

Supporting  
document 3.1

# CEG - The cost of arranging debt issues

2020-25  
Revised Proposal  
10 December 2019





COMPETITION  
ECONOMISTS  
GROUP

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# The cost of arranging debt issues

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# 1 Introduction

1. In a previous CEG report, we estimated SAPN's debt raising and liquidity management costs for the 2020-25 regulatory cycle at **\$7.60 million per year**, which is equivalent to **26.93 bppa**.<sup>1</sup> This estimate consisted of the following three components:
  - a. **9.04 bppa** direct debt raising costs;
  - b. **6.23 bppa** incremental costs that captured the average difference between issue and market price for debt issued (referred to as the issue price adjustment (IPA) component in this report); and
  - c. **11.66 bppa** costs in the form of liquidity commitment fees and 3-months-ahead financing costs.
2. The AER's draft decision has allowed the following compensation for these costs:
  - a. **5.59 bppa** direct debt raising costs. This reflected not just a rejection of our update of the PwC estimate for estimating the arrangement fee but a complete rejection of that same methodology<sup>2</sup> which the AER had previously universally applied;
  - b. **0.00 bppa** IPA costs; and
  - c. **0.00 bppa** costs in the form of liquidity commitment fees and 3-months-ahead financing costs.
3. The AER's draft decision methodology relies entirely on a report from Chairmont Consulting that estimates debt raising costs,<sup>3</sup> which the AER referred to in its subsequent draft decision.<sup>4</sup> The draft decision adopts Chairmont's conclusions, which sets SAPN's debt raising costs at **\$1.43 million per year**.
4. This report responds to the AER's draft decision regarding its estimates of the direct debt raising costs and IPA costs. Consistent with SAPN's instructions, we do not include further analysis of the magnitude of PTRM timing benefits relative to liquidity management costs, although we note that falling interest rates have

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<sup>1</sup> CEG, Debt transaction costs and PTRM timing benefits, January 2019.

<sup>2</sup> PwC, Energy Networks Association: Debt financing costs, June 2013.

<sup>3</sup> Chairmont, Debt Raising Costs, June 2019.

<sup>4</sup> AER, SA Power Networks Distribution Determination 2020 to 2025, Attachment 3 Rate of Return, Draft Decision, October 2019.

continued to erode the value of any PTRM timing benefits since our report was prepared.

5. The primary differences between our approach for estimating debt raising costs compared to the approach used by AER/Chairmont broadly fall into the following two main categories that then form the structure for the remainder of this report:
  - Section 2 examines the best estimate of arrangements fees (excluding any issue price adjustment);
  - Section 3 examines the critique of our issue price adjustment; and
  - Section 4 addresses the appropriate WACC for amortisation.

## 2 Arrangement fees before factoring in IPA costs

6. In this section we discuss the differences between the approach that we used for estimating SAPN's benchmark arrangement fees and the approach used by AER/Chairmont.
7. There are two key differences in the approaches:
  - Consistent with the AER's previous methodology we rely on public data and transparent analysis of that data;
  - Chairmont examines the same data we examine but ultimately does not base its estimate of arrangement fees on this data. Rather, Chairmont bases its estimate on non-transparent "informal discussions with several bond market participants". The nature of these discussions, who they were with, what Chairmont was told, and how Chairmont used the information is not disclosed. The AER, in accepting Chairmont's recommendation have effectively adopted this same non-transparent methodology.
8. We first analyse Chairmont's methodology for arriving at its 3.97 bppa arrangement fee estimate. We then provide further discussion about our reasons for departing from the PwC 2013 approach, and then evaluate the AER's/Chairmont's reasoning on this issue.

### 2.1 Chairmont's approach for estimating arrangement fees

9. Chairmont's 30 bp upfront fee estimate is obtained from what is described as an informal market survey:<sup>5</sup>

*The informal market survey revealed that 30 basis points is the norm for 10 year benchmark investment grade (BBB) bonds.*
10. This contrasts with PwC's 2013 estimate of 52.3 bp based on a transparent analysis of publicly available information.
11. We cannot comment any further on Chairmont's methodology and conclusion because it is entirely non-transparent. We do not know what questions were put to which market participants or in what circumstances. We do not know, for example,

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<sup>5</sup> Chairmont, Debt raising costs, June 2019, p. 9.



if there was any written communication between Chairmont and the ‘several bond market participants’ with which Chairmont had ‘discussions’.<sup>6</sup>

12. Some of the key information that has not been provided include:

- Who did Chairmont survey, and how were they chosen for the survey?
  - This information is important in order for stakeholders to verify that the sample is appropriate and unbiased.
- How was the survey conducted?
  - Each survey method has its strengths and weaknesses. Understanding the survey methodology allows stakeholders to better evaluate the quality of the responses.
  - Furthermore, there are several known issues that need to be taken into account when conducting surveys, such as non-response bias. Without being provided with further details about the procedure for conducting the survey, it would be impossible for stakeholders to ensure that such issues have been adequately accounted for.
- What was the distribution of the survey results, and which statistic did Chairmont use to derive the final 30 bp point estimate?
  - The distribution of the survey results provides a measure of the uncertainty around Chairmont’s 30 bp point estimate. The choice of statistic such as the mean, median, or mode can also generate estimates that differ substantially depending on the skewness of the results.

