

2026 Rate of Return Instrument

Post draft decision discussion paper

9 October 2026

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Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601
Email: aer inquiry@ aer.gov.au
Tel: 1300 585 165

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1 Executive summary

The Australian Energy Regulator (AER) is responsible for the economic regulation of electricity transmission and distribution systems in all states and territories except Western Australia. We exist to ensure energy consumers are better off, now and in the future. We focus on ensuring a secure, reliable and affordable energy future for Australia as we transition to net zero emissions.

A key component of the prices that regulated energy network service providers charge is the rate of return they recover for their capital investments. Energy networks are capital-intensive businesses, and the return on capital is typically around half of their revenue. National energy laws regulate the operation of energy networks, including the rate of return they can recover for their capital investments. This is the purpose of the Rate of Return Instrument (RORI). The RORI sets out the methodology the AER uses to determine the allowed rate of return for regulated electricity and gas networks. It specifies the way to calculate the rate of return on capital and value of imputation credits, expressed as mathematical formulae, and how we will obtain inputs for those formulae.

Under the National Electricity Law (NEL)¹ and National Gas Law (NGL)², the AER is required to review the RORI every four years. We released a Review Process Paper in March 2025³ and formally commenced the 2026 RORI review on 4 August 2025 with the publication of a discussion paper⁴ proposing the review focus on a limited number of key issues, given extensive past research and analysis. Since then, our work has been informed by an Eligible Experts' report⁵, two rounds of public stakeholder consultation⁶, three public forums⁷, several stakeholder meetings and, more recently, an Independent Panel's report⁸ on the draft 2026

¹ NEL, Division 1B, s. 18F-18Y.

² NGL, Division 1A, s. 30A-30T.

³ <https://www.aer.gov.au/documents/aer-rate-return-instrument-2026-review-process-paper-28-march-2025>

⁴ <https://www.aer.gov.au/industry/registers/resources/guidelines/rate-return-instrument-2026/discussion-paper>

⁵ <https://www.aer.gov.au/industry/registers/resources/guidelines/rate-return-instrument-2026/eligible-experts-report>

⁶ <https://www.aer.gov.au/industry/registers/resources/guidelines/rate-return-instrument-2026/discussion-paper>; <https://www.aer.gov.au/industry/registers/resources/guidelines/rate-return-instrument-2026/draft-2026-rate-return-instrument>

⁷ <https://www.aer.gov.au/industry/registers/resources/guidelines/rate-return-instrument-2026/discussion-paper>; <https://www.aer.gov.au/industry/registers/resources/guidelines/rate-return-instrument-2026/eligible-experts-report>; <https://www.aer.gov.au/industry/registers/resources/guidelines/rate-return-instrument-2026/draft-2026-rate-return-instrument>.

⁸ <https://www.aer.gov.au/industry/registers/resources/guidelines/rate-return-instrument-2026/independent-panels-report>

RORI⁹ that we published on 29 May 2026. We are grateful for stakeholders' ongoing engagement in this review process.

Following receipt of the Independent Panel's report and stakeholders' submissions on the draft 2026 RORI, we have been considering all views, evidence and recommendations that have been put to us. These considerations are ongoing. The insights and information received to date have helped us to critically assess the draft 2026 RORI and progress our work for the final 2026 RORI.

While we continue to target a December 2026 release date for the final 2026 RORI, we consider it important to hold a further short round of formal public consultation on a targeted set of questions we have specifically developed to further inform our consideration of the issues and final positions.

This discussion paper draws together the additional analyses we have undertaken in response to the Independent Panel's recommendations, which we set out and discuss in Chapter 3 (for equity beta) and Chapter 4 (for the market risk premium), with further details in the appendices.

The consultation period on this discussion paper will run for a strict period of **10 business days** only. As we noted in our Review Process Paper, we are mindful of the industry-wide regulatory engagement burden borne by stakeholders. We also indicated we would be flexible and transparent in our approach as we progress our review, which included the possibility of additional ways to engage on matters that are relevant to our considerations. Interested stakeholders are invited to make written submissions that directly address the targeted consultation questions set out in Chapter 3 (for equity beta) and Chapter 4 (for the market risk premium) by the close of business on **23 October 2026**.

