Estimating the allowed return on debt

Response to AER Discussion Paper

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Energy Networks Australia

Contents

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1 Overview

Key messages

- Stability of regulatory approach on allowed cost of debt approaches will be important to ensure efficient delivery for customers of networks services, by promoting ongoing access to efficient long-term term financing options
- Network businesses support the maintenance of a BBB+ benchmark credit rating as that is consistent with the empirical evidence.
- ENA also supports the maintenance of a 10-year benchmark term as that is consistent with a proper analysis of the relevant empirical evidence, the 10-year trailing average approach to the return on debt and it also avoids complex transition arrangements that would be required if a different term were adopted.
- The current Reserve Bank of Australia and Bloomberg third party data sources are well accepted and working well, and their use should be maintained.

Energy Networks Australia (ENA) welcomes the opportunity to provide this response to the Australian Energy Regulator's Discussion Paper *Estimating the allowed return on debt* as part of the ongoing rate of return guideline review.

The network sector is undergoing a period of transformation. Networks are being utilised in new ways, and will continue to provide valuable services to customers over the longer-term. To ensure customers continue to benefit from efficient investment in networks, the long-term impacts of any changes to the approach should be considered and fully understood. To this end, network businesses will continue to engage constructively with the AER and other stakeholders throughout the remainder of this review.

The AER has maintained a 10-year benchmark term and a BBB+ benchmark credit rating in decisions since its inception. The movement to a 10-year trailing average allowance provides even more stability in the allowed return on debt and better matches the financing approach of most capital intensive businesses with long-lived assets. This stability has enabled networks to attract the necessary debt to finance new investments while maintaining investment grade ratings for the benefit of network customers and all stakeholders.

It is appropriate for the AER to review its approach to setting the return on debt allowance periodically to ensure it remains fit for purpose and continues to provide customer benefits.

In relation to the key issues in the Discussion Paper, energy network businesses:

- support the maintenance of a **BBB+ benchmark credit rating** as that is consistent with the empirical evidence.
- support the maintenance of a **10-year term** as that is consistent with a proper analysis of the relevant empirical evidence. It is also consistent with the 10-year

trailing average approach to the return on debt and it avoids the complex transition arrangements that would be required if a different term were adopted while the current transition to a 10-year trailing average was only partially completed.

- consider that the RBA and Bloomberg third party data sources are well accepted and working well and should be maintained. ENA has a number of significant concerns in relation to the Reuters and Standard and Poors (S&P) curves and considers that they should not be used at this stage.

If the AER determines that the 10-year term and BBB+ credit rating benchmarks should be maintained, it would be relevant to compare the actual spread for 10-year BBB+ debt with the allowed benchmark cost of 10-year BBB+ debt. The Chairmont analysis published undertakes a different exercise, and would seem to be of limited relevance.

The primary focus of network businesses and our advisors in the period since release of the Discussion Paper has been to understand the Chairmont analysis, in particular as it relates to actual debt performance. Taking into account the identified limitations of the Chairmont analysis and the caveats in the associated report, it is unclear at this point that any change in approach is required. This would be even less clear were the S&P and Reuters curves used in setting the cost of debt, given the significant concerns we hold with the use of these curves.

2 Selection of benchmark credit rating

Summary

» ENA supports the AER's approach of using the median credit rating (computed using a relatively large sample of comparator firms) for the industry, assessed over a reasonably long historical period to inform its determination of the benchmark credit rating.

» The AER's updated evidence on the median credit rating for the industry suggests that maintaining the existing benchmark credit rating of BBB+ would be both conservative and reasonable.

The AER currently uses a benchmark credit rating of BBB+. This benchmark rating was informed by an assessment of the median actual historical credit rating of a sample of comparator firms.

Overall, the ENA supports this approach and:

» supports the AER's use of a relatively large sample of service providers when assessing the benchmark credit rating.

» considers that it is appropriate to examine actual ratings over a relatively long period of time, rather than take a snapshot of credit ratings in a single year, because the actual ratings of individual firms can vary in individual years. The benchmark credit rating is, in ENA's view, a long-term parameter that should not be influenced unduly by short-term fluctuations in credit ratings.

The Discussion Paper updates in Table 4 the historical credit ratings of service providers to 2017. Using these data, the AER calculates the median historical credit rating for the industry over different historical periods, as summarised in the Table below.

Table 1: Industry median credit rating over different historical periods

Time period	Median credit rating	Time period	Median credit rating
2017 (to date)	BBB+	2011–2017	BBB
2016–2017	BBB+	2010–2017	BBB
2015-2017	BBB+	2009-2017	BBB
2014–2017	BBB+	2008–2017	BBB+
2013–2017	BBB/BBB+	2007–2017	BBB/BBB+
2012–2017	BBB	2006–2017	BBB/BBB+

Source: Bloomberg (S&P), AER analysis.

Source: AER Discussion Paper, Table 5, p. 16.

ENA considers that this evidence:

- indicates that the median credit rating for the industry has ranged between BBB and BBB+, depending on the historical period considered; and
- indicates that a benchmark credit rating for this industry of BBB+ would be conservative.