13. It is notable that the use of a non-transparent informal market survey contradicts the AER’s focus on transparency, predictability, and replicability, which are set out in the AER’s Rate of Return Instrument [emphasis added]:<sup>7</sup>

*We consider that stability can be promoted in furtherance of the legislative objectives through a decision that is well-reasoned, clearly explained, and sets out **an approach to determining the allowed rate of return that is transparent and predictable**. The following chapters of this decision set out how we have estimated the rate of return and its component parameters.*

<sup>6</sup> Chairmont, Debt raising costs, June 2019, p. 10.

<sup>7</sup> AER, Rate of return instrument, Explanatory Statement, December 2018, p. 21.

14. Nevertheless, Chairmont did engage with the publicly available data that we relied on. Chairmont claims that this data supports its conclusions based on Chairmont's informal discussions:<sup>8</sup>

*“Consistent with our discussion with arrangers, Graph 1 above shows that the Arrangement fee on 10 year bonds is approximately 30bps. Whereas, in Graph 2 below the inclusion of outliers increases the Arrangement fee to around 45bps.”*

15. In reaching this conclusion, Chairmont makes a critical error in visual data interpretation. The correct estimate of a ‘10 year’ arrangement fee is at least 40bp absent the alleged ‘outliers’ and 70bp including the alleged ‘outliers’. Of course, we are only able to discover this error because, in this case, Chairmont is using publicly available data. We cannot similarly assess Chairmont's non-transparent analysis of ‘informal discussions’ to see whether similar problems afflict that.
16. Chairmont presents the charts reproduced in Figure 2-1 and Figure 2-2. These two charts each contain two separate series:
  - **Left-hand axis:** the maturity of each bond in our sample against the corresponding fees; and
  - **Right-hand axis:** arrangement fees.
17. Figure 2-1 excludes outliers from our sample, while Figure 2-2 includes them.
18. Based on the solid black lines drawn across these charts, Chairmont reaches its conclusion that the arrangement fee on 10 year bonds is approximately 30 bps:<sup>9</sup>

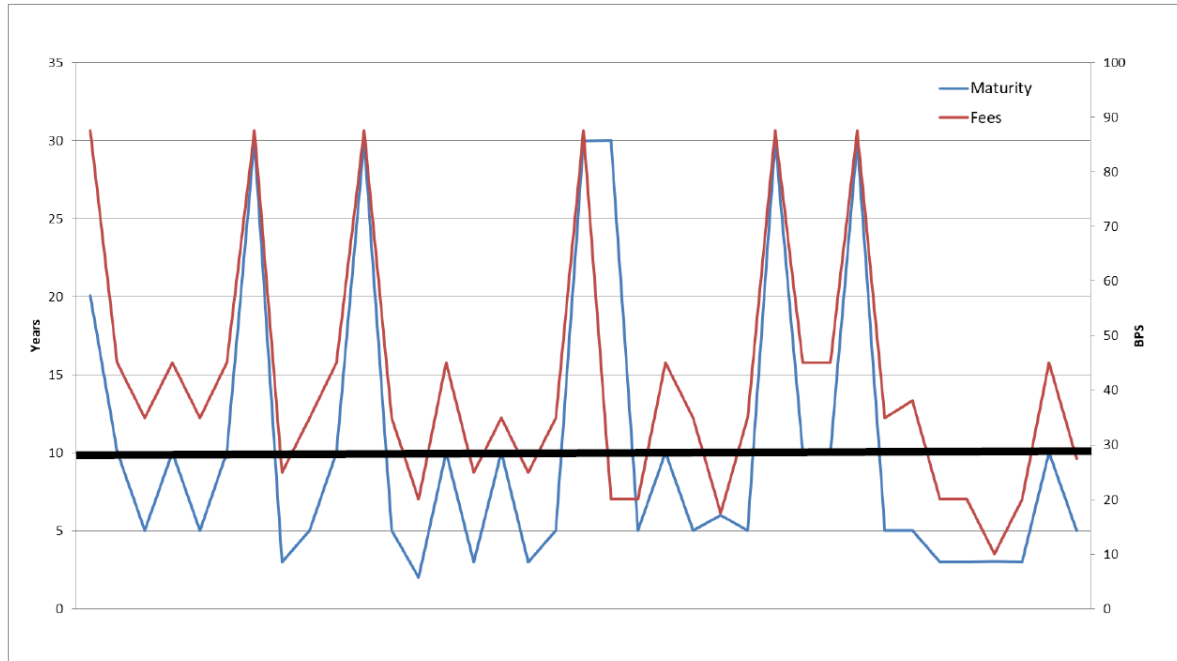
*Consistent with our discussion with arrangers, Graph 1 above shows that the Arrangement fee on 10 year bonds is approximately 30bps. Whereas, in Graph 2 below the inclusion of outliers increases the Arrangement fee to around 45bps.*

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<sup>8</sup> Chairmont, Debt raising costs, June 2019, p. 10.

<sup>9</sup> Chairmont, Debt raising costs, June 2019, p. 10.

