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Submitted online: [Current Consultations - Economic Regulation Authority Western Australia \(erawa.com.au\)](http://erawa.com.au)

28 June 2023

Dear Jason,

On behalf of the CBH Group (**CBH**) I would like to thank the Economic Regulation Authority (ERA) for the opportunity to provide a submission into the five year review of the process to determine the Weighted Average Cost of Capital (WACC) for regulated railways in Western Australia.

CBH engaged Frontier Economics to provide an opinion on two aspects of the ERA's Draft Determination for rail network businesses:

- a The allowed return on debt; and
- b The comparator set for estimating the equity beta.

The report from Frontier Economics forms the basis of our submission, including a recommendation on the two aspects of the ERA's Draft Determination as set out above.

If you require further information from CBH please don't hesitate to contact me on [REDACTED] or via email: [REDACTED]

Yours sincerely,
For: Co-operative Bulk Handling Limited

Rob Dickie
HEAD OF GOVERNMENT & INDUSTRY RELATIONS



Response to ERA 2023 draft determination of WACC for regulated railways in WA



Report prepared for CBH | 27 June 2023



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1 Executive summary

2. Frontier Economics has been engaged by CBH to provide an opinion on two aspects of the ERA's Draft Determination for rail network businesses:
 - a The allowed return on debt; and
 - b The comparator set for estimating the equity beta.

Allowed return on debt

3. In relation to the allowed return on debt, our key conclusion is that best regulatory practice is for the regulatory allowance to match the cost of debt that would be incurred by the prudent and efficient approach that would be adopted in practice in the absence of regulation – rather than for regulation to drive regulated businesses to adopt an approach to debt management that they would not otherwise adopt.
4. Our recommendation is that the allowed return on debt should be set using the standard 10-year trailing average approach that has become the Australian regulatory standard. The primary reasons for that conclusion are:
 - a The trailing average approach reflects the prudent and efficient debt management approach that is adopted by infrastructure businesses that are not subject to regulation. By contrast, the rate-on-the-day and hybrid approaches imply debt management approaches that no business would consider adopting, other than to replicate the allowance provided to it by the ERA. Consequently, it is difficult to support the notion that such strategies are prudent and efficient; and
 - b No other Australian regulator that has reviewed its rate of return methodology within the last decade adopts the rate-on-the day or hybrid approach.

Beta estimation

5. In relation to equity beta, we note that the available sample is significantly smaller than it was in 2018 and may decline further in future. Also, as time passes, estimates for the delisted firms in the sample will sink further into history.
6. Reliance on a small set of comparators risks a situation in which the regulatory estimate of beta comes to reflect random statistical variation from time to time rather than the true level of systematic risk.
7. We propose that, for current/future determinations, the Authority might consider approaches for expanding the sample of comparator firms from industries such as Ports and/or adopting an IPART-like approach (whereby the regulator would only contemplate changing the prevailing beta estimate in light of significant and sustained evidence that a change is warranted). This would guard against spurious changes in beta estimates.
8. In addition, to the extent that the sample of comparators identified does not reflect the key risk characteristics of the access provider in question, the ERA could consider how the overall beta point estimate should be selected to take into account those relevant risk characteristics.



2 Approach to the allowed return on debt

2.1 Draft Determination

9. In relation to the return on debt, the Draft Determination proposes to maintain the approach adopted in the ERA's 2018 determination. That approach sets the allowed return on debt according to the ERA's estimate of the yield on 10-year debt, estimated over a 40-day averaging period immediately prior to the date of the Determination.¹

2.2 Problems with the proposed 'on the day' approach

10. The approach adopted in the Draft Determination is known as the 'rate on the day' approach because it sets the allowed return on the basis of the estimated yield at a single point in time – being the date of the determination.²
11. This approach implies that the benchmark efficient firm would issue all of its debt in a single tranche of 10-year bonds on the determination date. That debt would all mature at the same time 10 years hence, when it would be refinanced as another single 10-year tranche.
12. We explain below that no commercial firm would issue debt in this manner due to the refinancing risk that arises from having the firm's entire debt portfolio mature at a single point in time which could occur during a financial crisis when debt is unavailable or when rates are very high. Rather, infrastructure firms issue long-term debt on a staggered maturity basis so that only a portion of the debt portfolio matures each year to mitigate refinancing risk.
13. Moreover, even if a regulated firm *did* issue debt in a single 10-year tranche (as the Draft Determination implies), the allowed return would not match the cost actually incurred. This is because the firm would lock in a rate for the 10-year term of the debt at the time of issuing that debt. Whereas the allowed return would match the actual cost over the first regulatory period, it would not thereafter. At the time of the next determination, the allowed return would be updated, but the original debt would remain on foot.
14. That is, there are two significant problems with the proposed on-the-day approach:
 - a The proposed approach implies a debt management approach that would never be adopted by a commercial firm due to the refinancing risk involved; and
 - b The proposed allowance does not correspond to any debt management approach that could be adopted in practice.
15. In our view, the allowed return on debt should reflect the cost of a prudent and efficient debt management strategy. The proposed on-the-day approach implies a debt management approach

