemporaneous comparison of the observed yields against the observed curve using a broad sample that only excludes bonds that have been incorrectly classed and select the service on that basis and verify the selection against other available information.

94. The AER has erred in predetermining that the use of a simple average of the two services because it has not given proper weight to the third criterion, characterising it as an 'indirect' basis for concluding which service is superior.

95. The rate of return objective seeks to provide a return that is commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk. It cannot be said with any certainty which data source will provide better estimates of this required return at any future point in time, or whether an average of the available sources will provide for the best estimate. Such an assessment can only be made at the relevant time based on the available market data.

96. Therefore, JGN considers that the third consideration referred to above is the most critical. If this is ignored then it gives rise to the possibility that the return on debt determined for future periods may not reflect the best estimate of the efficient financing costs of a benchmark efficient entity. On the basis of recent history, this 'possibility' is a real one, it is not purely hypothetical.

97. For these reasons, the AER approach has erred in its failure to give proper weight to testing of each service against underlying reported bond data.

3.4.3 JGN'S PROPOSED APPROACH WILL BETTER ACHIEVE THE RATE OF RETURN OBJECTIVE, BETTER PROMOTE THE NGO AND IS MORE CONSISTENT WITH THE RPP

98. JGN's proposed approach involves using the data source that transparently and objectively (via a pre-defined mechanistic process) provides the best estimate of the return on debt for the benchmark efficient entity at any point in time. The available methods and data sources are tested against relevant market evidence—yields for reported bonds with characteristics that are similar to the benchmark form of debt, such as their maturity and credit rating. This information can be sourced from data providers such as Bloomberg and UBS.

99. JGN's proposed approach is therefore more likely to produce the best estimate of the prevailing return on debt at each relevant point in time. In particular, where one curve is providing better estimates than the other, JGN's approach will necessarily lead to a better estimate.

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[33]   *Application by Jemena Gas Networks (NSW) Ltd (No 5)* [2011] ACompT 10, [53], referring to the Tribunal's earlier decision in *ActewAGL.*

3.4.4 JGN'S PROPOSED APPROACH DOES NOT PRECLUDE AUTOMATIC UPDATING, NOR IS IT COMPLEX

100. As noted above, the NGR require that, if the return on debt is estimated using a method that results in the return on debt (and consequently the allowed rate of return) being, or potentially being, different for different regulatory years in the AA period, then:[34]

> *a resulting change to the service provider's total revenue must be effected through the automatic application of a formula that is specified in the decision on the access arrangement for that access arrangement period.*

101. This requirement does not preclude the use of a method for selecting the data source which will provide for the best estimate of the prevailing return on debt at each time this needs to be measured. The NGR requirement for 'automatic application of a formula' only applies to the resulting change in total revenue that may need to occur where a methodology is used that potentially results in the return on debt being different between regulatory years. Under this provision, it is the resulting total revenue update that needs to effected by automatic application of formula, not the calculation of the return on debt.

102. As explained above, it is not necessary for all inputs into the updating process (or data sources for these inputs) to be pre-determined in order to facilitate automatic updating of the trailing average return on debt and total revenues.

103. Further, JGN's proposal is not biased or overly complex. JGN has set out a clear and simple process in its proposed AA for approval of selection of data sources for estimation of the prevailing return on debt in future averaging periods.

104. The process involves clear steps that minimise subjectivity and discretion and a default position which is to apply unless the data is misaligned such that a different measure should be considered in order to achieve the rate of return objective.

### 3.4.5 REVISIONS TO CURVE SELECTION METHOD TO ADDRESS MATTERS RAISED IN THE DRAFT DECISION

105. As noted above, JGN has amended its proposed curve selection method in two respects:

- **Default estimate**—an average of available yield curves will be the default for estimating the prevailing return on debt in each year. This default position will apply unless the available yield curves diverge materially (by more than 60 basis points). Where the available yield curves do diverge materially, the goodness-of-fit test will be applied to identify the yield curve that best fits the observed bond yield data.

- **Average of curves**—where a goodness-of-fit test is applied, an average of the available yield curves will be included in the set of yield curves to be tested. If the average provides the best fit to the observed bond yield data, then it will be used to estimate the prevailing return on debt for that year.

106. JGN considers that this revised approach is consistent with the AER's preference for use of an average, while addressing JGN's concern that an average may not be appropriate in all circumstances. JGN's revised proposal provides for a 'circuit breaker' to address the risk of anomalous behaviour by one or more of the available yield curves over the course of the access arrangement period.

107. The amended method is depicted in Figure 3-1 below.

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[34] NGR, rule 87(12).

Figure 3-1: Revised curve selection method
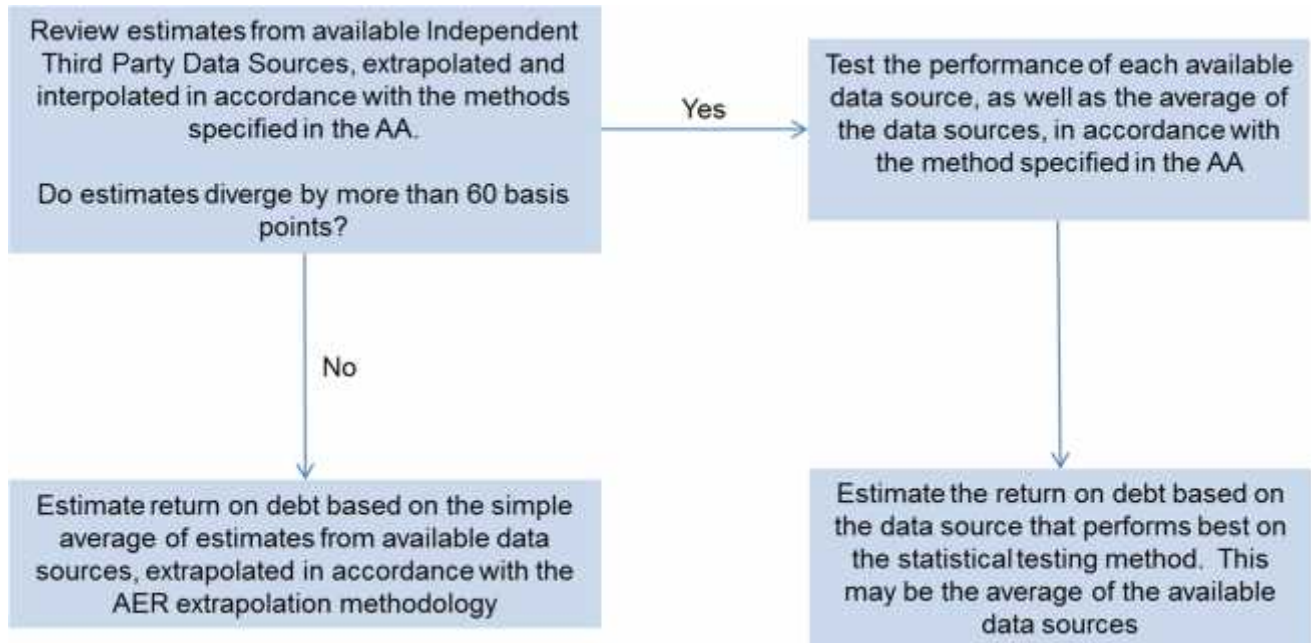
3.5   EXTRAPOLATION OF THIRD PARTY ESTIMATES

108.   JGN agrees with the AER that whether the RBA, Bloomberg or an average of the two curves is used, it is likely that the third party estimates will need to be extrapolated to obtain an estimate of the ten year return on debt. However, JGN does not agree with the AER's proposed extrapolation method.

109.   Analysis by CEG, based on the sample period 2 January 2015 to 30 January 2015, shows that the extrapolation proposed by the AER in its decision will not necessarily provide a best fit to the data during the access arrangement period. In fact, the method can create counter-intuitive results.[35]

110.   CEG tested the performance of the RBA curve, the Bloomberg curve and a simple average of the two curves, using two alternative extrapolation methods:

   •   the method proposed by the AER in its draft decision, and

   •   the method recently proposed by SA Power Networks (**SAPN**).