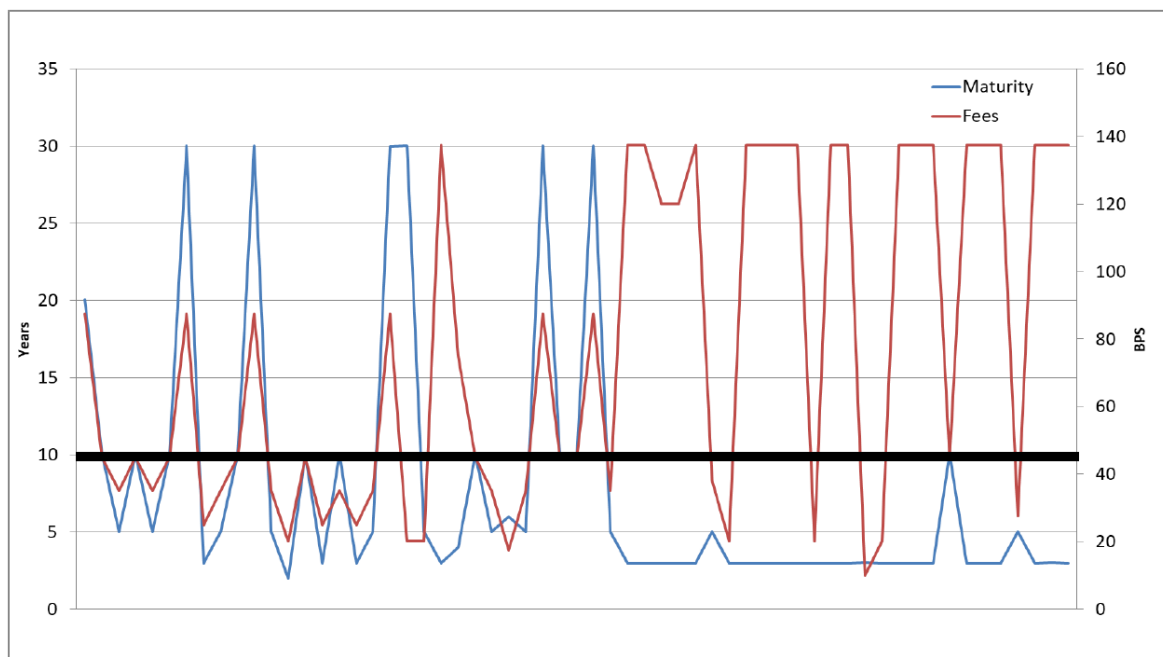
**Figure 2-1: Reproduction of Chairmont Graph 1**



**Graph 1: Maturity Profile v Arrangement Fees Excludes Outliers (2008-2018)**

Source: Chairmont, *Debt raising costs*, June 2019, p. 9.

**Figure 2-2: Reproduction of Chairmont Graph 2**

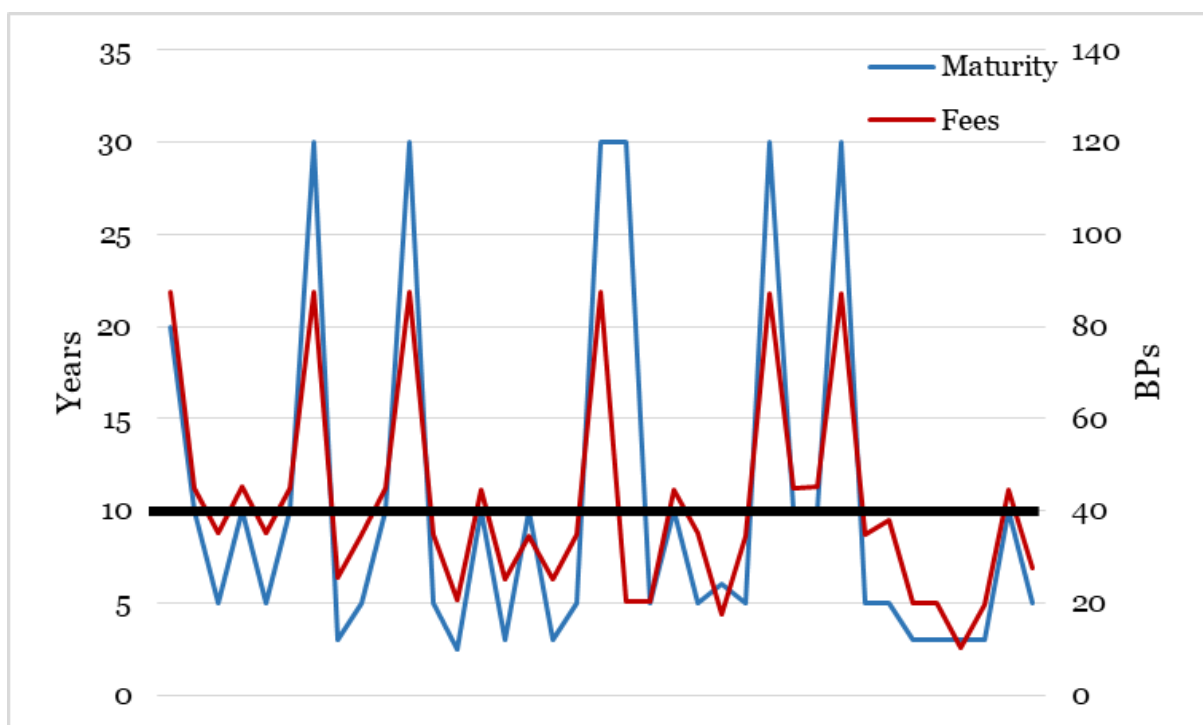


**Graph 2: Maturity Profile v Arrangement Fees Includes Outliers (2008-2018)**

Source: Chairmont, *Debt raising costs*, June 2019, p. 10.

19. Chairmont's visual analysis of these two charts is simply wrong. A horizontal line from the '10 year' point on the left-hand vertical axis will cross the right-hand horizontal axis (bp fees) at an arbitrary point that depends entirely on the scales chosen. Nothing can be inferred from this about the relationship between tenor and fees.
20. This effect can be seen in Figure 2-3 and Figure 2-4. Figure 2-3 shows the same data as in Chairmont Graph 1 but with the upper limit of the right-hand axis raised to 140 bp. The solid black line across Figure 2-3 that intersects the left hand axis at 10 years now intersects the right hand axis at 40bp (33% higher).

