AUSTRALIAN ENERGY REGULATOR

23 Marcus Clarke Street
Canberra ACT 2601
GPO Box 3131
Canberra ACT 2601
[redacted]
www.aer.gov.au

Our Ref: 65402
Contact Officer: Esmond Smith
Contact Phone: [redacted]

14 September 2021

Mr Leon Berkelmans
Senior Manager, Securities Markets
Domestic Markets Department
Reserve Bank of Australia
SYDNEY 2001

Dear Leon

The Australian Energy Regulator (AER) is in the process of reviewing the cost of capital we provide regulated energy network businesses. We must remake the Rate of Return Instrument (RoRI) we set in 2018 by 17 Dec 2022. We are currently doing research and working papers for stakeholder comment with more formal RoRI review process steps starting early next year.

The Australian equity market risk premium (the MRP) is a key input into the allowed rate of return set in the RoRI.[1]

This letter requests assistance from the RBA with respect to our work on estimating the MRP in relation to two matters:

- With respect to RBA Research Discussion paper RDP 2019-04 by Thomas Mathews; and,
- In relation to the RBA's use of dividend discount models to generate information on the MRP.

RBA Research Discussion paper RDP 2019-04

In our research work we have examined Reserve Bank of Australia (RBA) Research Discussion Paper RDP 2019-04 by Thomas Mathews.[2] We have also looked at the supplementary information (i.e. data) the RBA has published with this discussion paper.

We have publically indicated we are considering the use of this new RBA data series given its availability in a draft AER working paper.[3] We have also invited stakeholders to make submissions on the appropriateness of the AER using the RBA's new data series. Energy

1 *Rate of Return Instrument*, Dec 2018, p3. This is available here.
2 RBA, *Research Discussion* Paper – *RDP 2019-04 A History of Australian Equities*, June 2019. This paper is available here
3 AER, *Rate of return Equity Omnibus Draft working paper,* July 2022, p 22. This paper is available here

Networks Australia have submitted a consulting report prepared by Simon Wheatley at Houston Kemp Economists which considers the RBA Discussion paper.[4]

To assist us to evaluate the RBA's data series published with the discussion paper, and consider the comments raised in the Houston Kemp report, we are requesting the RBA assist us with data availability and in answering a number of questions.

The RBA's use of a dividend discount model to generate information on the MRP

The AER is also considering if dividend discount models (also called dividend growth models) might be used to improve our estimate of the MRP.[5]

We are aware the RBA has a dividend discount model it uses to generate information on the Australian MRP. We are requesting information on this model's specification, inputs, reliability and use, to assist us with our consideration of the use of these models for estimating or informing the estimation of the MRP.

The details of the specific requests are covered in Attachment A to this letter.

We greatly appreciate any assistance you or other RBA staff can give us with this work.

Yours sincerely

[redacted]

Warwick Anderson
General Manager
Network Pricing

Sent by email on: 14.09.2021

4 Houston Kemp Economists, A new MRP estimate? A review of RBA discussion paper 2019-04 – A report for Energy Networks Australia, August 2021. This report is available here

5 AER, *Rate of return Equity Omnibus Draft working paper,* July 2022, pp 24-26. This paper is available here

Attachment A – Assistance requested from the RBA

RBA research discussion paper RDP 2019-04

The AER requests access to the raw data series compiled by RBA staff from stock exchange gazettes for RBA research discussion paper RDP 2019-04.

- Obtaining this data will allow us to examine the underlying RBA data, calculations and analysis. It will also assist us to better consider the comments in the Houston Kemp report. While we would prefer to obtain public (non-confidential) data, we understand this data may be proprietary to the Australian Stock Exchange (ASX).
- To the extent the ASX does claim confidentiality over the raw data, we would request the data in confidence. We understand this request may need approval from the ASX and if required, we will directly discuss this with the ASX.

We have the following questions related to the RBA discussion paper:

- Houston Kemp at pages 11 to 12 of its report derives a different formula for the one period holding period return than the one it indicates is reflected in the published R code used for the RBA Discussion Paper.

  Does the RBA consider that formula three in the Houston Kemp report is more appropriate than formula 4 (used by the RBA) for calculating holding period returns on 10 year government bonds?

- The RBA discussion paper uses one-year holding period returns on 10-year government bonds as opposed to promised yields.

  This appears to result in a slightly higher average risk free rate over the period from 1917 to 2019 (relative to using promised yields) for two reasons: due to the decrease in the risk free rate from 1917 to 2019, and due to the volatility in the yield on 10 year government bonds. It can also result in materially different estimates of the risk free rate over different sub periods, relative to the use of the average of the promised yields, due to changes in the 10-year bond yield in different sub periods.

  In relation to the decision to use holding period returns:

  - What was the reason for using holding period returns instead of promised yields?
  - Does the RBA consider holding period returns superior relative to promised yields for estimating the MRP, particularly over sub periods where interest rates change materially, because they pick up valuation impacts from the change in the discount rate?

- Houston Kemp at pages 15 to 20 raises concerns with the impact of ignoring bonus issues due to the discussion paper's method of handling capital changes. With respect to this:
  - Is Houston Kemp's position on the expected bias from bonus issues correct?
  - If there is likely to be a systematic downwards bias due to bonus issues:
    - Does the RBA have a view on whether this is likely to be material?
    - Does the RBA have a view on how quantification of any bias might be undertaken?

- Houston Kemp at pages 8 to 9 raise concerns with combining the RBA dividend yield series from the discussion paper with Lamberton's commercial and industrial price series. With respect to this:

- Could this combination result in a material bias and is this likely?
- If this combination could result in material bias, could you adjust the RBA dividend yield series to allow the combination of the two series without material bias?
- If an adjustment to allow the combination of the data series is possible, would the raw RBA data be sufficient to estimate this? If not, what data might be sufficient?

While we understand Thomas Mathews no longer works for the RBA, we are happy to talk to him directly about the above questions if the RBA considers this appropriate.

RBA's use of a dividend discount model to generate information on the MRP

We understand the RBA may have a dividend discount model that it uses to generate information on the Australian domestic MRP. With respect to this model, we have the following questions:

- What does the RBA use the model for?
- How reliable are the different outputs from the model considered by the RBA (e.g. point estimates of the MRP, ranges or directional changes)?
- What is the algebraic specification of the model?
- What inputs is the model particularly sensitive to?
- What data sources are used for inputs to the model?
- Where is the model currently indicating the MRP (point estimate or range) is likely to fall and how uncertain/reliable are these estimates considered?
- Is the model indicating the current Australian MRP is likely to be above or below the long run historical average, how reliable is this information, and does this reconcile with other indicators the RBA considers in forming a view on the Australian MRP?