111.   CEG sought to determine which curve and extrapolation method best reflected the observed bond data by performing goodness of fit tests based on the methodology proposed by JGN, Nelson-Siegel analysis and bond-pair analysis. The sample of bonds used was also consistent with the criteria for bonds proposed in JGN's original proposal.

112.   CEG concludes that that over the period from 2 January 2015 to 30 January 2015, the best third party estimate of the 10 year spread to swap is the average of the RBA and BVAL curves extrapolated according to the SAPN methodology.[36]

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[35]   CEG, *Critique of the AER's JGN draft decision on the cost of debt*, February 2015.

[36]   CEG, *Critique of the AER's JGN draft decision on the cost of debt*, February 2015.

113. Further detail and explanation of the data and tests conducted is provided in the accompanying expert report of CEG.

114. In light of Dr Hird's analysis, JGN considers that it would not be appropriate to lock in use of the AER's extrapolation approach for each averaging period in which the prevailing debt needs to be estimated. Rather, where the results from the SAPN and AER extrapolation methods materially differ, each one should be tested against the available bond data to identify the best fit extrapolation methodology.

115. Therefore JGN has revised its proposal in response to the matters raised in the draft decision in relation to extrapolation methodologies as follows:

-   **Default extrapolation**—the AER extrapolation methodology will be the default extrapolation method. This default position will apply unless the available yield curves, each extrapolated in accordance with each of the AER and SAPN methods, diverge materially (by more than 60 basis points).

-   **Goodness of fit test**—where the extrapolated yield curves do diverge materially, the goodness-of-fit test set out in JGN's AA will be applied to identify the extrapolated yield curve that best fits the observed bond yield data.

3.6   TRAILING AVERAGE FIXED PRINCIPLE

116. JGN agrees with the AER's position, reflected in the rate of return guideline and the draft decision, that a trailing average portfolio approach should be adopted for estimating the return on debt. JGN also considers that this approach should be adopted across multiple periods, not just in the forthcoming access arrangement period.

117. It is for this reason that JGN included the fixed principle in its proposed access arrangement—to 'lock in' the trailing average approach beyond the 2015–2020 AA period.

118. The AER has rejected the proposed fixed principle in its draft decision. The only reason given by the AER for rejecting it is that JGN did not provide reasons for including this fixed principle.[37]

119. JGN's reasons for including this fixed principle are straight forward. We agree with the AER that a trailing average portfolio approach should be adopted for estimating the return on debt, and we consider that this approach should be adopted across multiple periods. The inclusion of a fixed principle provides some certainty to all stakeholders that this approach will be applied consistently in future periods.

120. We consider that including this fixed principle will contribute to the achievement of the rate of return objective and will promote the NGO by:

   a) ensuring a consistent application of the trailing average approach across access arrangement periods; and

   b) providing a degree of certainty to investors in relation to the return on debt methodology that will be applied in future.

121. For these reasons, JGN has retained the fixed principle in its revised access arrangement.

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[37]   Draft decision, [3-161].

3.7 RETURN ON DEBT TRANSITION TO THE TRAILING AVERAGE

3.7.1 OVERVIEW – JGN POSITION

122. In its original proposal JGN adopted the trailing average approach and transition set out in the guideline, on the proviso that **this approach is applied properly and results in reasonable estimates of the return on debt for the benchmark efficient entity**.

123. At the time JGN submitted its proposal, it appeared that properly applying the trailing average approach and transition set out in the guideline (notwithstanding shortcomings with the transition) would result in a reasonable estimate of the return on debt for the benchmark efficient entity for the forthcoming period. That is, for the forthcoming period the required return on debt for an entity which had been operating under the hybrid financing model in previous periods would be reasonably close to—or was not expected to materially differ from—the allowed return on debt under the trailing average approach and transition set out in the guideline.

124. However, due to changes in financial market conditions since JGN submitted its original proposal, this is no longer the case. Due to a decline in the prevailing DRP, the allowed return on debt under the trailing average approach and transition set out in the guideline will be significantly below the required return on debt for the benchmark efficient entity, given the embedded debt cost of the benchmark entity.

125. Further, in light of the AER's new findings in the draft decision in relation to efficient debt financing practices under the previous regulatory approach, and given changes in financial market conditions, it is clear that the guideline approach to the return on debt transition will not result in reasonable estimates of the return on debt for the benchmark efficient entity. Rather, under the AER's approach, there will be a deliberate or engineered mismatch between the allowed return on debt and the required return on debt for the benchmark efficient entity.

126. The AER's approach in the draft decision of seeking to engineer a mismatch between the actual and allowed return on debt in order to offset perceived windfall gains from prior periods is a material departure from its previous approach to transitional arrangements, and is demonstrably inconsistent with the NGR and NGL. The new justification cited by the AER for transitional arrangements—based on 'NPV neutrality' and offsetting alleged 'windfall gains' from prior periods—is a significant departure from the justification for transitional arrangements cited in the rate of return guideline, which sought account for costs and practical difficulties for the benchmark efficient entity in moving to a new financing model, and potential price impacts.[38]

127. Therefore, JGN submits that the AER should not adopt the guideline approach to the return on debt transition in its final decision for JGN. Rather, if a transition is to be applied, the AER should only apply that transition for the base risk-free rate component of the return on debt.

3.7.2 AER DRAFT DECISION IN RELATION TO TRANSITIONAL ARRANGEMENTS

128. In its draft decision the AER concludes that a transition should be applied for both the risk-free rate and DRP components of the return on debt. This is despite the AER's conclusion that the benchmark efficient entity would already face a trailing average DRP, and therefore should only require a transition for the risk-free rate component.

129. In short, the AER's reasoning for a transition for the DRP appears to be:

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[38]   AER, *Better Regulation: Explanatory Statement Rate of Return Guideline*, December 2013, p. 121.

- **Not required due to future mismatches between allowed and efficient costs.** In respect of the DRP, there is no mismatch between the debt financing cost expected to be incurred by the benchmark firm over the forthcoming period and that allowed by a trailing average, and therefore a transition is not needed to address such a mismatch.[39] On the contrary, use of a transition will necessarily create a mismatch between the allowed return on debt and the expected financing costs of the benchmark efficient entity.

- **Not required to avoid disruptions.** A transition for the DRP is also not required to avoid disruption either for businesses or consumers.[40]

- **But is required to offset previous mismatches.** However, use of a transition for the DRP will help to mitigate or offset 'windfall gains' which may have accrued to businesses in prior periods, due to a mismatch between the allowed return on debt and the expected financing costs of the benchmark efficient entity. Lally states that a transition can effectively proxy for a continuation of current arrangements, and therefore 'even out' any mismatches between the allowed return on debt and efficient financing costs over time.

- **Assume there were previous windfall gains or mismatches.** The AER considers that it is relevant to consider 'windfall gains' (or losses) which may have accrued to businesses in prior periods, since this is an impact on the benchmark efficient entity that could arise as a result of changing the methodology used to estimate the return on debt from one access arrangement period to the next.[41]

- **Offsetting mismatches more important than aligning allowance with efficient costs.** Both Lally and the AER appear to consider that it is more important to 'even out' mismatches over time—across multiple access arrangement periods—than to ensure that the return on debt allowance for the forthcoming period reflects the efficient financing costs of the benchmark efficient entity. This conclusion is also couched in terms of promoting NPV neutrality and avoiding potentially undesirable (and unknown) consequences from sudden changes in methodology.[42]

- **Assume that the future mismatch from transition will offset past mismatch.** On the basis that it will 'even out' mismatches over time, a transition for the DRP ensures that a benchmark efficient entity will receive a return on debt commensurate with its efficient financing costs over the life of its assets.[43] Therefore, the AER is satisfied that including a debt transition in the return on debt estimation will result in a return on debt that contributes to the achievement of the allowed rate of return objective.

- **Assume that the guideline transition will promote price stability.** The AER also considers that applying a transition will promote price stability (or avoid volatility).[44]

130. JGN agrees with the first two aspects of this reasoning—that a DRP transition is not required to avoid a mismatch between the debt financing cost expected to be incurred by the benchmark firm over the forthcoming period and that allowed by a trailing average, nor is it required to avoid disruption either for businesses or consumers.