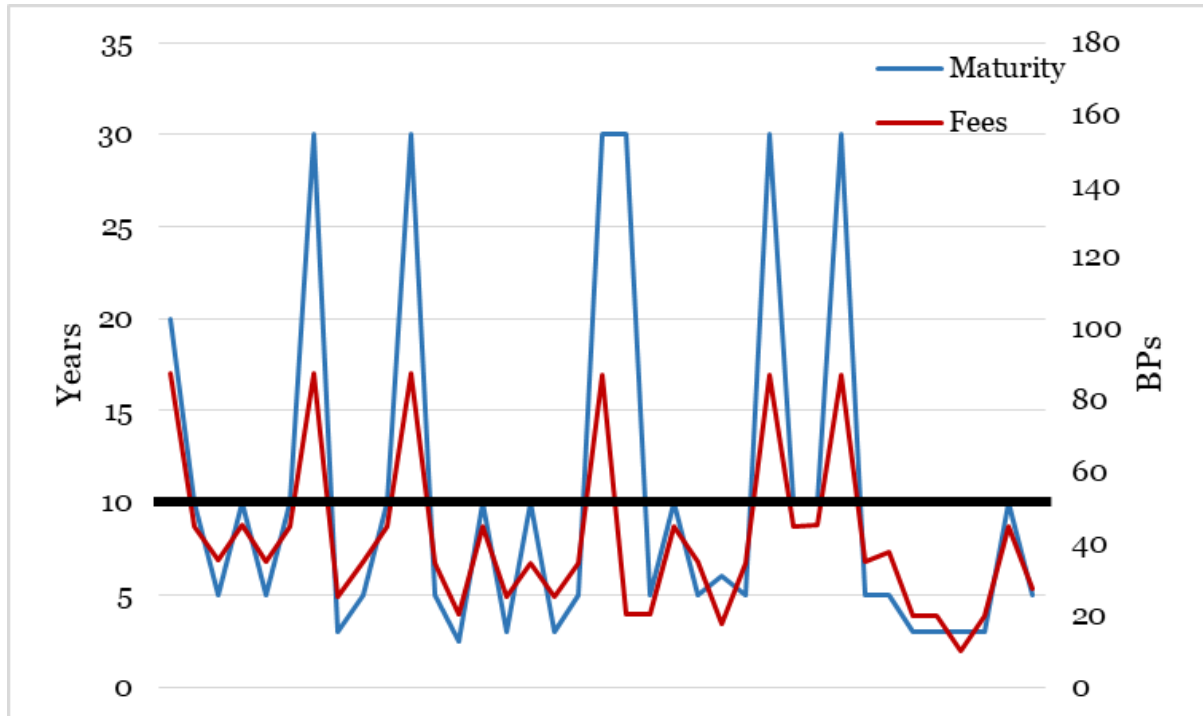
**Figure 2-3: Chairmont Graph 1 with modified right-hand axis**



Source: Chairmont, CEG analysis; Observations approximated based on measurements of Chairmont's Graph 1

21. As can be seen in Figure 2-4, further raising the upper limit to 140 bp causes the solid black line to "imply" a 10-year arrangement fee of approximately 50 bp.

**Figure 2-4: Chairmont Graph 1 with modified right-hand axis**



Source: Chairmont, CEG analysis; Observations approximated based on measurements of Chairmont's Graph 2

22. Chairmont's analysis in Graph 1 and Graph 2 of its report is therefore meaningless and statistically non-robust because it can be used to arbitrarily justify a benchmark 10-year arrangement fee of any magnitude by simply changing the range of the right-hand (or left hand) axis.
23. If one were to accept Chairmont's contention that the estimate of the arrangement fee should take into account the maturity of each bond, then the appropriate visual presentation of the data would be a scatter plot (not a line chart) and the appropriate statistical analysis would be to run a regression model of arrangement fees against bond maturities.<sup>10</sup>
24. Figure 2-5 reformats Chairmont's Graph 1 line chart into a scatterplot and also shows the resulting regression line of best fit. As shown in Figure 2-5, the regression line predicts a 10-year arrangement fee of 40.7 bp. This is similar to the corresponding simple average arrangement fee of 41.4 bp.

<sup>10</sup> I use a linear regression model in my analysis. While page 9 of Chairmont's report states that "the relationship is not linear to the actual maturity of issue", Chairmont has not proposed an alternative regression specification that would capture any effect that bond maturities may have on arrangement fees.