¹ ERA, May 2023, *2023 draft determination for the freight and urban networks and the Pilbara networks*, pp. 16-18.

² Albeit that the rate is not estimated on a single day, but over a short averaging period of 40 days.



that is neither prudent nor efficient. Nor is the on-the-day approach possible to implement in practice.

16. Moreover, the ERA itself has recognised a number of problems with the on-the-day approach:
- *It does not reflect that most capital has already been invested and is sunk so that the investment signals provided are of limited relevance. For sunk capital, focus needs to be on ensuring that it is efficiently financed consistent with the time of the investment.*
 - *It assumes that all the debt of a regulated entity can be financed at the prevailing rates in the short period just prior to the regulatory decision. This exposes a regulated business to large refinancing risks.*
 - *It does not reflect that refinancing risk is a concern to a business, which drives a business to stagger its debt portfolios.*
 - *It departs from the NPV=0 principle.*
 - *It leads to the greatest price volatility at the time of an access arrangement reset.*³

2.3 The ERA's approach in its Gas Rate of Return Instrument

17. In its recent Rate of Return Instrument (RoRI) for gas networks and pipelines, the ERA has adopted a 'hybrid' approach whereby the base risk-free rate is determined at the time of the determination and the debt risk premium (DRP) is calculated as a trailing average over the previous 10 years and is updated annually.
18. This approach implies that the benchmark efficient firm would:
- a Issue 10-year floating rate debt on a staggered maturity basis (10% of total debt requirements each year) – producing a trailing average DRP that updates annually as the oldest tranche matures and is replaced by a new tranche at current rates; and
 - b Enter a swap at the beginning of each regulatory period for the length of the regulatory period – producing a rate-on-the day risk-free rate.
19. In its 2022 RoRI, the ERA identified a number of reasons for its adoption of the hybrid approach, including:
- a The issuance of bonds with staggered maturity minimises interest rate and refinancing risk;⁴ and
 - b The hybrid approach is implementable and replicable.⁵
20. The hybrid approach has the advantage of being implementable in that it is possible for a business to adopt the implied debt management approach such that the actual cost of debt would match the regulatory allowance.

³ ERA, December 2022, *Rate of Return Instrument: Explanatory Statement*, paragraph 288.

⁴ ERA, December 2022, *Rate of Return Instrument: Explanatory Statement*, paragraph 287.

⁵ ERA, December 2022, *Rate of Return Instrument: Explanatory Statement*, paragraph 320.



21. However, the disadvantage of this approach is that commercial businesses do not adopt this debt management approach. The only reason for a firm to adopt such an approach would be to match a regulatory allowance.
22. In our view, best regulatory practice is for the regulatory allowance to match the cost of debt that would be incurred by the prudent and efficient approach that would be adopted in practice in the absence of regulation – rather than for regulation to drive regulated businesses to adopt an approach to debt management that they would not otherwise adopt.
23. It is this principle that has led to all other Australian regulators adopting the trailing average approach to the whole of the allowed return on debt (i.e., the risk-free rate component and the debt risk premium component).

2.4 The trailing average approach to the allowed return on debt has become the Australian regulatory standard

24. The approach to the allowed return on debt that has become the regulatory standard in Australia is the ‘trailing average’ approach. This approach sets the allowed return on debt equal to the simple average of the yield on 10-year bonds over the current and each of the preceding 9 years.
25. Under this approach, the regulator records the yield on 10-year debt with the appropriate credit rating during a specified averaging period each year. The regulatory allowance for each year is then set as the average over the 10-year period that ends with the current figure. There is no separate estimation of risk-free or base rates and debt risk premiums, just a simple trailing average of the relevant yield.
26. The assumed financing strategy that underlies this approach is one where the benchmark firm simply issues 10-year fixed-rate debt on a staggered maturity basis. Each year, 10% of the debt portfolio matures and is refinanced with a new tranche of 10-year fixed-rate debt.
27. In its recent WACC review, the QCA summarised the approaches of Australian regulators, reproduced in **Figure 1** below.