131. However, JGN strongly disagrees with the reasoning which follows this. In particular, JGN strongly disagrees that transitional arrangements can be used to 'true up' any alleged 'windfall gains' from prior periods. JGN also considers that there is no evidence of any 'windfall gains' having accrued in this case.

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[39] Lally M, *Transitional Arrangements for the Cost of Debt*, 24 November 2014, pp. 7, 13.

[40] Lally M, *Transitional Arrangements for the Cost of Debt*, 24 November 2014, pp. 13–15.

[41] Draft decision, [3-116]–[3-117].

[42] Draft decision, [3-117]–[3-119].

[43] Draft decision, [3-118].

[44] Draft decision, [3-121]–[3-122].

3.7.3   EFFICIENT FINANCING PRACTICES UNDER THE PREVIOUS 'ON-THE-DAY' APPROACH

132.   The AER considers that an efficient debt financing practice of the relevant benchmark efficient entity under the on-the-day approach would be:

- *to borrow long term (10 year) debt and stagger the borrowing so that only a small proportion (around 10 per cent) of the debt matured each year*

- *to borrow using floating rate debt (or to borrow fixed rate debt and convert this to floating rate debt using fixed-to-floating interest rate swaps at the time of issuing the debt and which extended for the term of the debt, being 10 years), and*

- *to enter into floating-to-fixed interest rate swaps at, or around, the time of the service provider's averaging period and which extended for the term of the access arrangement period, being typically 5 years).*[45]

133.   Under this financing strategy the risk free rate component of the benchmark efficient entity's actual return on debt is essentially matched with the on-the-day rate, while the debt risk premium component each year would reflect the historical (or trailing) average of the debt risk premiums over the previous 10 years.

134.   JGN agrees with the above finding in relation to the efficient financing practice of the benchmark efficient entity with a **similar degree of risk as that which applies to JGN in respect of the provision of reference services** under the on-the-day approach because:

- it allows more effective management of refinancing risk and interest rate risk, and

- it is in fact the financing strategy adopted by JGN's parent companies (SGSP (Australia) Assets Pty Ltd and Jemena Ltd) to manage risks under the on-the-day approach.

135.   JGN has previously explained that under the on-the-day approach to estimating the return on debt, its actual debt financing practices did not match the assumed practice of refinancing all debt just prior to the commencement of each access arrangement period.[46] Rather, JGN refinanced a portion of its debt each year, and managed its exposure to the base interest rate risk (relative to the regulatory allowance) using derivatives such as interest rate swaps. Base interest rate risk was managed by entering into fixed five year interest rate swaps during the JGN averaging period once every five years. However, as there are no viable derivative options to manage the DRP risks, JGN could only manage its exposure to movements in its actual DRP relative to the DRP allowance by selecting the timing and market of its debt issues.

136.   This means that at the commencement of the forthcoming access arrangement period, JGN's cost of debt will comprise:

- a floating risk-free rate component—since the five-year interest rate swaps entered into at the commencement of the prior period will have expired, and

- a DRP component that already reflects an historical or trailing average rate.

137.   JGN notes that the financing practices it has engaged in over past access arrangement periods may not have been efficient—or even possible—for all businesses. JGN understands that other businesses may not have been able to use swaps to manage base interest rate risk across their entire debt portfolio. In the case of these businesses, an efficient financing strategy is likely to have involved simply issuing fixed rate debt on a staggered

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[45]   AER, *Attachment 3 Rate of return Jemena Gas Networks 2015-20* at p. 114.

[46]   Jemena, *Rate of Return Guidelines – Consultation Paper: Submission from Jemena Limited to the Australian Energy Regulator*, 21 June 2013, Appendix A.

maturity cycle in order to hedge against interest rate movements. As previously noted, JGN does not agree with the AER's position that there is a single benchmark efficient entity across the provision of gas, electricity, transmission and distribution services – rather there is likely to be multiple benchmark entities with different characteristics and different financing practices.

138. This is specifically recognised by the NGR, and by the AEMC in the relevant rule determination implementing the current version of clause 87 of the NGR. However, if the correct position is to adopt a single benchmark entity, then the AER has selected the wrong single benchmark. The AER's benchmark is assumed to adopt a debt management practice that is only replicable by a minority of relevant firms. The correct single benchmark efficient entity would already have been engaging in debt financing practices which reflect the trailing average approach—that is, this benchmark would not have been able to mimic the on-the-day approach. Therefore, for this single benchmark efficient entity no transition arrangements would be required.

3.7.4   ROLE OF TRANSITIONAL ARRANGEMENTS UNDER THE NGR

139. The NGR contemplates that there may be a need for transitional arrangements where there is a change in the method for estimating the return on debt from one access arrangement period to the next.

140. The provision for transitional arrangements was made by the AEMC to allow the AER to take into account costs or practical difficulties for businesses associated with changing their debt financing practices. It was recognised that under the previous approach to estimating the return on debt, service providers may have put in place long term debt financing arrangements which may be difficult or costly to unwind. Transitional arrangements were seen as a way of allowing time for service providers to unwind these existing arrangements and transition to a different debt financing model.

141. The AEMC noted the advice it had received from SFG on this issue as follows:[47]

> *Service providers are likely to have entered into financial arrangements to mitigate their risk given the current approach to estimating the return on debt. Therefore, any change in approach could lead to some service providers gaining extra revenue or losing revenue as a result of unwinding those financial arrangements. Gains or losses of revenue of this type from changes in regulatory arrangements could be perceived by investors as increasing regulatory risk, and thereby lead investors to seek a higher rate of return. SFG therefore recommend that consideration be given to transitional arrangements when changing the approach to estimating the return on debt.*

142. Noting this advice, the AEMC included a requirement in the amended rules that, in estimating the return on debt, regard must be had to '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'.[48] This was included as the fourth in a list of factors which the AER must have regard to in estimating the return on debt.

143. The AEMC clearly stated the purpose of the fourth factor as follows:[49]

> *The purpose of the fourth factor is for the regulator to have regard to impacts of changes in the methodology for estimating the return on debt from one regulatory control period to another. Consideration should be given to the potential for consumers and service providers to face a*

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[47]   AEMC, *Rule Determination: National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012; National Gas Amendment (Price and Revenue Regulation of Gas Services) Rule 2012*, 29 November 2012, p. 76.

[48]   NGR, rule 87(11)(d).

[49]   AEMC, *Rule Determination: National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012; National Gas Amendment (Price and Revenue Regulation of Gas Services) Rule 2012*, 29 November 2012, p. 85.

significant and unexpected change in costs or prices that may have negative effects on confidence in the predictability of the regulatory arrangements.

It may be possible in many circumstances for the method to estimate the return on debt to take such concerns into account in the design of the method. Therefore, **this criterion was intended to promote consideration of concerns raised by service providers with regard to transitions from one methodology to another. Its purpose is to allow consideration of transitional strategies so that any significant costs and practical difficulties in moving from one approach to another is taken into account.** [emphasis added]

144. It is clear from the AEMC explanatory materials that this fourth factor was not intended to provide for an ex-post 'true-up' or 'clawback' of perceived past under- or over-recovery of debt financing costs. Rather, the purpose of providing for transitional arrangements was to allow service providers to unwind any financial arrangements that might have been put in place under the previous regulatory approach to estimating the return on debt, and to transition to a new debt management strategy.

145. This is also clear from the rules themselves and the context for the 'fourth factor'. The key requirement of the NGR in relation to the return on debt is that referred to in sub-rule 87(8), that it be estimated such that it contributes to the achievement of the rate of return objective—that the allowed return on debt 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. The 'fourth factor' referred to above is one of several factors which the AER must have regard to in estimating the return on debt under sub-rule 87(8), but it cannot override this primary requirement.

146. However, if the fourth factor were to be interpreted as allowing for 'true-up' or 'clawback' of perceived past under- or over-recovery of debt financing costs, it would potentially be in conflict with the primary requirement in sub-rule 87(8), since:

• if there were to be a clawback of perceived past over-recovery amounts, the allowed return on debt would need to be lower than the efficient financing costs of the benchmark efficient entity in the next period, and

• if there were to be a true-up for perceived past under-recovery amounts, the allowed return on debt would need to be higher than the efficient financing costs of the benchmark efficient entity in the next period.