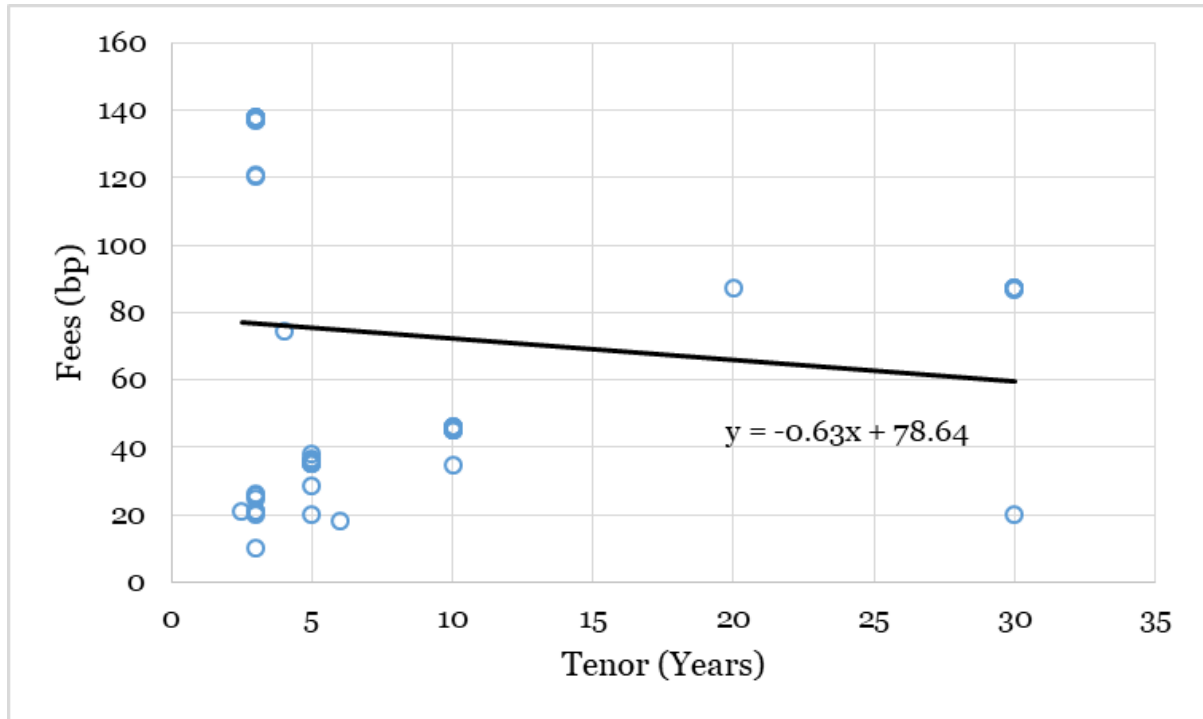
**Figure 2-5: Chairmont Graph 1 as a scatterplot**



Source: Chairmont, CEG analysis; Observations approximated based on measurements of Chairmont's Graph 1

25. When the outliers are included in the sample, the regression line in Figure 2-6 predicts a 10-year arrangement fee of 72.3 bp, which is once again similar to the 73.7 bp simple average observed across the sample. This is much higher than Chairmont's claimed value of 45 bp at 10 years for the same sample.

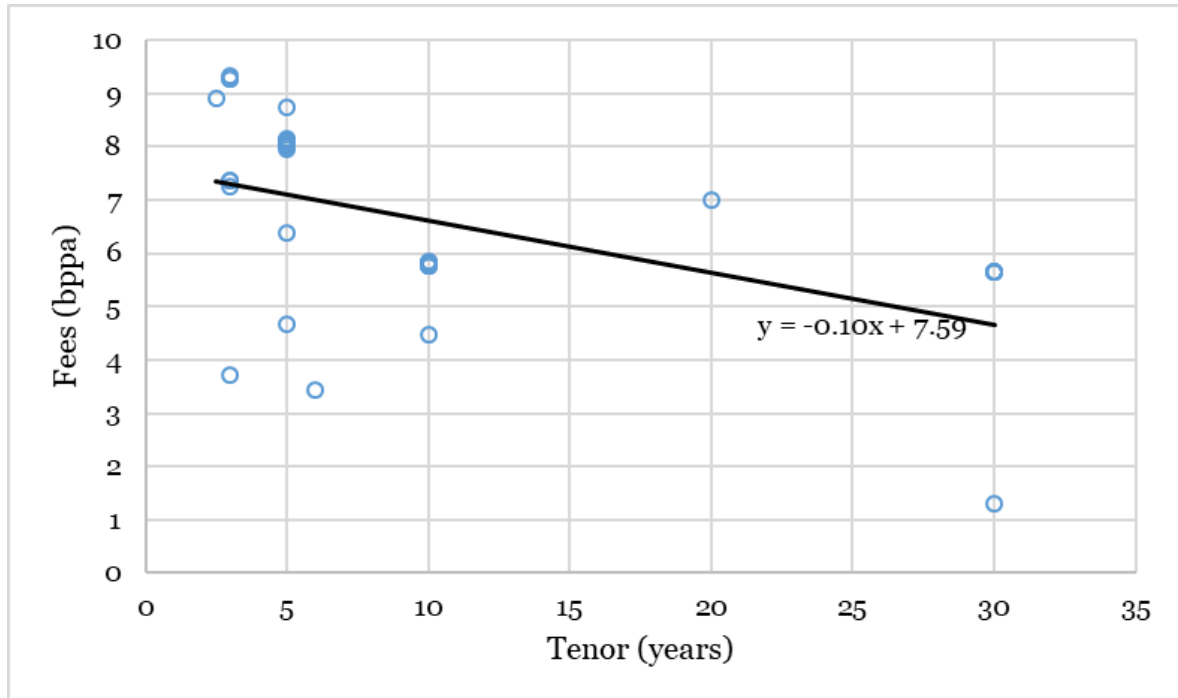
**Figure 2-6: Chairmont Graph 2 as a scatterplot**



Source: Chairmont, CEG analysis; Observations approximated based on measurements of Chairmont's Graph 2

26. The same arrangement fee data annualized over the life of the bond at the AER's draft decision 4.95% vanilla WACC results in the following relationship shown in Figure 2-7.