ENA notes that the historical rating data presented in Table 4 of the Discussion Paper considered data only to 2017. Since then:

- Victoria Power Networks' credit rating has increased slightly from BBB+ to A-; and
- Ausgrid's credit rating has fallen slightly from BBB+ to BBB.

As these changes affect only two firms in the sample, are movements in offsetting directions, and relate only to a single year, ENA does not consider that these recent changes in ratings should affect the overall benchmark rating. ENA considers that a reasonable benchmark credit rating of BBB+ is appropriate.

3 Selection of the term of debt

Summary

ENA supports the AER's continued use of a 10-year term to maturity for the following reasons:

- The empirical evidence remains supportive of a 10-year term.
- The conceptual basis for long-term (10-year) debt remains valid – the assets that are being financed are long-lived and refinancing risk is a key concern that is efficiently managed by issuing long-term debt with staggered maturities.
- Maintaining a 10-year term would be consistent with the AER "committing to a debt term for the period nominated" in its 2013 Guideline.
- Maintaining a 10-year term would recognise that network businesses are part-way through a transition to a 10-year trailing average allowance and have taken steps to align their debt portfolios accordingly.
- Maintaining a 10-year term would avoid the complexity of having to develop a new set of transition arrangements to be applied to the current set of transition arrangements – as the current transition to a 10-year trailing average portfolio would have to be re-set to a different maturity.
- Maintaining a 10-year term would be consistent with regulatory stability and predictability, given that the AER has adopted a 10-year term in all decisions since its inception.

3.1 AER's rationale for adopting a 10-year term to date

Since its inception, the AER has adopted a 10-year term of debt for all of the firms that it regulates. In its 2013 Rate of Return Guideline materials, the AER explained that a 10-year term:

- has a strong conceptual basis relating to the nature of the assets and the materiality of refinancing risk;
- is supported by the empirical evidence; and
- is consistent with regulatory stability and predictability and with the AER's "commitment" in moving to a 10-year trailing average allowance.

3.1.1 Conceptual basis

In relation to the conceptual basis for a 10-year term, the AER stated that:

> *Conceptually we consider that businesses will seek to issue longer-term debt. As the assets are long-lived the fewer times that the debt which funds them is required to be refinanced, the lesser is the risk. The risk consists of firstly, securing funding and secondly, with securing this funding*

at rates which do not vary considerably from the prevailing rates associated with financing that debt.[1]

The AER also observed that:

> *A significant proportion of regulated energy assets are long-lived. We observe that electricity transmission lines and gas pipelines are depreciated for regulatory purposes over as long as 60 years.*[456] *Accordingly, we consider that the entity will seek to fund the long-lived energy assets with longer debt tenors in order to manage refinancing and interest rate risk. By issuing longer term debt the entity reduces the frequency with which it must approach the market, thereby reducing the risk associated with not being able to secure funding at the time when it is required, or at rates that are higher or lower than those it currently pays. In approaching the market less frequently there is less risk associated with changing interest rates, which reduces the volatility in debt servicing costs and the likelihood of mismatch between the business' cash flows and its debt servicing obligations.*[2]

3.1.2 Empirical evidence

In its 2013 Guideline materials, the AER observed that the empirical evidence supported its 10-year term:

> *Based on observed practice we have assessed that the businesses' debt portfolio weighted average term at issuance is 8.7 years (ranging between 6.7 years to 16.3 years). We observe that businesses are securing bank debt with an average term at issuance of 4.3 years, issuing Australian bonds with an average term of 9.7 years and offshore bonds of 9.7 years.*[3]

The AER also considered evidence in relation to the term (at issuance) of debt held by NSPs regulated by the AER. The AER concluded that the average term (at issuance) of all debt was 8.7 years and the average term (at issuance) of corporate bonds was 9.7 years.[4] The AER also noted that issuances tended to be somewhat shorter during the GFC, due to a reduction in the availability of long-term debt over that period, which had the effect of temporarily lowering the average term of debt. The AER noted that more stable periods with lower rates was more conducive to issuing longer-term debt:

> *While this is a point in time estimate, we note that it has not changed considerably since the 2009 WACC Review, where the average term at issuance was 9.1 years. There are indications that the current market environment is favourable for issuing longer-term debt due to the low prevailing interest rates and increased appetite for corporate debt domestically. This would lead us to expect that the current environment is supportive of businesses issuing longer tenors.*

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[1] AER, 2013, Rate of Return Guideline Explanatory Statement, p. 136.
[2] AER, 2013, Rate of Return Guideline Explanatory Statement, p. 138.
[3] AER, 2013, Rate of Return Guideline Explanatory Statement, p. 136.
[4] AER, 2013, Rate of Return Guideline Explanatory Statement, pp. 141-143.