147. More generally, such an interpretation would be contrary to the allowed rate of return objective and the NGO. In particular:

• **Not commensurate with efficient financing costs.** As noted above, if there is to be an ex-post true up accounted for in the return on debt allowance, it is likely that the overall rate of return would not 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.[50]

• **Not commensurate with regulatory and commercial risks.** In such circumstances, reference tariffs would not allow for a return commensurate with the regulatory and commercial risks involved in providing the reference services to which those tariffs relate.[51]

• **Not provide opportunity to recover efficient costs.** If, due to the inclusion of a clawback amount, the allowed return on debt is below the efficient debt financing costs of a benchmark efficient entity, then the service provider would not be provided with a reasonable opportunity to recover at least the efficient costs it incurs in providing reference services.[52]

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[50]   NGR, rule 87(3).

[51]   NGL, s 24(5).

[52]   NGL, s 24(2).

- **Not promote efficient investment or operation.** If there is ultimately a mis-match between the allowed return on debt and the efficient debt financing costs of a benchmark efficient entity, such an approach would not promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers.[53]

148. Further, if the fourth factor were to be interpreted as allowing for a true-up, this would raise a number of questions as to how past under- or over-recovery amounts should be measured and accounted for in estimating the return on debt for the next period. For example, it is not clear over what period under- or over-recovery against the regulatory allowance should be measured, and how the rate of return for future periods should be adjusted.

149. For these reasons, JGN considers that there is no basis in the NGR or NGL to apply transitional arrangements with a view to 'truing up' any perceived under- or over-recovery of debt financing costs which may have occurred under the previous regulatory approach to estimating the return on debt. Consistent with the AEMC's intent, transitional arrangements should only be used to the extent necessary to allow service providers time to unwind any financial arrangements that might have been put in place under the previous regulatory approach to estimating the return on debt, and to transition to a new debt management strategy.

3.7.5 TRANSITIONING FROM EFFICIENT PRACTICE UNDER THE 'ON-THE-DAY' APPROACH TO A TRAILING AVERAGE

150. As noted in the draft decision, efficient debt management practice under the rate on the day approach involves financial arrangements that would continue into the next regulatory period. According to Lally:

> *at the end of the most recent regulatory cycle, a swap of floating to five-year fixed for all of the firm's debt would just have matured (in line with the end of the regulatory cycle). If the previous regime had been maintained, the firm would then have entered a new swap of floating to five-year fixed for all of its debt. However, upon the introduction of a trailing average regulatory regime, the rationale for these swap contracts would disappear and the firms could be expected to desist from them at that point. Nevertheless, in respect of the risk-free rate component of its debt, the existing debt has already been converted to floating rate debt and these swaps have residual lives of up to nine years (arising from ten-year debt that was issued one year ago).[54]*

151. As noted by Lally, the arrangements that will continue into the next access arrangement period relate only to the risk-free rate component of the return on debt, since this is the component for which a benchmark efficient entity would have been able to manage its exposure to interest rate risk (relative to the regulatory allowance) using interest rate swaps. There will be no pre-existing arrangements in relation to the DRP which would need to be accounted for by transitional arrangements, since the benchmark efficient entity would not have been able to manage DRP risk in the same manner. As a result, the DRP component of the required return on debt for the benchmark efficient entity would already reflect a trailing average rate.

152. As noted above, the purpose of imposing transitional arrangements is to allow for the unwinding of financial arrangements (if any) that were reasonably put in place under the previous regulatory approach to estimating the return on debt but are not necessary to continue under the trailing average approach. Such transitional arrangements would operate to minimise the potential mismatch between the allowed return on debt and the cost of debt for a benchmark efficient entity as it transitions its financing practices. Such transition arrangements, if applied at all, would only be relevant to the risk-free rate portion of the debt as efficient financing practice would have resulted in the risk free rate component matching the on-the-day rate. It would not be logical or appropriate to apply transition arrangements to the DRP portion as under the previous approach this would already reflect a trailing average rate.

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[53] NGL, s 23.

[54] Lally, M., *Transitional arrangements for the cost of debt*, November 2014, pp. 7–8.

153. In its original proposal, JGN had proposed to adopt the AER's guideline approach to transitional arrangements for the return on debt. This was on the basis that, at that time, it appeared that the AER's guideline approach would provide for a return on debt allowance for the forthcoming period which reasonably reflects the efficient financing costs of a benchmark efficient entity facing a similar degree of risk as JGN. However, it now appears that this is no longer the case, as the prevailing DRP has fallen well below the historical average rate. If the AER's guideline approach were to be applied now, the resulting DRP—and therefore the return on debt allowance—will be significantly below the efficient debt financing costs of a benchmark efficient entity (refer to Figure 3–2 below).

Figure 3–2: Comparison of trailing average and prevailing DRP
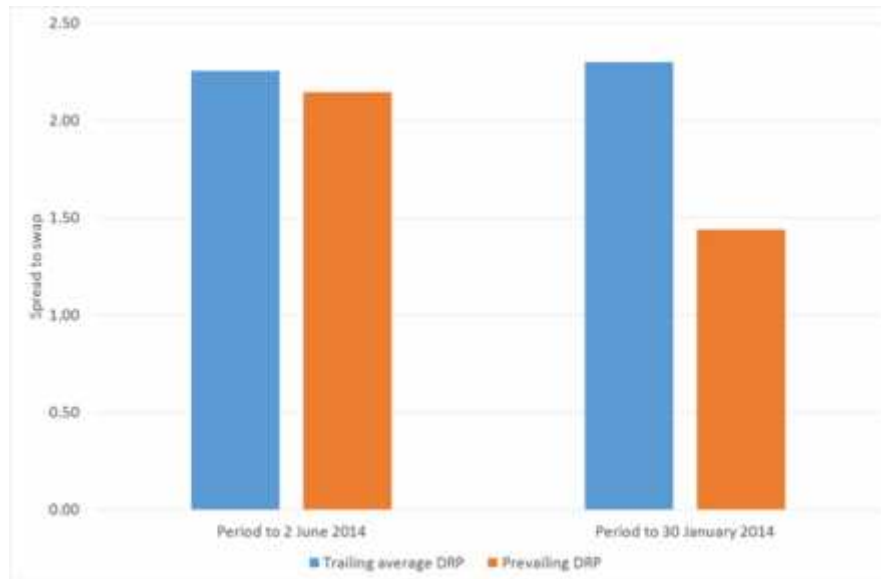
Source: CEG.[55]

154. Therefore in these circumstances it would not be appropriate to apply transitional arrangements to the DRP component of the return on debt. If transitional arrangements were to be applied to the DRP, this would give rise to a return on debt allowance that does not reflect the efficient financing costs of a benchmark efficient entity. Attachment B shows that the extent of this mismatch using current data is over $80M (in $2015) over the ten year transition period.

155. Depending on the characteristics of the benchmark efficient entity, it also may not be appropriate to apply a transition to the base risk-free rate component. If the nature of the benchmark efficient entity is such that it would not have been able to (or would not have been efficiently able to) manage base interest rate risk across its entire debt portfolio under the on-the-day approach, then it would not be appropriate to apply any transition. For a benchmark efficient entity of this type, the required return on debt for the forthcoming period (including both the risk-free rate and DRP components) would already reflect a trailing average.

3.7.6 THE AER JUSTIFICATION FOR THE APPLICATION OF TRANSITION ARRANGEMENTS TO DRP IS FLAWED AND IRRATIONAL

156. Despite its conclusion on the efficient financing practices under the on-the-day approach—referred to above— the AER's draft decision still sets a debt transition under which both the risk free rate and the DRP would be transitioned—rather than just transitioning the risk free rate.

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[55]   CEG, *Critique of the AER's JGN draft decision on the cost of debt*, February 2015.

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157.   As part of the justification for the debt transition arrangements applying to the DRP, the draft decision effectively suggests that a service provider may have received a 'windfall gain' in relation to the DRP component of the cost of debt in the most recent regulatory period due to the impact of the global financial crisis and should therefore be made to incur a 'windfall' loss in the regulatory period that is about to commence through application of a DRP transition.