**Figure 2-7: Chairmont Graph 1 data converted to bppa as a scatterplot**

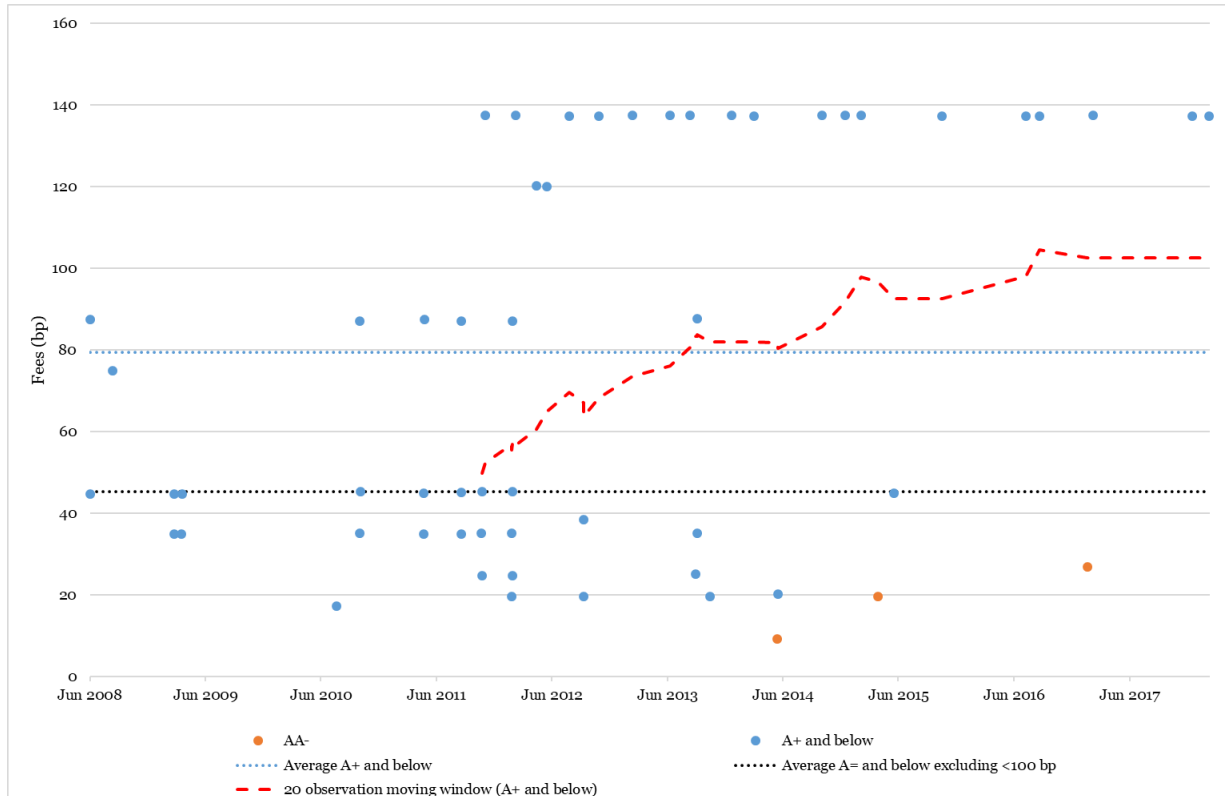


Source: Chairmont, CEG analysis; Observations approximated based on measurements of Chairmont's Graph 1

27. The resulting estimate of the arrangement fee at 10 years is 6.6bppa. The average for the sample is also 6.6bppa. This is a 70% higher cost compared to the 3.9bppa that the AER has allowed (based on Chairmont's 30bp annualized over 10 years at 4.95%). Even if we restricted this sample to only the 10-year bonds, of which there are ten observations, the average cost is 5.7 bppa. Indeed, the mean (median) upfront fee for the 10 year bonds in this sample is 44bp (45bp).
28. There is simply no basis upon which Chairmont's claim that the data in its Graph 1 is consistent with a 30bp estimate of upfront arrangement fees for 10 year bonds.
29. Similarly, Chairmont's Graph 3 also does not support their 30bp estimate (even when "outliers" are excluded).



**Figure 2-8: Chairmont Graph 3 data**



Source: Chairmont, CEG analysis; Observations approximated based on measurements of Chairmont's Graph 3

30. It can be seen that the average of all A+ and below observations in this chart is around 80bp upfront costs. If those bonds with greater than 100bp are excluded, which Chairmont does propose based on an ill-defined 'outlier' criteria, then this average falls to 45bp. This is still well above Chairmont's 30bp estimate.
31. It is also worth noting that the median of all A+ and below observations in Figure 2-8 is 81bp. The median observation since 1 January 2010 is 87bp and the median observation for the last five years is 137bp. It is, therefore, not at all clear that excluding observations above 100bp as 'outliers' is appropriate – this is just 21bp above the median observation over the entire period (and is below the median observation over the last 5 years). Consistent with this, the 20-observation moving average begins at an initial value (in mid-2011) of 50bp and rises to remain above 80bp from mid-2013 onwards.

## 2.2 Chairmont recommends annualisation over 9 years

32. It is worth noting that Chairmont recommended annualising its 30bp arrangement fee estimate (and all other upfront fees) over 9 years not 10 years.

*The benchmark should be changed so that bonds are re-purchased 1 year before maturity and an adjustment the debt transaction cost model for the shorter term, i.e. 9 years not 10 years of the bonds being in the market place.*

33. Adopting this recommendation would raise estimated debt raising costs by around 8%. This was explained to be necessary given that there was no compensation for liquidity management costs and that it is unrealistic to assume that debts are financed on the same day that they mature.
34. The AER has adopted Chairmont's (flawed) 30bp upfront cost estimate but has not adopted Chairmont's recommendation to annualise the arrangement fee estimate over 9 years.