Figure 1: Australian regulatory approaches to the term of the risk-free rate

<i>Regulator</i>	<i>Application of the trailing average approach</i>
AER	Entire cost of debt
ESC	Entire cost of debt
IPART	Entire cost of debt
ESCOSA	Entire cost of debt
ERA (electricity)	DRP only
OTTER	Entire cost of debt
ICRC	Entire cost of debt

Source: QCA, June 2021, *Rate of return review*, Table 8, p. 35.

28. In summary, it is now the case that:



- a Other Australian regulators do not adopt the hybrid approach; and
- b Other Australian regulators do not consider that the NPV=0 principle prevents them from adopting the standard 10-year trailing average approach.

2.5 The rationale for the standard trailing average approach

Overview

- 29. Other Australian regulators now adopt the standard 10-year trailing average approach on the basis that it best reflects the cost that would be incurred under a prudent and efficient debt management approach. In this sense, it achieves the key regulatory objective of matching the regulatory allowance to the benchmark efficient cost.
- 30. In particular, long-lived infrastructure assets tend to be financed with long-term fixed-rate debt on a staggered maturity basis. The standard trailing average approach reflects the cost of servicing debt under that approach.

The genesis of the trailing average approach in Australian regulatory determinations

- 31. The idea of the trailing average approach to debt was first introduced in Australia through an Australian Energy Markets Commission (AEMC) Rule Change process, which concluded in November 2012. The proponents of this change to the National Electricity Rules (NER) and the National Gas Rules (NGR) were the Australian Energy Regulator (AER) and the Energy Users Rule Change Committee (EURCC), which represented a number of large energy consumers in Australia.
- 32. The AER and the EURCC expressed concern during the rule change process that the then rate-on-the-day approach⁶ was not producing an appropriate estimate of the return on debt for a benchmark efficient entity. Specifically, the proponents noted that:
 - a Prudently-managed infrastructure businesses, including regulated networks, do not refinance all their debt at once, as the rate-on-the-day approach assumes. Rather, debt financing is staggered so as to minimise refinancing risk;
 - b As such, the debt held by a regulated network at any point of time is a mixture of debt raised in the past (that is due to mature in the near future) and debt raised more recently (that will mature further into the future);
 - c Consequently, the cost of servicing debt that is faced by regulated businesses is also a mixture of historical and recent interest rates – those that applied when each tranche of the debt that is currently on the firm's books was issued; and
 - d At the time the AER was resetting prices for many energy networks in 2008 and 2009, the rate-on-the-day cost of corporate borrowing had risen steeply as a consequence of the global financial crisis (GFC). However, the bulk of the debt held by those networks had been raised at significantly cheaper pre-GFC rates as part of the standard approach of staggering debt issuances. Hence, there was a significant divergence between the actual (efficient) debt service costs faced by regulated networks at the time and the allowed return on debt (determined using the rate-on-the-day approach, whereby the prevailing high rate was applied to the firm's entire debt portfolio).

⁶ That is, the approach of setting the allowed return on debt equal to the relevant yield observed at the time of each regulatory determination.



AER's observations

33. The first Australian regulator to adopt the trailing average approach was the AER in its 2013 Rate of Return Guideline. The AER was clear that the benefits of the trailing average approach it had identified would flow to both the regulated businesses and to customers:

*We propose to apply a trailing average portfolio approach to estimate the return on debt. This approach means that the allowed return on debt **more closely aligns with the efficient debt financing practices** of regulated businesses and means that **prices are likely to be less volatile over time**. The trailing average would be calculated over a ten year period. The annual updating of the trailing average should also reduce the potential for a mismatch between the allowed return on debt and the return on debt for a benchmark efficient entity. This should **reduce cash flow volatility** over the longer term.⁷*

34. That is, the AER noted two key benefits of the trailing average approach:
- a It would result in a better match between the regulatory allowance and the efficient cost of debt; and
 - b It would result in lower year-to-year volatility in allowed returns, and consequently prices paid by consumers.