158.   The AER refers to advice from Associate Professor Lally, which states that a transitional arrangement may be used to erode or claw back past 'windfall gains'. Lally's argument is that under the previous regulatory approach to estimating the return on debt, there would have necessarily been a mismatch between the allowed return on debt and the efficient financing costs of a benchmark efficient entity, but these mismatches would have netted out over multiple periods. Lally proposes that, given that the last period would have been a period of over-recovery, either the existing arrangement should be continued until there has been a sufficient offsetting period of under-recovery, or a transitional arrangement should be applied as a proxy for the continuation of current arrangements.

159.   Associate Professor Lally states:[56]

> In the face of economic crises, DRPs rise sharply and generally take several years to subside to their original level. So, if the DRP were set by a regulator at the beginning of the regulatory cycle (typically five yearly) as was the case under the old regime, there will be mismatches between the DRP allowed and the trailing average that is paid by a firm, and these will take several years to dissipate. In particular, when the DRP suddenly rises during a regulatory cycle, the allowed DRP will remain fixed for the remainder of that regulatory cycle whilst the trailing average rate that is paid will rise over that period, leading to a cash flow shortfall. However, once the DRP is reset at the end of that cycle at the higher prevailing rate, it will exceed the trailing average because the latter rises more slowly than the prevailing rate. Furthermore, as the DRP reverts to its earlier level, the allowed DRP will at some point fall below the trailing average, producing another period in which there is a cash flow shortfall. Finally, the trailing average will converge on the prevailing rate, after which there is neither shortfall nor excess. So, the DRP spike will first induce a DRP shortfall, then an excess, another shortfall, and finally stabilize at zero. Consequently, there may be a period during which the accumulated effect of the mis-match is positive. So, during this favorable window for the firm, if the regulator switches immediately to a trailing average (from which point the DRP allowed will match that incurred), this accumulated benefit will be retained by the firm rather than gradually eroded away and this 'windfall' benefit to the firm comes at the expense of its customers. This problem could be avoided by deferring any switch to a trailing average until the current DRP spike has fully subsided. An alternative approach would be to use a transitional process because it proxies for deferral of the switch.

160.   The AER refers to this advice and ultimately concludes that:[57]

> In relation to the debt risk premium component of the allowed return on debt, we are satisfied that a transition reduces the potential windfall gains or losses to service providers or consumers from changing the regulatory regime.

161.   Both Lally and the AER recognise that applying a transition for the DRP will result in a return on debt allowance for the next access arrangement period that is below the efficient financing costs of a benchmark efficient entity. Lally correctly observes that:

> in respect of the DRP component of the cost of debt, there is no mismatch between the cost incurred by the benchmark firm and that allowed by a trailing average after the regime change, and therefore no transition method would seem to be warranted.[58]

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[56]   Lally M, *Transitional Arrangements for the Cost of Debt*, 24 November 2014.

[57]   Draft decision, [3-116].

162. The AER notes that the prevailing circumstances are ones in which the prevailing return on debt is lower than the 10 year trailing average[59], which implies that a transitional arrangement which relies on the prevailing DRP rate would lead to under-compensation, since the DRP component of the required return on debt for the benchmark efficient entity will reflect a trailing average rate.

163. However, Lally and the AER consider that it is appropriate to weigh the impact of the mismatch in the next period against mismatches (or 'windfall gains') which may have occurred in the past under the previous regulatory approach to estimating the return on debt. Lally considers that 'windfall gain issue' (i.e., the issue of mismatches which may have occurred in prior periods) is more important, and should outweigh consideration of the mismatch between the allowed return on debt and efficient financing costs in the forthcoming period.[60] It is for this reason that Lally favours a transition for the DRP, even though this will create a 'mismatch' in the forthcoming period.

164. There are three key flaws in the AER's reasoning:

- first, the AER has erred in having regard to potential over- or under-recovery in prior periods in determining the return on debt allowance for the forthcoming period

- second, the AER has proceeded on the assumption that windfall gains have accrued to JGN, without any reliable evidence of such windfall gains—and assumes that the proposed transition arrangements will rectify the windfall gains, and

- third, the AER has erroneously concluded that its approach is consistent with the rate of return objective.

165. Each of these points is discussed below.

3.7.6.1 It is not permissible to seek to correct for past 'windfall gains' or losses

166. The AER has erred in concluding that it is relevant to consider 'windfall gains' (or losses) which may have accrued to businesses in prior periods.

167. What the AER refers to as 'windfall gains' are not impacts on the benchmark efficient entity that could arise as a result of changing the methodology used to estimate the return on debt from one access arrangement period to the next. Rather, any differences between the allowed return on debt and efficient financing costs in prior periods was due to shortcomings of the previous methodology.

168. In essence, Lally's definition of 'windfall gain' or loss is not a windfall gain or loss at all, but a mismatch between the AER's previous approach to setting the return on debt allowance and what the AER now recognises would have been efficient practice.

169. As noted by SFG:[61]

> In relation to the regulatory allowance for the return on debt, Lally (2014, p. 17) implicitly defines a "windfall gain" in terms of the debt risk premium only. He assumes that, under the previous Rules, the firm would have adopted the hybrid debt management approach if it was operating efficiently, in which case there would have been an effective match between the regulatory allowance and the actual cost of debt in relation to the base risk-free rate, but not in relation to the DRP. He then defines a windfall gain to have occurred where the allowed debt risk premium exceeds the debt risk

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58   Lally M, *Transitional Arrangements for the Cost of Debt*, 24 November 2014, pp. 7, 13.

59   Draft decision, [3-118].

60   Lally M, *Transitional Arrangements for the Cost of Debt*, 24 November 2014, p 25.

61   SFG, *Return on debt transition arrangements under the NGR and NER*, 27 February 2015, [93]–[94].

premium that would have been incurred by a firm adopting the hybrid approach, which he considers to be the efficient approach for all service providers irrespective of their particular characteristics. That is, Lally's definition of a windfall gain is an ex post one – he says that the outcome over the last 5-year regulatory period turned out to be an allowed DRP that was higher than the DRP that would actually have been incurred by the benchmark efficient entity. When the regulatory allowance was set (at the beginning of the last regulatory period), it was impossible to know in advance whether it might turn out to be above or below the DRP that would actually have been incurred by the benchmark efficient entity. That is, the benchmark efficient entity was subjected to the risk that the allowed DRP might not match the incurred DRP and Lally (2014) defines the outcome of that mis-match to be a windfall gain or loss, depending on the ex post outcome. Although I question whether the realised outcome of such a risky scenario can be properly described as a "windfall," I adopt that terminology throughout this report so that the key conceptual points are not confused by differences in terminology.

Symmetrically, Lally (2014) defines a windfall loss to occur where the allowed debt risk premium is less than the debt risk premium that would have been incurred by a firm adopting the CKI approach.

170. The rules require that the allowed rate of return be set so as to be commensurate with the efficient financing costs of a benchmark efficient entity over the relevant access arrangement period. This is a forward-looking enquiry. Any differences between the regulatory benchmark allowance for financing costs and the costs a benchmark efficient service provider may actually have faced over the previous AA period are irrelevant to the task of setting an efficient allowance for financing costs over the forthcoming AA period.

171. In effect, by taking a backward looking approach and incorrectly assuming a power to 'true-up ' or 'claw-back' 'windfall' gains/losses, the AER is supporting a transition that appears likely to, and is intended to, result in actual 'windfall' losses for JGN simply because it engaged in what the AER considers to be efficient debt management practices. This is at odds with the requirements of the NGR and incentive based regulation. It is also inconsistent with the NGO, the rate of return objective the RPP and good regulatory practice.