## 2.3 Summary and conclusion

35. There appear to be some minor differences in the underlying data used by Chairmont and CEG and also differences in policies to exclude high "outliers" (Chairmont applies a 90bp cut off (irrespective of tenor) while we applied a 30bpps cut off) The table below summarises the differences in terms of the impact on the bpps estimate.

**Table 2-1: Arrangement fee bpps using 4.95% discount rate**

	Arrangement fee (bpps)	Arrangement fee, amortisation 1 year less
PWC (2013) 8.5bpps at 10% WACC updated for 4.95% vanilla WACC	6.7	7.3*
CEG update to PwC approach. Average of 1 April 2013 to 1 April 2018 bonds identified in Table 1-2 of previous CEG report	6.5	8.1*
<b>CEG 1 April 2008 to 1 April 2018 sample (as per Figure 3-1 of previous report)</b>		
Average excluding observations with >30bpps	6.9	8.6
10-year regression estimate (excluding >30bpps)	6.8	8.7
Average no exclusions	30.3	42.3
10-year regression estimate (no exclusions)	24.0	33.0
<b>Chairmont sample</b>		
Average excluding >90bp	6.6	8.1
10-year regression excl. >90bp	6.6	8.2
Average excluding >30bpps	7.1	8.7
10-year regression excl. >30bp	7.1	8.8
Average no exclusions	21.3	30.1
10-year regression no exclusions	18.9	26.4

*All estimates discounted using 4.95% nominal WACC; \* The reduction in the number of years of amortisation has a larger impact for the CEG update than on the original PwC estimate. This is because PwC does not disclose the average tenor of the bonds used to estimate the 8.5bpps, consequently, we have used 10 years. However, the average tenor in our sample is 9 years and there is a dispersion from 3 to 20 years.*

36. The samples that apply an exclusion (either 30bppa or 90bp) have a range from 6.5 to 7.1bppa when amortised over 10 years and 8.1 to 8.8bppa when averaged over 9 years. This suggests that, if outliers are to continue to be excluded, there is no strong reason to depart from the PwC (2013) estimate (updated for current WACC) of 6.7bppa (6.75bppa at two decimal places). That is, a continuation of regulatory precedent is justified by an update to the PwC method. (We address whether this it is appropriate to exclude high “outliers” in the next section).
37. If we replace the AER’s 3.97 bppa estimate from Table 3.5 of SAPN’s draft decision with 6.75 bppa, then total direct debt raising costs rise to 8.50 bppa.

### 3 Issue price adjustment (IPA)

38. Our previous report showed that:

- bond issues with high arrangement fees tended to have traded prices immediately after issue below the “issue price”; and
- bond issues with low arrangement fees tended to have traded prices immediately after issue above the “issue price”.

39. We noted that arrangers receive part of their compensation via the arrangement fee and part of their compensation via the difference between the market value of the bond and the issue price (i.e., the value of the bond less the price paid for to the issuer for the bond). That is, total compensation for the arranger is given by:

$$\text{Total compensation} = \text{Arrangement fee} + (\text{market value} - \text{issue price}).$$

$$\text{Total compensation} = \text{Arrangement fee} + \text{IPA}.$$

40. We showed that once these two sources of compensation were added together the “outliers” disappear in the sample because:

- The set of issues that appeared to have high costs due to high arrangement fees had issue prices above market value – which reduced total compensation relative to just looking at arrangement fees alone;
- The set of issues that appeared to have low costs due to low arrangement fees had issue prices below market value – which increased total compensation relative to just looking at arrangement fees alone.

41. These two effects combined caused the apparent differences in costs between the two samples to disappear (see Figure 1-2 from our previous report). We estimated that the aggregate effect of accounting for the difference between issue price and market value was to add around 6bpps to arrangement costs (see Table 1-2 from our previous report).

42. Chairmont addresses this analysis in section 4.1 of its report. Chairmont lists seven “fundamental difficulties” with our conclusion (p. 16). On the basis of these “fundamental difficulties” Chairmont concludes:<sup>11</sup>

*Whilst CEG found “.... a strong positive relationship between arrangement fees paid to underwriters and the subsequent loss, relative to the issue price, made by underwriters when selling those bonds to the public”. Chairmont is*

<sup>11</sup> Chairmont, Debt Raising Costs, June 2019, p. 16.

*not of the view that any adjustment is required to the Arrangement fee for “CEG DRT incremental to AER DRT” for the reasons outlined above.*

43. However, the seven fundamental difficulties listed by Chairmont are not, in fact, inconsistent with our conclusion at all (and, indeed, are either irrelevant or supportive of our conclusion). We address each of these in the same order as they appear in Chairmont p. 16:
  - i. We agree that *“the Arrangement fee is negotiated and agreed in the period before bond launch and issuance”*. This fact is entirely consistent with our conclusion. The arrangement fee and issue price is agreed at the same time – a higher value for one implies a lower value is required for the other;
  - ii. It may or may not be true that *“Higher Arrangement fee bonds are those that have a longer term to maturity and are the most price sensitive to changes in absolute levels of interest rates”*. However, this is irrelevant to our analysis (in part because our analysis is based on bppa which actually tends to be associated, if anything, with lower bppa costs for longer term bonds).
  - iii. We agree that *“The underwriter advises and has input into the issuance price prior to it being set”*. Indeed, these are set at the same time and in the same contract (see point i).
  - iv. We simply do not understand point being made by Chairmont in point 4.
  - v. Rather than being a fundamental difficulty, point 5. is our core proposition. Chairmont state: *“For bonds allocated to the underwriter any post issuance trading price difference is borne by the underwriter, not the issuer. Underwriters are compensated for this risk through the underwriting fee which is included within the overall Arrangement fee.”* We entirely agree with this. It also follows that if the issue price is set well below the market value of the bond then the arrangement fee will be much smaller (*and vice versa*) because the expected cost of bearing that market value risk is lower and/or negative;
  - vi. Point 6. is simply a suggestion for improving our empirical observation by trying to account for the effect of changes in market interest rates on market value. We do not believe that this would add value because the time periods involved are small and there is no bias in our sample mean results (interest rates can rise or fall). However, failure to adopt this methodological suggestion is not a ‘fundamental difficulty’ and the fact that it is being suggested implies that neither are the other 6 points listed by Chairmont.
  - vii. Point 7. states *“all the bonds analysed by CEG were issued offshore and their price movements may have reflected offshore factors and not Australian domestic factors”*. We do not consider that this is relevant.