Any submissions received on this discussion paper will be considered alongside all submissions already received in this review, including in response to the draft 2026 RORI.

⁹ <https://www.aer.gov.au/industry/registers/resources/guidelines/rate-return-instrument-2026/draft-2026-rate-return-instrument>

2 Invitation for submissions

Interested stakeholders are invited to make written submissions that directly address the targeted consultation questions set out in Chapter 3 (for equity beta) and Chapter 4 (for the market risk premium) of this discussion paper by the close of business on **23 October 2026**.

Submissions should be sent to RateOfReturn@aer.gov.au and addressed to Gavin Fox, General Manager Network Pricing. Alternatively, you can mail submissions to GPO Box 3131, Canberra ACT 2601.

Submissions should be in Microsoft Word or another text readable document format.

We prefer that all submissions be publicly available to facilitate an informed and transparent consultative process. We will treat submissions as public documents unless otherwise requested. When lodging your submission, please confirm that your submission does not contain confidential information and may be published on the AER's website.

Parties wishing to submit confidential information should:

- Clearly identify the information that is the subject of the confidential claim.
- Provide a non-confidential version of the submission in a form suitable for publication.

All non-confidential submissions will be published on our website.

3 Equity beta

Equity beta is a key parameter within the Sharpe-Lintner Capital Asset Pricing Model (SL CAPM) that we use to estimate the return on equity. It reflects a firm's exposure to systematic risk, which is market-wide risk common to the whole economy and cannot be eliminated through diversification. Examples of factors that influence systematic risk include the economic cycle, interest rates, inflation, wars and natural disasters. A firm's exposure to systematic risk will depend on its business activities and its level of financial leverage. For firms that we regulate, this reflects the systematic risk in providing Australian regulated energy network services.¹⁰

Non-systematic risks, on the other hand, are firm-specific and can be diversified away. We consider non-systematic risks separately in the cash flows that are discounted by the rate of return, for example, in depreciation.

This chapter outlines the equity beta specific analyses we have undertaken in response to the Independent Panel's recommendations, particularly on the estimation period, comparator firms, and other regulators' decisions. We will also respond to all of the Independent Panel's recommendations in the Explanatory Statement to the Final 2026 RORI.

3.1 Background

3.1.1 Draft 2026 RORI

Our draft decision set an equity beta value of 0.55 for the 2026 RORI. This was based on our view that an appropriate range of equity beta estimates is between 0.4 and 0.7, and our consideration of where the point estimate could be likely to sit within this range. This was a decrease from a point estimate of 0.6 set in the 2022 RORI.

Historically, we have relied on a comparator set of 9 listed Australian NSPs, but 8 of these firms have been delisted. In our draft decision, we reviewed our approach to the comparator set. We developed a new sample of international energy firms, using filters and adjustments to correct for key differences from domestic NSPs, and assessed the relative merits of our domestic comparator set and the new international sample.¹¹

In arriving at our draft decision, we:¹²

- relied primarily on the longest-period estimates and less on 5-year estimates
- used estimates of domestic majority-regulated firms and estimates of international firms, respectively, to inform the lower and upper bound of our range

¹⁰ NER 6.5.2(c), 6A.6.2(c) and NGR 87(3).

¹¹ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, pp.20-22.

¹² AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, pp.20-22.

- exercised judgement in determining a point estimate by considering the relative merits of our domestic and international comparator firms.

Our reasons for the reduction from a point estimate of 0.6 set in the 2022 RORI to 0.55 were as follows.

- We recognised that the equity beta estimates of the majority-regulated domestic firms are below the average estimate of our domestic comparator set.
- We refined our approach to estimating equity beta for international firms, including developing a new international sample and introducing a debt beta of 0.1, resulting in lower international estimates compared with our 2022 RORI approach.
- We observed a decrease in the 5-year estimates of both domestic (APA Group) and international firms, which were below their longest-period estimates.