Essential Services Commission of South Australia (ESCOSA's) observations

35. The benefits identified by the AER were echoed by ESCOSA, which concluded that the trailing average approach would:
- a Result in a better matching of the regulatory allowance to the efficient debt management practices of regulated utilities (because the regulatory allowance under such an approach could be replicated by businesses that manage their debt in an efficient and prudent way);
 - b Provide SA Water with a reasonable opportunity to earn sufficient revenue to attract equity and debt needed to finance regulated services; and
 - c Achieve greater price stability for the benefit of customers.
36. ESCOSA stated the following in relation to its recent proposal to adopt the trailing average approach:

The proposed approach involves setting a ten-year trailing average cost of debt, updated annually during the regulatory period to reflect prevailing rates. This recognises the historic costs of debt incurred over a ten year period, while also encouraging efficient new investment through the annual update, consistent with the "new entrant" approach.

It explicitly recognises that it is prudent and efficient for a large water and sewerage business, such as SA Water, to enter into long-term debt financing arrangements given the long-term supply obligations and long asset lives that the business must invest in.

The approach is expected to reduce risk and therefore costs to consumers in the long-term, bearing in mind the nature and scale of the regulatory obligations and the regulated entity.

The proposed approach is also increasingly becoming standard regulatory practice within Australia for application in industries such as energy and water, where the regulated businesses generally have significant debt requirements, long-term supply obligations and long asset lives.

⁷ AER Rate of Return Guideline – Explanatory Statement, December 2013, p.12, emphasis added.



It has been adopted or endorsed by other jurisdictional and national regulatory and policy bodies over the past three years.

It is also consistent with observed financing practices of large infrastructure businesses and with the requirements of the National Water Initiative (Principle 1 of the NWI Principles for the recovery of capital expenditure) and the overarching statutory framework under the Water Industry Act 2012.

Under this approach, SA Water is incentivised to finance any new investments at or below the prevailing efficient market rates, meaning that consumers ultimately pay only the efficient cost of those investments. For legacy investments, the approach recognises only efficient past financing practices (not rewarding inefficient practices), encourages efficient management of the re-financing costs of those investments over time. In that way it reduces the volatility inherent in a shorter-term approach, which assumes all legacy financing costs will be re-financed at the start of each new regulatory period.

Importantly, the proposed approach is based on an assessment of the actions of a benchmark prudent and efficient utility with the same obligations as SA Water. It does not look to the actual actions, costs or legal structure of SA Water itself.

The approach proposed will:

- protect consumers from any possible costs of poor financing decisions made by SA Water by providing a benchmark rate of return*
- provide SA Water with a reasonable opportunity to earn sufficient revenue to attract equity and debt needed to finance regulated services, and*
- incentivise SA Water to outperform the benchmark rate of return.⁸*

QCA's observations

37. The QCA has also recently concluded that the regulatory framework first requires a decision about which debt management strategy should be adopted as the prudent and efficient benchmark:

Before estimating a regulatory cost of debt allowance, it is necessary to choose a benchmark debt management strategy as the basis for this estimation process.

Once a benchmark debt management strategy has been chosen, the cost of debt (and hence a cost of debt allowance) can be estimated.⁹

38. The QCA then notes that the trailing average approach is considered to be the appropriate benchmark because it reduces refinancing risk, as explained above:

It may be efficient for capital-intensive infrastructure firms to stagger their debt financing to avoid needing to refinance their entire debt portfolio over a relatively short window of time to manage refinancing risk. This has in part led many Australian regulators over the last decade to move to estimating the cost of debt using a form of trailing average debt management strategy. For example, the AER, ESC, ESCOSA and ICRC [other Australian regulators] all have recently used a trailing average cost of debt approach.¹⁰

⁸ ESCOSA, SA Water Regulatory Rate of Return 2016 – 2020: Final Report to the Treasurer, March 2015, pp. 3-4.

⁹ QCA, June 2021, *Rate of return review*, p. 24.

¹⁰ QCA, June 2021, *Rate of return review*, p. 26.



39. The QCA concludes that the trailing average approach best reflects the cost of serving debt that would be incurred by an efficient firm operating in a competitive market:

Therefore, when reviewing the relevant debt management strategy, we need to consider the likely debt management behaviour of an unregulated 'efficient' firm operating in a competitive market for similar services. We consider it appropriate to use this reference point, as the debt management strategy benchmark we are developing is to serve as a proxy for this hypothetical unregulated competitor—and such a competitor would have no reason to utilise an on-the-day [spot] strategy. Rather, we consider that the trailing average approach is representative of the debt management strategy adopted by a benchmark efficient firm operating in a competitive market.¹¹

Conclusions on the rationale for the standard trailing average approach

40. All other Australian regulators now adopt the standard 10-year trailing average approach on the basis that it best reflects the cost that would be incurred under a prudent and efficient debt management approach. In this sense, it achieves the key regulatory objective of matching the regulatory allowance to the benchmark efficient cost.