Moreover, the AER's approach, following PwC, has been to use "offshore data" for the last 10 years of regulatory decisions.

44. On this basis, we do not consider that Chairmont has raised any material difficulties with our analysis and, indeed, "difficulty 5." simply confirms the validity of our approach.
45. Finally, we note that, from deal to deal, the direct risk taken by an arranger will vary. However, even if the arranger allocates 100% of bonds to third parties at the issue price, a lower issue price bestows economic value to the recipients of the bonds. These will, inevitably, be the clients of the bank doing the arranging. The ability to confer value to clients in such transactions is an important source of loyalty from those clients to the arranging bank. It is naïve to believe that giving a bank the power to allocate value to its clients is of no value to the bank.
46. The AER draft decision dealt with our result in the below passage:<sup>12</sup>

*"Having considered CEG's submission, we are not persuaded that this cost should be in the debt raising allowance. Our task is to set an efficient allowance to compensate regulated businesses for issuing debt. In terms of the cost of underwriter(s) to an issuer, that is the arrangement fee. The difference between issue price and traded price reflects a gain or loss for the underwriter, but it comes from market participants—not the issuer of the debt. It is not clear to us that there is a need to compensate for underwriters' subsequent profits and losses in a benchmark that compensates issuers. There are also a range of factors that can cause traded price to differ from issued price (such as subsequent change in interest rates, economic outlook) that do not appear to affect the arrangement fee paid by issuers."*

47. This is, in our view, an untenable position for the AER to hold. The arrangement fee and the issue price (which determines placement profits) are interrelated. An underwriter could agree to place bonds with a zero arrangement fee and, in return, demand a lower issue price (creating a placement profit). The AER cannot sensibly say that this isn't a cost borne by the issuer. It clearly is a cost to the issuer, who would then receive less money because the absence of an arrangement fee led to the underwriter paying them a lower issue price. The AER cannot sensibly claim that the issuer got the underwriter's services for 'free' in this instance just because there was a zero arrangement fee.
48. More generally, this approach would create perverse incentives for regulated businesses. If the AER maintained this view then regulated businesses would have a strong incentive to negotiate higher arrangement fees and higher issue prices. For

<sup>12</sup>

AER, SA Power Networks Distribution Determination 2020 to 2025, Attachment 3 Rate of Return, Draft Decision, October 2019, p. 3-15.

example, consider a bond with a market value of \$100. Currently a regulated issuer might negotiate:

- An issue price of \$99.90 (10bp discount to market value); and
- An arrangement fee of 40bp;
- Giving a combined cost of 50bp.

49. However, if the AER only compensated the arrangement fee (and ignores the issue price relative to market value) a regulated business has a strong incentive to negotiate:

- An issue price of \$101 (100bp premium to market value); and
- An arrangement fee of 150bp;
- Giving a combined cost of 50bp.

50. In this case, the issuer pays the same combined costs but the AER would (presumably) be prepared to compensate on the 150bp arrangement fee.

51. In any event, let us accept the AER's position that the "arrangement fee" is the only cost and the placement profit is irrelevant. The next question becomes, "What basis does the AER have for excluding the high outliers for arrangement fee?" In our view, the answer is "none". We have shown that the so called "high outliers" for arrangement fee are driven by negative placement profit. Moreover, as shown in Figure 3-1 from our previous report, the high arrangement fee values are similar in number to the low arrangement fee observations. If placement profit is irrelevant then the AER has no basis for identifying "high" outliers.

52. In our view, the AER cannot reasonably simultaneously say:

- Positive placement profits on bonds with low arrangement fees are irrelevant and should not be included in costs; and
- Negative placement profits on high arrangement fee bonds (which is why the high arrangement fees exist in the first place) are a reason for excluding these high arrangement fee issues.

## 4 Appropriate WACC for amortisation

53. The AER currently uses the nominal vanilla WACC to amortise upfront costs. However, within the PTRM, the DRC feeds directly into opex in the PTRM. Opex is treated as a tax deduction in the PTRM and, consequently, it is implicitly assumed (modelled) that no tax is paid on the interest cost embedded in the amortisation of debt raising costs (i.e., the PTRM implicitly assumes that there is a tax deduction for 100% of this compensation).
54. However, this is not correct. There is a tax deduction only for the total upfront amount. The interest component of the amortisation will be taxed – or, at least, the equity funded component of this interest charge will be taxed.
55. At a minimum, the pre-tax nominal WACC (draft decision 5.14% instead of 4.95%) should be used to amortise these costs (to mimic the result ‘as if’ the upfront costs were included in the RAB).