172. As noted by SFG:[62]

…it is my view that it is not appropriate for a regulator to keep a mental accounting of what it considers to be any windfall gains or losses from past regulatory determinations, and to then seek to "square the ledger" in the current determination. The reasons for this conclusion are:

- *The new Rules state that for each determination the allowed rate of return must be commensurate with the efficient financing costs of a benchmark efficient entity. The Rules do not provide for an exception in cases where the regulator considers that it should set the allowed return to be different from the efficient financing costs of a benchmark efficient entity in order to square up the regulator's assessment of any windfall gains or losses from prior regulatory periods…*

- *Ex post "claw backs" or "square ups" of the type that is proposed in this case create a level of regulatory risk and are counter to incentive-based regulation. That is, ex post adjustments that are applied to actions that were taken by regulated firms years before the ex post adjustment was even contemplated are a form of regulatory risk. Also, it is counter to incentive-based regulation to introduce an ex post adjustment mechanism after a regulated firm has benefitted from operating in a way that the regulator itself considers to be efficient. Moreover, in circumstances where investors do not know, at the time of committing capital, which "windfall" gains or losses the regulator might seek to balance up in future determinations, or how the*

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[62] SFG, *Return on debt transition arrangements under the NGR and NER*, 25 February 2015, [21].

regulator may seek to apply any balancing up, they will perceive additional risk and require higher returns as compensation.

- *There is no transparent means of determining the quantum of prior mis-matches that are to be clawed back. How is the purported prior windfall gain or loss to be quantified? Over how many past regulatory periods should the tally be kept? Should the square up be limited to mis-matches relating to the cost of debt, or should all possible sources of mis-match between the regulatory allowance and the efficient costs of the benchmark firm be considered? How does the regulator know that their proposed actions will "square up" the correct amount, and not more or less, than the running tally of prior mis-matches? Given that the AER cannot know ex ante that its proposed transition arrangements will serve to perfectly square up the perceived past windfall gains (which have not been quantified), it seems likely that further adjustments will be required in the future to square up any remaining balance at the end of the transition period. Finally, in its recent draft decisions, the AER has simply asserted that a windfall has occurred and that its proposed transition arrangements will properly redress it – the AER has provided no calculations in this regard.*

- *The clawing back (or squaring up or balancing out) of perceived windfall gains in the prior regulatory determination in relation to the return on debt assumes that any such windfall gains have not already been balanced out by other features of the determination.*

- *The AEMC did not allow for possible transitional arrangements as a means of clawing back (or squaring up) past gains or losses. Rather, the AEMC stated that the purpose of transitional arrangements is to allow service providers to unwind any financial arrangements that might have been put in place under the previous Rules…*

173. JGN understands that the AER may be relying on rule 87(11)(d) of the NGR as giving it the ability to have regard to past windfall gains. However for reasons discussed above, this provision clearly does not allow the AER to use transitional arrangements to 'true up' past windfall gains or losses.

3.7.6.2 There is no compelling evidence of past windfall gains or that they will be rectified

174. Putting aside the AER's ability to use transition as a true-up mechanism under the NGR and NGL, and the fact that conceptually service providers should not be penalised for implementing the debt management practices which the AER has determined to be efficient, there is no compelling evidence that there has in fact been a 'windfall gain' and no reason to assume 'windfall gains'.

175. The AER's conclusion that 'windfall gains' have occurred relies on Lally's analysis which is based on speculative assumptions as to the future prevailing return on debt. Lally's analysis does not provide compelling evidence of 'windfall gains' and there is no other evidence provided.

176. In particular, Lally's key conclusion is that there will be significant windfall gains accruing in 2014/15, 2015/16 and 2016-17 if there is no transition rests on assumptions about the prevailing return on debt in those future years. Lally assumes that the prevailing return on debt will fall significantly in 2014/15 and remain at a relatively low level for the next ten years—but it is not clear what the basis is for these assumptions.

177. It is also not clear why Lally has chosen to begin his analysis of windfall gains / losses in 2006, and the AER has not explained why an analysis of windfall gains would be confined to a limited period, or to one building block component.

178. Further, the proposed rectification of this gain makes an assumption about the course of debt returns over the next two AA periods (especially given that there will be annual measurements under the new trailing average approach), in circumstances where the AER does not know what figures will be produced over the 10 year period. In effect, the AER's approach is to roll the dice for a further 10 years.

3.7.6.3 The AER has erred in its interpretation of the rate of return objective

179. The AER's justification for applying a DRP transition—that past windfall gains should be offset by future losses—implies that it is justifiable to undercompensate service providers in this period, provided that there is compensation over the life of the assets. The AER appears to be interpreting the rate of return objective as only requiring compensation for the efficient financing cost of a benchmark efficient entity, over the life of the relevant assets.

180. This is simply incorrect. The NGR requires that the rate of return for each access arrangement period reflect the efficient financing costs of a benchmark efficient entity over the period for which it is determined. Further, under the NGL, the tariff that is established for each access arrangement period must allow the service provider a reasonable opportunity to recover at least the efficient costs it incurs in providing reference services in that period, including a commercial return.[63]

181. The AER's approach is to postpone the application of the best assessment of efficient financing costs on the basis that the previous approach should continue to apply over the life of the assets in order to promote NPV neutrality. Apart from the deficiencies already identified, a further difficulty with this approach is that it operates on a hypothesis of a single set of assets midway through their asset lives, and

    a) ignores that the JGN RAB is a mix of assets with different lifespans and at different stages in those lifespans, and

    b) ignores that debt is managed by a range of facilities that do not match the lifespans of particular assets (e.g., for a new asset purchased now),

182. it is not clear how the AER can possibly be satisfied that JGN will be compensated over the life of the asset (which might be 50 years or more) despite under-compensation in this regulatory period and the next by virtue of the application of the AER's 10 year transition. Likewise, given that debt is managed by facilities entered into at regular intervals and for fixed periods unconnected with the life of the underlying assets, the AER's stated rationale is just an irrelevant distraction from what is, in truth, nothing more than an attempted clawback. The simple result of the AER's approach is to under-compensate for the efficient financing costs of the benchmark entity.

183. It is inconsistent with the NGR, the NGO and proper principles of economic regulation to set an allowed rate of return that is lower than the rate which reflects the efficient financing costs of a benchmark efficient entity for an access arrangement period, with a view to squaring up an alleged over-recovery in another period.

184. Such an approach introduces significant regulatory risk and is inconsistent with the fundamental principles underpinning incentive-based regulation. It would be particularly inappropriate in this case given that JGN has operated in a way which the AER recognises would have been efficient, and any alleged over-recovery could only have been due to a flaw in the previous regulatory model.

185. Allowing the regulator to claw back or square up perceived windfall gains or losses from prior regulatory periods in principle involves many speculative assumptions in practice and it is not clear how the regulator could transparently and accurately achieve this. For example, how would the quantum of prior mismatches to be clawed back be determined, over how many past regulatory periods should the mismatches be assessed? On what basis should this principle only apply to mismatches relating to the cost of debt, how would it be determined that prior mismatches would be corrected for by the right amount (ie, that the approach doesn't itself create mismatches)?

186. The implication of the AER's interpretation of the rate of return objective is that there may be under-recovery of efficient financing costs in the next period, as a means of 'squaring up' alleged over-recovery in the previous

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63   NGL, s. 24.

period. This is inconsistent with the RPP and the NGO. The RPP require that a service provider should be provided with a reasonable opportunity to recover at least the efficient costs it incurs in providing reference services and that a reference tariff should allow for a return commensurate with the regulatory and commercial risks involved in providing the reference service to which it relates. These requirements cannot be satisfied under an approach which seeks to deliberately estimate a return on debt that is below that of a benchmark efficient service provider.

187. To the extent that there is under-compensation for efficient financing costs, this may provide incentives to abandon or defer efficient capital expenditure in order to maintain financial sustainability. Such an outcome would clearly not be in the long-term interests of consumers. The likely consequences of this for the long-term interests of consumers are discussed further in Appendix 1.2 to JGN's response to the draft decision.

3.7.7 THE AER'S APPROACH WILL NOT PROMOTE PRICE STABILITY

188. Finally, the AER refers to the maintenance of price stability and the avoidance of price volatility as reasons for it adopting its approach to the transition. However, these are not factors in favour of the AER's approach.

189. The application of transitional arrangements to the debt risk premium component of the return on debt will cause a much more significant decline in the allowed return on debt than would be the case if the AER moved immediately to the trailing average approach, and therefore the immediate imposition of a transition arrangement will cause less price volatility than the approach contained in the draft decision. This is a relevant factor in favour of JGN's revised proposal.