The AER concluded that:

> *We therefore consider that an average term of issuance around nine years is reasonably stable over time.*[5]

3.1.3 Regulatory commitment in relation to trailing average approach

The AER also noted in its 2013 Guideline materials the interaction between the 10-year trailing average approach and the use of a 10-year term of debt:

> *Accordingly, in moving to a trailing average approach we consider that we are committing to a debt term for the period nominated. To change the benchmark debt term in response to updated debt portfolio information would not be conducive to regulatory stability. In light of this, in order to ensure that the benchmark efficient entity is able to recover its efficient financing costs consistent with the allowed rate of return objective, we propose to use a 10 year debt term for the purposes of estimating the return on debt and for setting the period of the trailing average.*[6]

3.2 Current consideration of the AER's rationale for a 10-year term

All of the reasons that the AER put forward to support the use of a 10-year term of debt in its 2013 Guideline, currently apply with equal or stronger force. As explained below:

- the conceptual basis remains the same;
- the empirical evidence continues to support a 10-year term; and
- any movement away from a 10-year term would now result in a more severe breach of regulatory stability and the regulatory commitment to adopt a 10-year term that was made in the 2013 Guideline.

3.2.1 Conceptual basis

The long-lived nature of the assets in question and the existence of refinancing risk remain just as relevant as at the time of the 2013 Guideline. Consequently, the conceptual basis for considering that the benchmark efficient entity would issue long-term (10-year) debt remains valid.

3.2.2 Empirical evidence

ENA considers that the empirical evidence, properly evaluated, remains supportive of a 10-year term. That evidence is set out in the following sub-section.

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[5] AER, 2013, Rate of Return Guideline Explanatory Statement, p. 142.
[6] AER, 2013, Rate of Return Guideline Explanatory Statement, p. 137.

3.2.3 The AER's commitment to maintaining a 10-year term

In its 2013 Guideline, the AER stated that its movement to a trailing average allowance for the return on debt involved the AER "committing to a debt term for the period nominated" and was "conductive to regulatory stability." Since the 2013 Guideline the AER has:

- set the term of debt to 10 years in every draft and final decision that it has made; and
- determined that the benchmark efficient return on debt is commensurate with a 10-year trailing average and most businesses are currently part-way through a transition to this benchmark.

Consequently, a change to the term of debt would be even more inconsistent with regulatory stability given that, since the 2013 Guideline, there have been five more years of decisions in which the AER has set the term of debt to 10 years.

Moreover, making a change to the allowed term of debt even before businesses could complete their transition to the 10-year trailing average approach would represent a material breach of the regulatory commitment "to a debt term for the period nominated." Most businesses are only in the initial years of the 10-year period nominated in the 2013 Guideline, so another change to a different term would be materially inconsistent with what businesses have been reasonably working towards since the 2013 Guideline.

Moreover, a change in the term of debt would seem to require a new set of transition arrangements to be applied to the current set of transition arrangements. This is because, under the transition set out in the 2013 Guideline, the benchmark efficient firm will be part way through building up a staggered-maturity portfolio of 10-year debt. If a different term was adopted now, the existing 10-year debt would presumably have to be liquidated by the benchmark efficient firm and gradually replaced with debt of a different term.

The alternative would be for the AER to allow the existing 10-year debt that has been put in place in accordance with the current AER approach to remain until it matures, to be replaced by debt of the new maturity. However, this would involve a different regulatory allowance for different firms, depending on how far through the transition period they are. Either way, any departure from the standard 10-year term would be complicated and quite inconsistent with regulatory stability.

3.3 Updated empirical evidence

ENA considers that the empirical evidence, properly evaluated, remains supportive of a 10-year term.

The Chairmont analysis[7] (Graph 3) shows the average term of debt for issuances over the 4-year period of 2014-2017. That analysis shows some variation in terms – being

[7] Chairmont, 28 April 2018, *Aggregation of return on debt data*, report for the AER.

greater than 9 years in the most recent period, but with shorter terms in early 2014 and early 2016. ENA considers that there are two key issues that must be considered when interpreting the Chairmont analysis:

- **Method of averaging**: Chairmont appear to have compiled their average over all debt issuances that were made in the previous 12-month period, ignoring the term of any debt that was not refinanced during that period. For example, consider a firm that behaves exactly in accordance with the AER's assessment of the benchmark efficient approach to debt financing. That firm will have a staggered-maturity portfolio of 10-year debt, of which 10% will be refinanced each year. It may also have one or more tranches of short-term debt for liquidity and/or working capital purposes – assume for this example that such debt is rolled over every 3 months. In this case, in any 12-month period, there will be:
  - four observations of the short-term debt being refinanced;
  - one observation of a 10-year bond being refinanced; and
  - zero weight given to the nine 10-year bonds that were not refinanced during the period.

  Thus, the short-term debt will be materially over-represented and the majority of the long-term debt will be omitted from the calculation entirely. This would result in a downwardly-biased estimate of the term of debt, even for a company that was replicating the AER's 10-year trailing average benchmark approach.
- **Effect of recent privatisations**: When a network business is sold, the new owner (or long-term lessee) must raise the entire debt portfolio afresh at the time of the transaction. A new owner who intended to replicate the AER's 10-year trailing average debt allowance as closely and as quickly as possible would, at the time of the transaction, issue 10% of the total requirement in 1-year debt, 10% in 2-year debt, and so on. As each tranche matures, it would be replaced by 10-year debt. In this way, a full 10-year trailing average portfolio will be in place after 10 years. Of course, this means that the average maturity at the time of issuance would be 5.5 years, even though the firm is seeking to exactly replicate the AER's benchmark 10-year term.