3.1.2 Independent Panel's report

While the Independent Panel emphasised that it had not formed a view that an equity beta value of 0.55 is inappropriate, or that a reduction compared to the 2022 RORI may be appropriate, the Panel noted that:¹³

- the reasoning for our range on the equity beta was not adequate, and therefore our draft decision on the point estimate was not fully explained
- we did not properly address the weaknesses of our domestic sample (as we have done for the international sample). The case for giving more weight to domestic firms was not made out.
- there is scope for further qualitative and empirical analysis of international data, including how we can better use it to inform our decision.
- the reasons for the reduction in our point estimate were not consistent with the reasoning in the 2022 RORI.

The Panel made several more specific recommendations, which we also consider further in the following sections.

The first and fourth points above relate to the AER's exercise of judgement in reaching its decision and the explanation of that decision. These are matters that will be addressed in the AER's final decision when it has considered the appropriate beta in light of further analysis presented here, submissions, and the Independent Panel's report.

¹³ Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, pp.2-3.

3.2 Estimation period

3.2.1 Alternative long-term horizons

Our draft decision was to rely primarily on the longest-period estimates (from 1992 to 2025) and less on the most recent 5-year estimates.¹⁴ This is consistent with our approach from the 2022 RORI and previous reviews.¹⁵

The Independent Panel noted that while the equity beta of network service providers (NSPs) may be stable, it does not imply they are static. It recommended that we consider an alternative long-term horizon, such as 10 or 15 years, because “the forward-looking beta will evolve over time, and genuine trends will be obscured in a very long sample”.¹⁶

In response, we have estimated equity beta using the most recent 10, 15, and 20 years, in addition to estimates over the longest period and the most recent 5 years. We found that the most recent 5-year estimates are below the longest-period estimates, while the 15- and 20-year estimates are above the longest-period estimates. We also found that domestic firms’ 10-year estimates are below their longest-period estimates, while international firms’ 10-year estimates are above their longest-period estimates. As some of these estimates are above and some are below, they suggest volatility over time rather than a trend. They do not show evidence of a clear upward or downward bias in the longest-period estimates.

We also undertook the Hansen test for parameter instability for our domestic beta estimates over the longest period. We did not find strong evidence of instability in beta for our majority-regulated domestic firms. (See Appendix C.1)

3.2.2 Significant one-off events

The Independent Panel also suggested that we calculate long-term beta estimates for specific periods for a consistent sample of firms, which could allow us to assess the impact of extreme events on energy network betas. It suggested that we investigate in more detail the impact of significant one-off events (such as COVID-19 or the Global Financial Crisis (GFC)) on both short-term and long-term estimates. It further suggested that we consider approaches to adjust the historic data based on the reasonable likelihood of the future occurrence of such events.¹⁷

We have estimated equity beta over the following 2 additional estimation periods that exclude significant one-off events.

- Post technology boom, excluding the GFC and COVID-19 (PTEGC).
- Post GFC, excluding COVID-19 (PGEC).

¹⁴ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, p.20.

¹⁵ AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p.175.

¹⁶ Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, p.21.

¹⁷ Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, pp.21-22.

We found that the PTEGC and PGEC estimates tend to be higher than the longest-period estimates for domestic firms, particularly those that are majority-regulated. This suggests that domestic beta estimates tend to be lower during significant one-off events than in ‘normal’ periods.

We observed the opposite for international firms, particularly US firms. International firms’ PTEGC and PGEC estimates tend to be lower than their longest-period estimates. This suggests that international beta estimates tend to be higher during significant one-off events than in ‘normal’ periods.

We also examined the rolling 5-year equity beta estimates of APA Group, AusNet Services, and Spark Infrastructure, over the period from 2007 to 2021 (when they were all publicly listed companies) and compared them with international estimates. We observed that, at the start of COVID-19 in 2020, all 3 domestic firms’ equity betas decreased, while the estimates of international firms, particularly US firms, increased.

We have not been able to find a reliable method within the academic literature to determine the probability of future occurrence of significant one-off events.