3.7.8 CONCLUSION

190. Given the AER's findings in relation to benchmark efficient debt management practices, there is no proper basis to apply transition arrangements to the DRP as proposed by the AER. If a transition is to be applied, then it should only be applied to the component of the return on debt that is not already transitioned—the risk free (or base) rate component.

4. REVISED PROPOSAL

191. For reasons set out above, JGN does not agree with the AER's approach to determining the return on debt, as set out in the draft decision.

4.1 PROPOSED APPROACH

192. Our preferred approach to determining the required return on debt involves:

- **Benchmark**—using a 10-year term-to-maturity and a BBB credit rating for estimating the return on debt.

- **Averaging periods**—selection of averaging periods using the process set out in JGN's proposed access arrangement.

- **Data source**—using a four step method for selecting the appropriate data source in the first measurement period (Steps (b)–(e) below) and a five step method for selecting the appropriate data source in each future measurement period:

  a) calculate the difference in estimates produced by the extrapolated fair value yield estimates from Bloomberg and the RBA:

    i) If the difference is less than 60 basis points, the estimate produced by the simple arithmetic average of extrapolated fair value yield estimates from Bloomberg and the RBA (extrapolated in accordance with the SAPN method, as recommended by CEG) is used[64]

    ii) If the difference is 60 basis points or greater, move to step (b)

  b) Identify all relevant third party return on debt data series (e.g. Bloomberg FVC or BVAL), the RBA or CBASpectrum)

  c) estimate the return on debt for each data series, and an average of the available data series, for that averaging period

  d) identify relevant bonds to compare each estimate against and their yields over the averaging period that meet the predetermined objective criteria, and

  e) select the return on debt estimate (or combination of estimates) that best fits the sample of bonds identified in step (d).

- **Extrapolation**—using the SAPN method to extrapolate data sources, where necessary.

- **Trailing average fixed principle**—including a fixed principle in the access arrangement, to lock in use of a trailing average methodology.

- **Transition**—implementing the return on debt over future averaging periods using a hybrid to trailing average transition which transitions the risk-free rate over a ten year period from the rate on the day to a trailing average whilst the DRP is simply rolled forward as a trailing average.

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[64] The 60 basis point value is set to align with the one per cent revenue threshold set out in the NGL. A 60 basis point difference between the two curves means that each curve is either 30 basis points higher or lower than the average of those two curves. Moving from that average to either curve corresponds to a $5.4M annual revenue impact—which is about one per cent of JGN's forecast building blocks revenue. The $5.4M is calculated as $5.4M = 30 basis points x $3B RAB x 60 per cent.

193. This approach is as set out in our original proposal except for:

- **Added a default estimate.** A compromise between JGN's proposal and the AER's draft decision in relation to the selection of third party data series. A simple arithmetic average of the available data series will be used if the difference in estimates produced by the extrapolated fair value yield estimates from Bloomberg and the RBA is less than 60 basis points.

- **Added average of curves.** An amendment to methodology for selecting the appropriate data source in each future measurement period to test the use of each service individually as well as simple averages of the available services against the underlying trading data in light of the fact that there may be a scenario in which a simple average of two services may perform better than any individual service.

- **Extrapolation.** A revised approach to extrapolation, in response to matters raised in the draft decision, and based on expert advice from CEG.

- **Revised transition.** A revision in relation to the proposed approach to debt transition, as discussed above.

4.2 REVISED POSITION IN RELATION TO RETURN ON DEBT TRANSITION

194. In its original proposal JGN adopted the trailing average approach and transition set out in the guideline, on the proviso that **this approach is applied properly and results in reasonable estimates of the return on debt for the benchmark efficient entity**.[65]

195. In light of the AER's new findings (in the draft decision) relating to efficient debt financing practices under the previous regulatory approach, and the material departure of the newly proposed rationale for the proposed transition of the DRP in the draft decision—which consciously forces or seeks a mismatch between actual and allowed return on debt—it is clear that the guideline approach to the return on debt transition will not result in reasonable estimates of the return on debt for the benchmark efficient entity. Rather, under the AER's approach, there will be a mismatch between the allowed return on debt and the required return on debt for the benchmark efficient entity.

196. At the time of JGN's original proposal the mismatch generated by adopting the guideline approach was not material and the rationale behind the approach was not set out as a conscious design to achieve a net loss for the services provider in the forthcoming period. This mismatch is now significant and this conceptual departure material.

197. In particular, as noted above, this mismatch has been exacerbated by the substantial reduction in debt yields since the original proposal was submitted.

198. The revision of JGN's position in relation to the return on debt transition is both:

- consistent with the original proposal, which was to adopt the guideline approach provided that it gave reasonable estimates of the return on debt for the benchmark efficient entity—in light of changes in financial markets this proviso will not be met, and

- in response to matters raised in the draft decision.

199. Specifically, the AER has raised new matters in relation to debt financing practices of the benchmark efficient entity which are relevant to the issue of transitional arrangements. As discussed above, the new analysis and evidence referred to by the AER implies that there is no longer a rational basis for adopting the transitional arrangements set out in the guideline and adopted by JGN in its original proposal.

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[65] JGN return on debt proposal (Appendix 9.10 to JGN's Access Arrangement Information), [66].

200. To the extent that the AER considers that this revision is not responsive to matters raised in the draft decision, JGN requests that the AER approves this revision to its original proposal for the reasons discussed above.

201. If the revisions to our proposal are not accepted, then the AER must consider this matter when preparing its proposal to achieve the best estimate of the return on debt—to meet both the rate of return objective and the NGO—given:

   • its views on efficient financing practices as expressed in the draft decision, an

   • the fact that this transition creates a mismatch between efficiency debt financing costs and allowed return on debt.

202. The findings and reasons in the draft decision are logically inconsistent with adopting the guideline transition and—based on the AER's finding—there is no proper basis to suggest that this transition is appropriate.

4.3   UPDATED PLACEHOLDER ESTIMATES OF THE RETURN ON DEBT FOR YEAR ONE

203. JGN has updated its return on debt estimate for year one of the access arrangement period to reflect its revised approach to transitioning to the trailing average. The updated estimate also reflects more recent data (for the period 2–30 January 2015).

204. JGN has calculated the updated estimate for year one as the sum of:

   • the historical average DRP for ten years prior to 2015–16 (2.35 per cent)

   • the average of one to 10 year swap rates during the period 2–30 January (2.69 per cent), and

   • swap transaction costs (23 basis points).

205. This results in a semi-annual yield estimate for the first two items of 5.04 per cent—which is equivalent to an annualised estimate of 5.10 percent. Adding swap transaction costs gives a return on debt estimate of 5.33 per cent.

206. This updated is based on a placeholder averaging period (2–30 January 2015). This will be updated once data for JGN's actual averaging (19 January–16 February 2015) period becomes available in March 2015.

207. Attachment A provides further detail on the method used to calculate this value and the transitional return on debt values for later years of the access arrangement period. Attachment B shows that the mismatch between the hybrid and AER transitions is material, and worth over $80M ($2015) over the 10-year transition period for an assumed RAB of $3B ($2015).

Attachment A
Transitional return on debt values

A1. TRANSITIONAL RETURN ON DEBT VALUES

A1.1 UPDATE TO THE RETURN ON DEBT FORMULA

208. JGN has amended its access arrangement to provide for a hybrid-to-trailing average transition. This has involved amending the return on debt formula—clause 5.1 of the access arrangement—to include transitional return on debt values for each year.

