Australian Government
The Treasury

26 October 2022

Ms Clare Savage
Chair
Australian Energy Regulator

Via email: [redacted]

Dear Ms Savage

**Australian Energy Regulator review of the Rate of Return Instrument and impacts of monetary policy post the Global Financial Crisis on asset prices**

Thank you for your letter of 26 August 2022 on the updated method the AER is using to determine the rate of return for the energy networks it regulates.

I welcome the thoroughness of the Independent Panel's analysis of the market risk premium (MRP) used in the draft Rate of Return Instrument (RoRI).

We have undertaken a review of the relevant academic literature to address the questions in your letter. We note that the literature is still evolving and is primarily drawn from overseas, although we assess that the findings are broadly applicable to the Australian context. An overview of the literature and list of academic papers we considered can be found in Attachments A and B.

Regarding the recommendations by the Independent Panel and questions posed in your letter:

1. There is a significant body of literature that identifies conceptual reasons and empirical evidence that periods of highly accommodative monetary policy, including quantitative easing programs, may contribute to a rise in measured historical excess returns (HER).

2. The literature on the effect of the unwinding of highly accommodative monetary policy on equity prices and HER is more limited. However, we assess that it is more likely than not that, as monetary policy normalises, the measured HER will decline. The decline in equity prices that has accompanied the withdrawal of monetary stimulus by central banks in recent months may in part reflect this.



Langton Crescent
Parkes ACT 2600
Australia

P: [redacted]

3. The Treasury has not conducted analysis of changes in the equity market risk premium in Australia from late 2018 to now.

4. We have reviewed the documentation concerning the estimation of the MRP published by the AER, the Independent Panel, and stakeholders. We do not have any additional information of relevance.

**Recommendation**

We assess that the Reserve Bank's extraordinary monetary policy response to the coronavirus pandemic is likely to have increased Historical Excess Returns (HER) in 2020 and 2021, all else equal. We also assess that the variability in the magnitude of the effect found in the literature makes estimating an appropriate adjustment to the HER difficult. As such, we suggest that the simplest and least subjective method for reducing bias in the measured HER – to the extent that it exists – is to:

1. Extend the sample period to include the 2022 calendar year, though this may require a short extension to the planned publication date of the final RoRI. This approach would incorporate into the calculation window the signalling by central banks of their intention to unwind the extraordinary monetary policy settings of the pandemic period; or

2. Shorten the sample period to end in 2019, which would exclude any bias in the measured HER stemming from the pandemic period. The pandemic and post-pandemic period could then be incorporated into the calculation window at the next RoRI review.

We hope this has been of assistance and look forward to the final publication of the new RoRI.

Yours sincerely

[redacted]

**Mark Cully**
First Assistant Secretary
Macroeconomic Analysis and Policy Division

## ATTACHMENT A – Summary of the literature

All else equal, finance theory suggest that lower longer-term real risk-free rates raise the present value of future profits, which increases equity prices and measurements of HER.

Empirically, the literature finds a causal relationship between lower market interest rates resulting from QE programs and a rise in equity prices.

Quantitative easing also aims to reduce risk premia by displacing investors from segments of the government bond market (the so-called 'portfolio rebalance channel') toward more risky assets. To the extent that investors rebalanced portfolios into equities, this reduces equity risk premia and increases the present value of future profits, equity prices and the measured HER.

Empirical evidence of a portfolio rebalance channel effect is mixed. Some literature indicates that most or all rebalancing occurs within fixed income markets, while other studies find evidence of flows into equities and reduced equity risk premia. This variance in findings appears to reflect differing methodologies, time periods and economies across the studies.

The literature on the effect of 'quantitative tightening' – the passive or active disposal of assets acquired via QE – is limited. While there is some conjecture that the effect of QE and QT is asymmetric, there is no published empirical evidence of this.

## ATTACHMENT B – References


**Albertazzi U, B Becker and M Boucinha** (2018), 'Portfolio rebalancing and the transmission of large-scale asset programmes: evidence from the euro area', European Central Bank Working Paper Series No 2125

**Altavilla C, G Carboni and R Motto** (2015), 'Asset purchase programmes and financial markets: lessons from the euro area', European Central Bank Working Paper Series No 1864

**Beirne, J, N Renzhi, E Sugandi and U Volz** (2021), 'COVID-19, asset markets and capital flows', *Pacific Economic Review*, 26(4), pp 498–538

**Borio C and A Zabai** (2016), 'Unconventional monetary policies: a re-appraisal', BIS Working Papers No 570

**Cox J, D Greenwald, S Ludvigson** (2020), 'What Explains the COVID-19 Stock Market?', NBER Working Paper No. 27784

**Deng T, T Xu and YJ Lee** (2022), 'Policy responses to COVID-19 and stock market reactions – An international evidence', *Journal of Economics and Business*, 119

**Finlay R, D Titkov and M Xiang** (2022), 'The Yield and Market Function Effects of the Reserve Bank of Australia's Bond Purchases', RBA Research Discussion Paper No 2022-02

**Fratzscher M, ML Duca and R Straub** (2013), 'On the International Spillovers of US Quantitative Easing', European Central Bank Working Paper Series No 1557

**Haldane AG, M Roberts-Sklar, T Wieladek and C Young** (2016), 'QE: the story so far', Bank of England Staff Working Paper No 624

**Hudepohl T, R van Lamoen and N de Vette** (2019), 'Quantitative Easing and Exuberance in Stock Markets: Evidence from the euro area', DNB Working Paper No 660

**Jakl J** (2019), 'The True Nature of the Portfolio Balance Channel of Quantitative Easing Policy', *Review of Economic Perspectives*, 19(2), pp 95-117

**Johnson C, K Lane, N McClure** (2022), 'Australian Securities Markets through the COVID-19 Pandemic', Reserve Bank of Australia Bulletin – March 2022

**Joyce MAS, A Lasaosa, I Stevens and M Tong** (2011), 'The Financial Market Impact of Quantitative Easing in the United Kingdom', *International Journal of Central Banking*, 7(3), pp 113-162

**Joyce MAS, Z Liu and I Tonks** (2014), 'Insitutional investor portfolio allocation, quantitative easing and the global financial crisis', Bank of England Working Paper No 510

**Kapp D and K Kristiansen** (2021), 'Euro area equity risk premia and monetary policy: a longer-term perspective', European Central Bank Working Paper Series No 2535

**Kiley MT** (2014), 'The Response of Equity Prices to Movements in Long-Term Interest Rates Associated with Monetary Policy Statements: Before and After the Zero Lower Bound', *Journal of Money, Credit and Banking*, 46(5), pp 1057-1071

**Kimura T and D Small** (2004), 'Quantitative Monetary Easing and Risk in Financial Asset Markets', Federal Reserve Finance and Economics Discussion Series 2004-057

**Knox B, A Vissing Jorgensen** (2022), 'A Stock Return Decomposition Using Observables', Federal Reserve Finance and Economics Discussion Series 2022-014

**Poshakwale S and P Chandorkar** (2016), 'The impact of monetary policy shocks on the equity risk premium before and after the quantitative easing in the United Kingdom', *Investment Management and Financial Innovations*, 13(4), pp 146-159

**Rosa C** (2012), 'How "Unconventional" Are Large-Scale Asset Purchases? The Impact of Monetary Policy on Asset Prices', Federal Reserve Bank of New York Staff Reports No 560

**Shah IH and I Malki** (2018), 'The portfolio balance channel: an analysis on the impact of quantitative easing on the US stock markets', University of Bath Economics Research Papers No 74/1