2.6 The ERA's rejection of the trailing average approach

41. In its 2022 RoRI, the ERA sets out four proposed disadvantages of the standard trailing average approach. Those proposed issues with the trailing average approach, and our responses are as follows:¹²

- a It does not incorporate a forward-looking efficient component, as a trailing average of the total cost of debt only reflects past debt costs.

We disagree with this contention. The trailing average approach places 10% weight on the current (forward-looking) cost of debt. It also recognises that the majority of the firm's debt will have been (prudently and efficiently) issued at historical rates.

- b It may deliver higher costs of debt to regulated entities as firms may exploit the typical upward sloping yield curve to issue debt at lower cost. This is achieved by issuing debt at shorter maturities than the assumed 10-year tenor.

This is an issue relating to the term of debt that applies equally to all methods for determining the allowed return on debt. The rate-on-the-day, hybrid and trailing average approaches all assume that the benchmark firm issues 10-year debt. If a shorter maturity is appropriate, that shorter maturity should be adopted – for all three approaches.

- c Compared to other debt approaches, it leads to the greatest volatility of the cost of debt within an access arrangement period, including the greatest difference between forecast cost of debt and actual cost of debt in the last year of an access arrangement.

The trailing average approach produces a small change in the allowed return on debt each year as one (10%) tranche rolls off and is replaced by a new tranche. By contrast, the on-the-day-approach produces a constant allowance for each year during a regulatory period and then a larger shock at the beginning of the next regulatory period. That is, the trailing

¹¹ QCA, June 2021, *Rate of return review*, p. 27.

¹² ERA, December 2022, *Rate of Return Instrument: Explanatory Statement*, paragraph 324.



average approach produces a small change each year, whereas the rate-on-the-day approach 'stores up' five years of changes to be applied at the time of each determination.

- d It introduces complexity through annual updating.

There is no significant complexity. Allowed revenues and prices are updated annually for many reasons, including inflation. An annual update for the allowed return on debt is straightforward to implement and has been easily implemented by all other Australian regulators. We note that the hybrid approach (which the Authority has adopted for gas and electricity businesses) also requires an annual update and is more complex in that the return on debt must be decomposed into component pieces (risk-free rate and debt risk premium).

2.7 Recommendation

- 42. In our view, best regulatory practice is for the regulatory allowance to match the cost of debt that would be incurred by the prudent and efficient approach that would be adopted in practice in the absence of regulation – rather than for regulation to drive regulated businesses to adopt an approach to debt management that they would not otherwise adopt.
- 43. Our recommendation is that the allowed return on debt should be set using the standard 10-year trailing average approach that has become the Australian regulatory standard. The primary reasons for that conclusion are:
 - a The trailing average approach reflects the prudent and efficient debt management approach that is adopted by infrastructure businesses that are not subject to regulation. By contrast, the rate-on-the-day and hybrid approaches imply debt management approaches that no business would consider adopting, other than to replicate the allowance provided to it by the ERA. Consequently, it is difficult to support the notion that such strategies are prudent and efficient; and
 - b No other Australian regulator that has reviewed its rate of return methodology within the last decade adopts the rate-on-the day or hybrid approach.



3 Comparator set for estimating beta

3.1 Draft Determination

44. The Draft Determination recognises the problems that arise when using a small set of comparators to estimate beta:

The ERA has some concerns with the use of small samples, including that:

- *A forward-looking equity beta requires live firms that can incorporate information into prices, where historical estimates cannot incorporate information due to being delisted.*
- *A sample that is largely reflective of one firm deviates from a benchmark approach to an actuals approach.*
- *A small sample may be overly affected by the idiosyncratic position of one firm and its changes over time.*
- *A sample largely reflective of one firm also may be statistically unreliable.*

The ERA considers that market circumstances necessitated the examination of further international rail networks in the benchmark sample. The proposed filters are used to identify comparators with a similar degree of risk to the benchmark firm, to the closest extent possible given market realities.