  In practice, it is likely to be uneconomical for a firm to issue ten separate tranches of debt at one time. However, it remains the case that such firms tend to issue a mixture of short-, medium-, and long-term debt to finance such transactions, and to replace maturing debt with long-term debt. Indeed, it is not uncommon for some debt at the time of the transaction to be issued on a bridge financing basis, pending its replacement with longer-term debt soon after the transaction is complete.

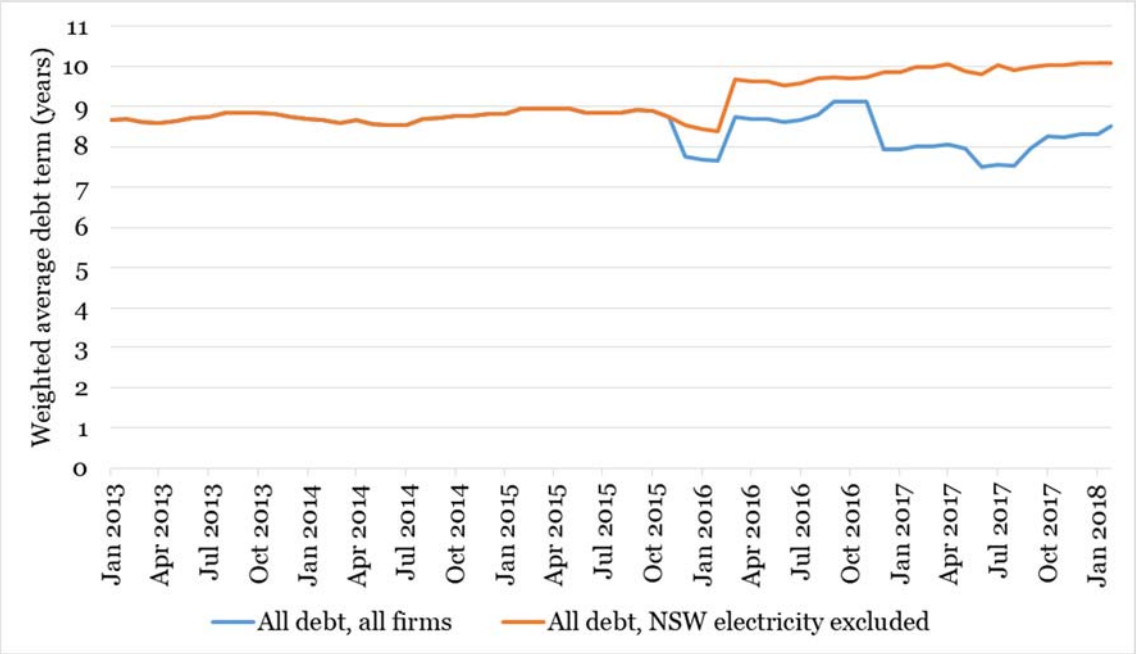
  The fact that the Chairmont sample includes a number of such transaction-related debt issuances is a further reason why the average they have compiled is a downwardly-biased estimate.

The downward biases set out above can be corrected by:

- Computing the average term to maturity by averaging over all debt for the industry debt portfolio (with and without recently privatised NSW businesses (and/or for each NSPs balance sheet) at the end of each month, rather than over all issuances. That is, the balance sheet of each network business is observed at the end of the month, all debt on that balance sheet is documented, together with its term at issuance, and the average is taken over all of that debt and/or over all NSPs in the sample. This corrects for the over-weighting of short-term debt that is frequently refinanced, and the underweighting of long-term debt that was not refinanced during each rolling 12-month period.
- Giving little weight to debt raised in relation to the completion of corporate transactions.

When these corrections are made, the evidence supports a 10-year term of debt, as illustrated in Figure 1 below.

Figure 1: Corrected estimates of term of debt



Source: Corrected version of Chairmont analysis of average term to maturity. Includes all debt, including callable debt, at date of final maturity

3.4 Summary on appropriate term of debt

ENA supports the AER's continued use of a 10-year term to maturity for the following reasons:

- the empirical evidence remains supportive of a 10-year term.
- the conceptual basis for long-term (10-year) debt remains valid – the assets that are being financed are long-lived and refinancing risk is a key concern that is efficiently managed by issuing long-term debt with staggered maturities.

- maintaining a 10-year term would be consistent with the AER "committing to a debt term for the period nominated" in its 2013 Guideline.
- maintaining a 10-year term would recognise that NSPs are part-way through a transition to a 10-year trailing average allowance and have taken steps to align their debt portfolios accordingly.
- maintaining a 10-year term would avoid the complexity of having to develop a new set of transition arrangements to be applied to the current set of transition arrangements – as the current transition to a 10-year trailing average portfolio would have to be re-set to a different maturity.
- maintaining a 10-year term would be consistent with regulatory stability and predictability, given that the AER has adopted a 10-year term in all decisions since its inception.