209. Under the revised clause 5.1, the return on debt for each financial year of the access arrangement period is to be calculated as follows:

- For financial year 2015–16: $kd_{2015-16} = T_{2015-16}$

- For financial year 2016–17: $kd_{2016-17} = (0.9 \times T_{2016-17}) + (0.1 \times R_{2016-17})$

- For financial year 2017–18: $kd_{2017-18} = (0.8 \times T_{2017-18}) + (0.1 \times R_{2016-17}) + (0.1 \times R_{2017-18})$

- For financial year 2018–19: $kd_{2018-19} = (0.7 \times T_{2018-19}) + (0.1 \times R_{2016-17}) + (0.1 \times R_{2017-18}) + (0.1 \times R_{2018-19})$

- For financial year 2019–20: $kd_{2019-20} = (0.6 \times T_{2019-20}) + (0.1 \times R_{2016-17}) + (0.1 \times R_{2017-18}) + (0.1 \times R_{2018-19}) + (0.1 \times R_{2019-20})$,

210. where:

- kd_t is the return on debt for financial year t of the access arrangement period

- $T_{2015-16}$ is 5.33%

- $T_{2016-17}$ is 5.54%

- $T_{2017-18}$ is 5.79%

- $T_{2018-19}$ is 5.97%

- $T_{2019-20}$ is 5.76%, and

- R_t is the annual return on debt observation for each financial year t of the access arrangement period (other than financial year 2015–16), calculated in accordance with clauses 5.2 to 5.4 of the access arrangement.

211. The 'T' values in the above formula represent the transitional return on debt values for each year of the access arrangement period.

A1.2 CALCULATION OF TRANSITIONAL VALUES

212. The transitional value for each year is calculated as the sum of:

- the average of swap rates for swaps that would be in place in that year—that is, for swaps that would be used by the benchmark efficient entity to hedge against base interest rate risk during the ten year transition period

- the historical average DRP for debt that would have been raised prior to the start of the transition period and which wold be yet to mature, and

- the transaction costs of entering the swap transactions.

213. For example, in year one of the access arrangement period, the transitional value—which is equal to the return on debt in that year—is the sum of:

- the average of the one to ten year swap rates, and

- the historical average DRP for the years 2005–06 to 2014–15.

214. By the second year of the access arrangement period, the one year swap will have expired and the debt raised in 2005–06 will have matured. Therefore the transitional value for that year will reflect the sum of:

- the average of the two to ten year swap rates, and

- the historical average DRP for the years 2006–07 to 2014–15.

215. This transitional value for the second year will be given a 90 per cent weighting in the return on debt formula, with 10 per cent weighting given to the new return on debt observation for that year.

216. The transitional values for subsequent years are calculated in a similar manner. These transitional values are given a progressively lower weighting through the access arrangement period.

217. In order to calculate the transitional values, estimates of the historical DRP and one to year swap rates are required. These estimates (provided by CEG) are set out in Table A1 1 and Table A1 2 below.

Table A1 1: Historical DRP values

Financial year	DRP (%)
2005–06	0.628
2006–07	0.793
2007–08	1.719
2008–09	4.359
2009–10	2.810
2010–11	2.737
2011–12	3.025
2012–13	2.886
2013–14	2.746
2014–15 (2–30 January 2015)*	1.816

(1) The value for 2014–15 is based on a placeholder averaging period (2–30 January 2015). This will be updated once return on debt data for JGN's actual averaging period (19 January–16 February 2015) becomes available. Values are semi-annual.

Source: CEG, Table 12.

Table A1 2: Swap rates*

Term of swap	Swap rate
1 year	2.62
2 year	2.51
3 year	2.51
4 year	2.53
5 year	2.60
6 year	2.68
7 year	2.76
8 year	2.83
9 year	2.89
10 year	2.95

(1) Swap rates are based on a placeholder averaging period (2–30 January 2015). These will be updated once return on debt data for JGN's actual averaging period (19 January–16 February 2015) becomes available. Values are semi-annual.

Source: CEG, Table 17.

218.   The estimate of transaction costs is based on CEG's estimate of the cost of entering into swap contracts.[66] CEG refers to two estimates of the expected cost of entering into swap contracts—an estimate of 14.5 basis points, from a report by Evans and Peck for the Queensland Competition Authority, and an estimate of 23 basis points, from a recent UBS expert report. CEG recommends adopting the upper end of the range defined by these two estimates, including because prevailing transaction costs are likely to be higher than these historic estimates. Therefore in the calculation below, we adopt an estimate of swap transaction costs of 23 basis points.

219.   JGN's calculation of the transaction costs to be included in the transitional values does not include any allowance for a new issue premium. As noted in JGN's initial proposal, there is evidence that an upward adjustment (i.e. a new issue premium) should be added to reflect the transaction costs associated with issuing new debt. These transaction costs will not be reflected in the yield estimates produced by sources that reflect trades in the secondary market (such as Bloomberg or the RBA). A recent report by CEG concludes that the best estimate of the new issue premium is 27 basis points.[67] An earlier report by Ronn and Golderg also finds support for a new issue premium in Australia.[68]

220.   Given that there is no allowance made for a new issue premium, the estimate of transaction costs used in these calculations is likely to be highly conservative, in the sense that it is more likely to understate the financing costs (including transaction costs) faced by the benchmark efficient entity.

221.   The transitional values for each year are calculated in Table A1 3 below.

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[66]   CEG, *Critique of the AER's JGN draft decision on the cost of debt*, February 2015, section 3.4.

[67]   CEG, *The new issue premium*, October 2014.

[68]   Ronn, E. and Goldberg, R., *Research into the New Issue Premium, and the Applicability of that Research to the Australian Corporate Bond Market*, October 2013.

Table A1 3: Transitional return on debt values

Year	Historical average DRP (%) (semi annual)	Average swap rate (%) (semi annual)	DRP + swap (%) (annual)	Transaction costs (%) (annual)	Transitional value (%) (annual)
2015–16	2.35	2.69	5.10	0.23	5.33
2016–17	2.54	2.70	5.31	0.23	5.54
2017–18	2.76	2.72	5.56	0.23	5.79
2018–19	2.91	2.75	5.74	0.23	5.97
2019–20	2.67	2.79	5.53	0.23	5.76

(1) The historical average DRP for 2015–16 is the simple average of the 2005–06 to 2014–15 DRP values shown in Table A1 1. The historical average DRP for 2016–17 is the simple average of the 2006–07 to 2014–15 DRP values and so on through to 2019–20.

(2) The average swap rate for 2015–16 is the simple average of the 1–10 year swap rates shown in Table A1 2. The average swap rate for 2016–17 is the simple average of the 2–10 year swap rates and so on through to 2019–20.

(3) The annualised transitional value for each year is the sum of the historical average DRP and average swap rate for each year in columns two and three, annualised (this annualised figure is shown in column four), and the transaction costs in column five.

222. As noted above, the swap rates and the DRP value for 2014–15 that are used for these calculations are based on a placeholder averaging period. Therefore, each of the transitional values will need to be updated once data for JGN's actual averaging period becomes available in March 2015.

Attachment B
Mismatch if AER transition adopted

B1. EXTENT OF MISMATCH

223. If the AER transition is adopted and the benchmark entity follows the hybrid transition, then there is a clear mismatch between the return on debt allowance and the efficient financing costs of that entity. Using current data, the extent of this mismatch is material—and for an assumed RAB of $3B is $82M ($2015) over the 2015-16 to 2019-20 period.

Table B1 1: Extent of mismatch if the AER transition is adopted.

Year	Transitional values (%) (annual)			Value of mismatch	
	Hybrid transition	AER transition	Mismatch	Weight in transition (%)	Return on debt mismatch (A$M, $2015)
2005–06	5.33	4.83	**(0.51)**	100	**(9.12)**
2006–07	5.54	4.83	**(0.71)**	90	**(11.52)**
2007–08	5.79	4.83	**(0.96)**	80	**(13.83)**
2008–09	5.97	4.83	**(1.14)**	70	**(14.42)**
2009–10	5.76	4.83	**(0.93)**	60	**(10.08)**
2010–11	5.77	4.83	**(0.94)**	50	**(8.49)**
2011–12	5.78	4.83	**(0.96)**	40	**(6.88)**
2012–13	5.68	4.83	**(0.85)**	30	**(4.60)**
2013–14	5.50	4.83	**(0.68)**	20	**(2.43)**
2014–15	5.06	4.83	**(0.23**	10	**(0.41)**
Total					**(81.80)**

(1) Transitional values for the hybrid transition calculated as per Attachment A. Transitional value for the AER transition is annualised value of the sum of the 10 year swap rate and the 2014–15 DRP value set out in Attachment A.

(2) The analysis assumes a $3B ($2015) RAB—which is a conservative value for JGN's RAB over the forthcoming period—and 60 per cent gearing.