We note that when and how to adjust for significant one-off (or low-probability) events is a difficult question on which regulators have taken different approaches. For example, in the United Kingdom, the Civil Aviation Authority sought to limit the impact of the COVID-19 period data, while the Competition and Markets Authority preferred not to exclude the data when it made the Water PR24 price redeterminations.¹⁸ The case for the latter approach is stronger when greater weight is given to equity beta estimates generated using the longest-period data where the impact of any one-off event is smaller.

3.3 Comparator set

3.3.1 Domestic sample

Our draft decision was to place more reliance on the 5 majority-regulated domestic firms within our domestic comparator set of 9 firms.¹⁹ We analysed the historical annual reports of the domestic firms to determine whether they should be considered majority or minority-regulated firms. This was a departure from our previous RORIs and reviews, where we did not make a distinction between majority and minority-regulated domestic firms.

Our domestic firms are as follows.

- Majority-regulated sub-sample: AusNet Services Limited (AST), DUET Group (DUE), Envestra Limited (ENV), GasNet Australia Group (GAS), and Spark Infrastructure Group (SKI).

¹⁸ Flint, *Support to the Civil Aviation Authority: NR23 Updated Beta Assessment*, April 2023, p.23; Competition and Markets Authority, *Water PR24 References, Final Determinations Volume 4: Allowed return - chapter 7*, 10 March 2026, pp.113-116.

¹⁹ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, p.21.

- Minority-regulated sub-sample: Alinta Limited (AAN), Australian Gas Light Company (AGL), APA Group (APA), and Hastings Diversified Utilities Fund (HDF).

The Independent Panel suggested that there has been no change in the underlying data of majority-regulated domestic firms relative to our 2022 RORI. It noted that equity beta estimates should be forward-looking, but the 5 majority-regulated domestic firms have all been delisted and have become increasingly out of date. Moreover, the domestic firms have been listed at different times and have inconsistent estimation periods.²⁰

The key reason for the change in our approach in the draft 2026 RORI to rely more on majority-regulated domestic firms is that we recognise these firms as the closest comparators to a ‘pure play’ Australian NSP. This is supported by our consideration of stakeholders’ submissions to our August 2025 discussion paper.

- Energy Consumers Australia (ECA) supported relying more on majority-regulated domestic firms, noting that these firms have lower estimates than other domestic firms.²¹
- Energy Networks Australia (ENA) noted that our 9 domestic estimates (over the longest period) are widely dispersed, and therefore, did not support our point estimate of 0.6 from the 2022 RORI.²² We note this dispersion is due to the sample consisting of a mix of majority-regulated firms (which have lower estimates) and minority-regulated firms (which have higher estimates). The variances of the average estimates of the two sub-samples are each lower than that of the full domestic sample.
- ENA suggested that the tests we used to exclude international comparators should also be applied to domestic firms.²³ More recently, ENA supported a point estimate of 0.6 for the domestic sample and opposed placing more reliance on majority-regulated domestic firms.²⁴

In our draft 2026 RORI, we developed a new international sample of firms using several filtering criteria, one of which was that the firms derive a high proportion of their revenue from regulated energy networks, as reported in their annual financial information.²⁵ This led us to use a similar approach to review our domestic sample. Our approach to selecting for majority-regulated firms is, to the extent practical, consistent across our domestic and

²⁰ Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, pp.22,27.

²¹ ECA, *Attachment - EMAS Report for Energy Consumer Australia's Submission to the AER's 2026 Rate of Return Instrument Review*, December 2025, p.28.

²² ENA, *AER 2026 Rate of Return Instrument Review Response to AER Review Discussion Paper*, December 2025, p.35.

²³ ENA, *AER 2026 Rate of Return Instrument Review Response to AER Review Discussion Paper*, December 2025, p.49.

²⁴ ENA, *Submission on draft 2026 RORI*, 31 July 2026, pp.28-56.

²⁵ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, pp.24-25.

international samples. This allows us to compare ‘like with like’ when assessing domestic and international firms and determining our range of estimates.

We will consider and respond to all stakeholder submissions in more detail in our final 2026 RORI Explanatory Statement.