4 Curve selection

Summary

- ENA supports the retention of the RBA and Bloomberg curves. These data sources are well-accepted by regulated businesses, and their strengths and weaknesses well-understood.
- There is no strong case to support the adoption of either the Reuters or S&P curves at the present time:
  - The Discussion Paper notes that the S&P curve is constructed using bonds issued by overseas firms. This is at odds with Benchmark Efficient Entity (BEE), which the AER has defined as an Australian firm.
  - Any yield curves used to estimate the return on debt allowance for the BEE should reflect the way in which the BEE would issue debt. Australian corporates, including regulated NSPs, issue debt both domestically and overseas. The RBA and Bloomberg yield curves are constructed using bonds issued by Australian corporates domestically and overseas, so reflect well the debt raising approach adopted by the BEE.
  - The S&P data has only a very short history available, which makes it unsuitable for the purpose for setting the allowed rate of return (e.g., using the historical trailing average approach) and does not allow sufficient back-testing of the data to check its reliability.
  - The S&P curve appears to produce materially different estimates of the return on debt than either the RBA or Bloomberg curves (which are very consistent with one another). This alone provides grounds for cautious treatment of the S&P data. However, the scant public information available to stakeholders on the precise methodology and data used by S&P means that stakeholders cannot comment meaningfully on why the S&P curve produces such markedly different outcomes from the RBA and Bloomberg curves. For this reason, ENA submits that the S&P data should not be relied on by the AER for the purpose of setting allowances until a high degree of confidence can be achieved that the S&P methodology and data are reliable and fit for a regulatory purpose.
  - The Reuters curve is available only intermittently.
- Adopting up to four different yield curves for the purpose of setting the return on debt allowance would be unnecessarily complex and burdensome on NSPs and other stakeholders, with no obvious countervailing benefits.

4.1 The RBA and Bloomberg curves should be retained

The AER presently uses yield curves published by the Reserve Bank of Australia (RBA) and Bloomberg to determine the return on debt allowance. Energy network businesses:

- accept that there are benefits to using more than one data source to set the return on debt allowance. As the AER notes in the discussion paper, different data sources have strengths and weaknesses. Further, in the past, data providers have either temporarily or permanently ceased publication of yield curves. Reliance on a single data source would risk the possibility that the data required by the AER in order to set or update the return on debt allowance is unavailable, if that data source is suspended or discontinued.
- note that the use of the RBA and Bloomberg curves have become well-accepted by NSPs.
- consider that whilst the RBA and Bloomberg curves do not produce identical outcomes (given the differences in the data and methodologies underlying the curves), they have been largely consistent with one another over a reasonably long period of time. The fact that the two sources have largely corroborated one another provides a high degree of confidence in these two data sources.

For these reasons, ENA submits that the RBA and Bloomberg curves presently used by the AER should be retained for the purposes of setting the return on debt allowance for network businesses.

4.2 No strong case for adoption of Reuters or S&P curves at this time

The Discussion Paper seeks views on whether yield curves published by Thomson Reuters (Reuters) and/or Standard & Poor's (S&P) should be adopted.

ENA submitted in its response to the Rate of Return Guideline Issues Paper that the assessment of new data sources should include the following criteria:[8]

- The data source is derived from a dataset that appropriately matches the characteristics of debt issued by a benchmark efficient entity.
- The data source is derived from a sufficiently large data set, which provides confidence that the result is not unduly influenced by a small number of observations in the data set.
- The data source is published regularly by an independent reputable organisation—independent in the sense that the source is beyond the direct influence of any stakeholders.
- A sufficiently long history of estimates is available to determine whether the source provides reasonable estimates over a range of market conditions.

ENA considers that these criteria remain valid and should be used to assess the suitability of the Reuters and S&P curves for regulatory purposes.

[8] Energy Networks Australia, AER Rate of Return Guidelines – Response to Issues Paper, 12 December 2017, p. 20.

In ENA's view, the RBA and Bloomberg curves perform well against these criteria – hence their wide acceptance within the industry.

By contrast, the Reuters and S&P curves perform poorly against these criteria. For instance:

- Australian networks raise debt in Australian and offshore in other currencies. The benchmark efficient entity (BEE) has been defined by the AER as an Australian firm. Therefore, the curves used to determine the return on debt allowance for the BEE should reflect the manner in which the BEE raises debt finance. This implies that only bonds issued by Australian entities (domestically and offshore) should be used to construct the yield curve. The Discussion Paper notes that the S&P curve is constructed using bonds issued by non-resident entities, and the main 'blended' Reuters curve places no restrictions on the ownership or country of risk.[9]
- As the Discussion Paper indicates, the S&P curve is available for only a very short period, which is too short for the purposes of determining return on debt allowances.[10]
- As the Discussion Paper notes, the Reuters curve is intermittent in its availability.[11] If this intermittency is due to the underlying curve-fitting methodology used by Reuters, as suggested in the Issues Paper, then the availability of the Reuters curve may continue to be sporadic over time.