The ERA acknowledges that it may not be possible to find additional comparators, but will endeavour to identify and propose suitable candidates for this draft determination.¹³

45. In relation to Arc Infrastructure, the Draft Determination notes that approximately 36% of the 2018 sample has now been delisted, leaving only 7 live comparators¹⁴ and that:

Given the reduced sample size, the ERA considered including other comparators. However, the ERA is unable to identify further suitable comparators which have a similar degree of risk to Arc Infrastructure.¹⁵

46. Thus, the ERA's beta estimate is now based on a set of 7 live comparators, two recently de-listed comparators, and two comparators that were delisted more than 5 years ago.

3.2 Larger comparator sets produce more robust beta estimates

47. We agree with the ERA's characterisation of the risks of relying on a small set of comparator firms. In addition to the problems identified above, we note that beta estimates for individual firms (and consequently small samples) tend to be volatile, even when estimated over 10-year periods. By contrast, true systematic risk likely changes slowly over time. That is, the risk associated with owning and operating a rail network is unlikely to increase or decrease significantly between one determination and another.

¹³ ERA, May 2023, 2023 draft determination for the freight and urban networks and the Pilbara networks, pp. 43-44.

¹⁴ ERA, May 2023, 2023 draft determination for the freight and urban networks and the Pilbara networks, pp. 48-49.

¹⁵ ERA, May 2023, 2023 draft determination for the freight and urban networks and the Pilbara networks, p. 48.



48. Thus, volatility in beta estimates is more likely to reflect random statistical variation in the estimation process than variation in the true level of systematic risk.
49. In a larger sample of comparators, the random statistical variation in individual estimates will tend to cancel out, producing more stable and reliable estimates.
50. For this reason, it is desirable to adopt a larger sample of comparators when estimating beta. For example, the ERA already uses port comparators in its sample and a substantial set of additional port comparators is available for consideration. For example, recent analysis for the Port of Melbourne has identified a large set of comparators.¹⁶
51. In this note, we do not propose that any particular set of comparators should be adopted. We simply highlight the dangers of continuing to rely on the same set of comparators, even as that set shrinks further. The key danger is that beta comes to reflect random statistical variation from time to time rather than the true level of systematic risk.
52. In this regard, we note that IPART has recently adopted an approach to beta whereby the regulatory estimate of beta will only be changed on the basis of significant and sustained evidence that the prevailing estimate has become inappropriate. Specifically, the IPART approach is that it would only depart from the prevailing beta estimate if the established value was more than one standard deviation from the new mean estimate and where such evidence supporting a different value was persistent over a long timeframe (being a regulatory period or longer).¹⁷
53. Finally, we note that in practice it is challenging to identify sufficiently large samples of comparators that mirror all of the key risk characteristics of the access provider. For example, the access provider may be more insulated from competition than most of the comparators used to estimate beta or may benefit from long-term supply contracts that the majority of the comparators do not enjoy. These are relevant risk characteristics that would be expected to influence the true systematic risk of the access provider but may not be reflected well in the average beta estimate for the sample. In these circumstances, we recommend that the ERA consider how it might select the overall beta point estimate for the access provider based on the empirical estimates for the comparator sample, to reflect the important risk characteristics that are not represented well by the firms within the comparator group.

3.3 Recommendation

54. We note that the Draft Determination proposes that the asset beta for Arc Infrastructure of 0.7, unchanged from the 2018 Determination.
55. We also note that the available sample is significantly smaller than it was in 2018 and may decline further in future. Also, as time passes, estimates for the delisted firms in the sample will sink further into history.
56. Reliance on a small set of comparators risks a situation in which the regulatory estimate of beta comes to reflect random statistical variation from time to time rather than the true level of systematic risk.

¹⁶ <https://www.esc.vic.gov.au/sites/default/files/documents/Port-of-Melbourne-2022-23-Tariff-Compliance-Statement-Appendix-I-HoustonKemp-Estimation-of-the-WACC-20220511.pdf>.

¹⁷ IPART, August 2020, *Estimating equity beta for the weighted average cost of capital*, p. 6.



57. We propose that, for current/future determinations, the Authority might consider approaches for expanding the sample of comparator firms and/or adopting an IPART-like approach. This would guard against spurious changes in beta estimates.
58. The ERA should also consider how the overall point estimate for beta should be selected (e.g., from within the overall range of empirical estimates) to reflect the most important risk characteristics of the access provider in question.

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