Furthermore, the Issues Paper notes that the credit spreads on the S&P curve have been materially and consistently lower than implied by the RBA and Bloomberg curves (which, as noted above, have corroborated one another over a relatively long period of time). This suggests that the S&P curve could be measuring something other than the RBA and Bloomberg curves. This seems likely, given the differences in methodology and data used by S&P to construct its yield curve – as identified in the Discussion Paper. Such marked differences between one curve and all others could indicate that it is an outlier that should be treated with caution.

Additionally, material differences of the kind identified by the AER would suggest that it is necessary to understand precisely what is driving those differences before reliance is placed on the S&P curve when setting allowances. However, S&P does not publish the details of its methodology or the data (i.e., the precise bonds) it uses to construct its curve.[12] Given the very short period of S&P data available, and the scant information on the methodology and data it uses, it is very difficult to draw firm conclusions on the suitability of the S&P curve. However, based on the information

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[9] Discussion Paper, Table 2, pp. 19-20.
[10] Discussion Paper, Table 5, p. 24.
[11] Discussion Paper, Table 5, p. 24.
[12] The Discussion Paper (p. 21) notes that S&P has made available to the AER a detailed proprietary document setting out its approach. However, given the proprietary nature of that information, S&P has not made that information available more widely for stakeholders to scrutinise.

that the AER has made available, and the apparent divergence between estimates derived using the S&P curve and estimates obtained using the RBA and Bloomberg curves, ENA submits that there is no strong case for adopting the S&P data at the present time.

Finally, ENA submits that the adoption of up to four different yield curves in order to determine the return on debt allowance would be overly cumbersome, complex and burdensome on stakeholders with no obvious offsetting benefit. ENA supports the relatively simple approach of using two reliable data sources—RBA and Bloomberg—which appears to have been working effectively for a number of years.

5 Chairmont analysis of actual cost of debt

Summary

The ENA would welcome further engagement with the AER and Chairmont to ensure it fully understands the details of the analysis that has been undertaken. Currently it has concerns about any conclusions that might be drawn from the analysis presented by Chairmont for the following reasons:[13]

- The Chairmont and AER analysis over-weights short term debt (some of which may actually be undrawn). In order to correctly weight both term and spread data each observation should be weighted by the term of the associated debt instrument;
- The AER should reconsider its exclusion of callable/subordinated debt. Failure to do so has the potential to result in a form of cherry-picking to include short-term high-rated debt but not the higher-cost more flexible debt that makes the issuance of short-term high-rated debt possible;
- To the extent that callable/subordinated debt is excluded because it is different to the benchmark so should short term debt (and very long term debt) and debt with a credit rating materially different to BBB+.
- To the extent that the AER continues to have regard to short term debt it should consider whether it has accurately accounted for fees on short term debt when estimating the credit spread. One-off fees for short term debt translates into a materially higher annual cost of that debt than for long-term debt. Excluding one-off fees from both short and long term debt tends to understate the true relative cost of short term debt.
- Data from debt issued in 2018 appear to be left out of the analysis but should be included.
- The AER presents graphical analysis that has the potential to be unintentionally misleading to stakeholders for a number of reasons. It is, consequently, not clear that the AER's Figures 2 to 5 provide a clear description of the data. The AER should report a single average of the relevant metrics for all debt issued since 1 January 2013.
- The AER should draw its conclusions in the context that:
  - The AER only has 5 years of debt issuance data and this is affected by the NSW privatisations. The debt portfolio of the industry at any given time will reflect credit spreads on debts issued on debt over a period of decades (from 30 to 60 years);
  - The relationship between the Bloomberg/RBA credit spreads and industry credit spreads prospectively will not necessarily be the same as over the last

[13] Chairmont, 28 April 2018, *Aggregation of return on debt data*, report for the AER.

5 years. Notably, the most recent data from 2017 and 2018 suggests industry credit spreads have been at or below levels predicted by the Bloomberg/RBA BBB curve.

5.1 Term of debt bias

The methodology underpinning Figures 2 and 4 in the AER's Discussion Paper[14] gives the same weight to 1-year and a 15-year debt instruments. The methodology underpinning Figures 3 and 5 in the Discussion Paper[15] gives zero weight (excludes) debt instruments with maturity greater than 10 years. Neither of these outcomes are appropriate because:

- By its nature short-term debt is refinanced more often and, consequently, the observations of debt issued in any given year will tend to be artificially dominated by short-term issuance;
- Businesses only pay the spread to swap on short-term debt for a short period of time. By contrast, long-term debt is 'on the books' for a longer time.

Both of these considerations mean that the appropriate methodology would be to assign short-term debt less weight than long-term debt. One sensible weighting scheme would be to weight debt issues by the tenor of the debt itself. This weighting scheme reflects the proportion that each debt instrument would have in the balance sheet if the observed pattern of debt issuance in any given period was continued indefinitely.

For example, imagine that, in a given year, the AER observed that 50% of debt issued was 1 year debt and one sixth of debt issued was respectively 5, 10 and 14 year debt. The average term of debt issued in that year would be just 5.3 years. However, if the same pattern of debt issues was repeated year after year, the equilibrium average term of debt (at issue) on the industry balance sheet would be 10.1 years.

This is because the 1-year debt expires every year and is replaced by 1-year debt (i.e., it never grows in size on the balance sheet). However, the longer-term debt does not expire in that year and, as new debt of the same maturity is issued, the amount of debt in the industry debt portfolio with that initial maturity also increases. Assuming continuation of the same issuance pattern in the long term, the equilibrium is reached after 14 years when the 14 year debt ceases to grow on the balance sheet because new 14-year debt is replacing maturing 14-year debt from 14 years prior. At this point, the average term of debt (at issue) on the balance sheet is given by:

$$\text{Av term} = \frac{1 * 1 * 50\% + 5 * 5 * (1/6) + 10 * 10 * (1/6) + 14 * 14 * (1/6)}{1 * 50\% + 5 * (1/6) + 10 * (1/6) + 14 * (1/6)}$$

$$= 10.125$$

[14] AER, May 2018, Estimating the allowed return on debt: Discussion Paper, pp. 30, 39.
[15] AER, May 2018, Estimating the allowed return on debt: Discussion Paper, pp. 37, 40.

In other words, the one-year 'snapshot' will have contained the refinancing of all of the 1-year debt, one fifth of the 5-year debt, one tenth of the 10-tear debt and one fourteenth of the 14-year debt.

Similarly, if, in all future years, spreads on these instruments were the same as during the observed year, then the above weighting scheme would result in the correct equilibrium spread being paid by an industry portfolio associated with repeating the same issuance in all future years.

A more appropriate method would be to weight by the term of debt issued. That approach would produce a conceptually rational metric that takes into account the fact that, in any given period, one will observe a much higher proportion of short-term debt issues than the proportion of total debt outstanding that is short-term debt.

The failure to adopt an appropriate weighting scheme renders the AER's metrics very difficult to interpret meaningfully. They certainly do not provide a robust measure of the extent to which networks':

- Average debt term (as a proportion of total outstanding debt) is lower than the benchmark; and
- Average risk premiums are lower than the benchmark risk premiums.

5.2 Excluding callable and subordinated debts

The AER states that callable and subordinated debt are excluded from its analysis. ENA considers that the exclusion of callable and subordinated debt has the potential to result in a form of cherry-picking whereby the analysis includes short-term high-rated debt but not the higher cost more flexible debt that makes the issuance of the short-term high-rated debt possible.

The reason for issuing a portion of the portfolio in callable and subordinated debt is typically to reduce the overall risk of the portfolio. This takes pressure off credit rating metrics and allows the firm to maintain a lower credit rating and/or a shorter maturity on its other debt. It is not a balanced analysis to disregard the higher cost debt instruments that allow for the lower cost debt instruments to be issued. Doing so does not result in a complete view of the full cost of debt financing for an efficiently financed network business.

5.3 Fees and short-term debt

To the extent that the AER continues to have regard to short-term debt, it should consider whether it has accurately accounted for fees on short-term debt when estimating the credit spread. The same one-off fees for short-term debt translates into a materially higher annual cost than for long-term debt. Excluding one-off fees from both short- and long-term debt tends to understate the true relative cost of short-term debt.

5.4 Data from 2018

The AER has been provided with data on debt issuance from early 2018. The AER does not appear to have included this data in its analysis. The ENA considers that this data should be included in the AER analysis.

5.5 Problems with AER graphical analysis

The AER presents its empirical analysis in Figures 3 to 5. This section suggests amendments to the way the relevant data is analysed and presented.

5.5.1 Figures 2 and 4

In addition to the failure to weight observations by the term of the debt issued, Figures 2 and 4 in the Discussion Paper are problematic given that that data from after January 2017 and before December 2014 receives less visual weight (appears in fewer points in the chart) than data from between these periods. This is in addition to the fact that data post December 2017 receives zero weight.

It is also the case that the "AER series" in these charts is a trailing average of all trading day observations from the Bloomberg/RBA curves over the preceding 12 months. By contrast, the "industry index" is an average of observations from a handful of days over the preceding 12 months. This means that divergences between the two curves may simply reflect the fact that the industry did not raise debt on every trading day.

The AER could correct for the first problem by extending Figure 2 and Figure 4 backwards/forwards to January 2013/February 2018 – noting that the relevant trailing average is less than 12 months in these regions of the charts.

The AER could correct for the second problem by reporting a term weighted average difference of the spread actually paid on debt issues and the "AER series" on the same day. It may also be useful to include a trailing average of the "AER series" that only gives weight to days in which industry debt was raised (and weights this by the term of the debt raised on that day).

In addition to weighting observations by the term of the debt issued, the AER could also include a version of Figures 2 and 4 that focusses on debt with a credit rating similar to BBB+ and a term similar to 10 years. For example, excluding debt with:

- Maturity that is outside the range of 5 and 15 years;
- Credit ratings outside the range of Standard and Poor's BBB to A-.

This would allow the AER and stakeholders to understand the extent to which the analysis is sensitive to the inclusion of debt that is different from the AER's benchmark.

5.5.2 Figures 3 and 5

As with all of the analysis, the observations underpinning Figures 3 and 5 in the Discussion Paper should be weighted by the term of the relevant debt instrument.

ENA understands that Figures 3 and 5 involve a comparison of spreads on debt instruments to the same maturity on the RBA/Bloomberg curve on the same day that the debt was issued. This eliminates one of the problems with Figures 2 and 4 (i.e., the lack of correspondence of the RBA/Bloomberg values to the days that debt was issued).

However, a similar problem exists in that, by reporting only calendar year averages, it is not clear what the average is over the entire period (unless it can be assumed that the same number of debt issues are made in each calendar year). The AER could correct for this by reporting a (term weighted) average across the entire period (including data from 2018).

In addition, Figures 3 and 5 are highly problematic because they appear to exclude all debt with maturity of greater than 10 years. The AER's reason for doing so is as follows:

> *In some cases, there is no corresponding BVAL or RBA estimate because the term of issued debt is longer term than the longest published term at issuance by either of the curve providers. We have not calculated a 'difference estimate' in these cases because they would require strong assumptions to extrapolate the curves. This excludes approximately 10 per cent of the sample. However, we have undertaken a sensitivity check using a conservative assumption (spreads held constant from longest published term) and it does not appear to materially change the result.*[16]

ENA considers that it is unreasonable to exclude debt with a term of 10.1 years (very close to the benchmark of 10 years) and not exclude debt with a term of 1-year (very different from the benchmark). The fact that the RBA does not publish estimates for debt with a term below 3 years makes this even more problematic.

A more comprehensive and balanced analysis would include longer term debt in Figures 3 and 5 – even if assumptions are required in relation to the behaviour of credit spreads above 10 years. Such an analysis could include an assessment of the sensitivity of the results to a range of reasonable assumptions.

As with Figures 2 and 4, it would be useful to consider a version of Figures 3 and 5 that focusses on a narrower maturity and credit rating profile that is more consistent with the benchmark efficient entity.

5.6 Sample period

The Chairmont analysis covers a very short period, considering only those debt instruments issued between 2013 and 2017. This entire data period is only half of the life of the current benchmark efficient 10-year term of debt. Thus, a network operating in accordance with the benchmark efficient trailing average approach to managing its debt portfolio would only have refinance half of its debt over the period examined by Chairmont. Moreover, the actual financing practices involve issuing

[16] AER, May 2018, Estimating the allowed return on debt: Discussion Paper, Footnote 49, p. 36.

some much longer term debt (of 20-plus years). This would seem to be too short a period to reach any firm conclusions.

It is also the case that the relationship between the Bloomberg/RBA credit spreads and industry credit spreads prospectively will not necessarily be the same as over the last five years. Notably, the AER analysis (even before the amendments suggested by the ENA) seems to suggest that most recent data from 2017 suggests industry credit spreads have been at or below levels predicted by the Bloomberg/RBA BBB curve. To the extent that recent correlations are most relevant to predicting future correlations, this would be reason to be cautious in relying on older data.

6 Weighted yield estimate

Summary

» ENA supports the maintenance of a BBB+ credit rating and the maintenance of the RBA and Bloomberg yield estimates.

ENA supports the maintenance of a BBB+ credit rating and the maintenance of the RBA and Bloomberg yield estimates. Both data sources produce curves for broad BBB and broad A-rated corporate bonds – neither produces a curve specifically for BBB+ bonds due to the lack of sufficient data points.

In its 2013 Guideline, the AER concluded that when setting the allowed return on debt it would use:

> *...yield estimates from an independent third party service provider for a 10 year debt term and the closest proximate for a BBB+ credit rating*[17]

and that has resulted in the AER using the broad BBB yield estimates compiled by the RBA and Bloomberg in all decisions since the 2013 Guideline.

The RBA and Bloomberg BBB yield estimates are based on all bonds with BBB-, BBB and BBB+ ratings.

Historically, the sample of bonds at the long end of the broad BBB rating category has included disproportionately more bonds with a BBB+ rating, which is consistent with the AER using the broad BBB third party estimates even though it has adopted a BBB+ benchmark credit rating.

However, it is appropriate for the AER to continue to check that the Bloomberg/RBA 10 year BBB estimate is appropriate for a BBB+ benchmark credit rating.

Network businesses' and our advisors' primary focus in the period since release of the Discussion Paper has been to understand the Chairmont debt analysis, in particular is it relates to actual debt performance. The ENA and its advisors have concerns about some of the analysis (as highlighted in this response) and would like to work with the AER prior to the Draft Guideline to ensure it can have full confidence in its results.

Taking into account the identified limitations of the Chairmont analysis and the caveats in the associated report, it is unclear at this point that any further change in approach in relation to the weighted yield estimate is required. This would be even less clear were the S&P and Reuters curves used in setting the cost of debt, given the significant concerns we hold with the use of these curves.

[17] AER, 2013, Rate of Return Guideline, p. 4.