We recognise the shortcomings of our majority-regulated domestic sub-sample are that these firms have all been delisted and have been listed at different periods. As discussed earlier, we undertook the Hansen test for parameter instability for our domestic beta estimates over the longest period and did not find strong evidence of instability for our majority-regulated domestic firms. We also examined the rolling 5-year equity beta estimates of our majority-regulated domestic firms, particularly Spark Infrastructure and AusNet Services, and observed that the estimates, while volatile, did not appear to be trending upwards or downwards over the long term. Finally, we examined whether, and how, the systematic risk of Australian NSPs may have changed in recent years, which we discuss in section 3.3.4.

3.3.2 International sample

Our draft 2026 RORI applied a filtering approach and developed an international sample of 48 firms from the US, Canada, Europe, and New Zealand. We selected firms that:²⁶

1. operate in developed economies
2. operate in energy-related sectors and industries
3. derive most of their revenue from regulated electricity and/or gas networks
4. have been listed for at least a specific number of years
5. have a market capitalisation that exceeds a certain threshold
6. have a bid-ask spread that is below a certain threshold.

This contrasts with the previous international sample used in the 2018 and 2022 RORIs, which was based on a sample of 56 US firms developed by CEG.²⁷

The Independent Panel suggested 5 additional European firms that are used by European regulators:²⁸

- SNAM in Italy (SRG IM Equity)
- Italgas in Italy (IG IM Equity)
- Redeia in Spain (RED SM Equity)

²⁶ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, pp.24-25.

²⁷ CEG, *Information on equity beta from US companies*, June 2013.

²⁸ Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, p.24.

- Elia in Belgium (ELI BB Equity)
- REN in Portugal (RENE PL Equity).

We reviewed the annual report information of these firms to estimate the proportion of their revenues derived from regulated energy networks. We found them suitable for inclusion in our international sample for the 2026 RORI. We also confirmed that each of these 5 firms is used by multiple European regulators.

In our review, we also found that Hera Group (HER IM Equity), from our existing international sample, may not be a suitable comparator because around 90% of its electricity and gas revenues are from sales and trading activities.²⁹ We are considering whether to exclude this firm from the final international sample we use for the 2026 RORI.

The Independent Panel further suggested that we divide our international sample into sub-samples by country and region and further analyse them.³⁰ We have done this and present the results in our empirical estimates (see section 3.5). Our latest (post draft 2026 RORI) international sample consists of 53 firms, which we divide into the following 4 sub-samples:

- 37 US firms
- 5 Canadian firms
- 10 European firms (from Belgium, Italy, Portugal, Spain, and the UK)
- 1 New Zealand firm.

If we were to remove Hera Group, it would reduce the European sub-sample to 9 firms, and the overall international sample to 52 firms.

3.3.3 Comparability of international firms to domestic NSPs

In our draft 2026 RORI, we found that international firms have limited comparability to Australian NSPs, meaning that the international firms would be imperfect substitutes to our domestic comparators (particularly the majority-regulated firms) in estimating the equity beta of a ‘pure play’ Australian NSP. Our reasons are summarised as follows.³¹

- Other regulators generally have a default preference for domestic data and would typically only use international data when there is a lack of domestic data.
- There is a significant difference in the empirical estimates of equity beta and gearing between Australian NSPs and international energy firms.
- Australia’s market index composition differs from that of other countries, and this difference is greater than the change in the Australian index over time.

²⁹ Hera Group, *Annual Report 2024*, March 2025, pp. 68, 73.

³⁰ Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, p.7.

³¹ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, pp.29-38.

The Independent Panel suggested that we further investigate the differences between the international sample and the forward-looking risks of Australian NSPs, empirically where possible. It expressed concern that our international sample is very focussed on North American firms, and suggested that we compare sub-samples of the international comparators, including the following.³²

- Test whether the observed betas for the European sub-sample are different from the US (or North American) sample.
- Compare the regulatory regimes of the countries in the international sample to Australia. Provide a reasoned basis for concluding whether the riskiness of the regulatory regime in Australia is average, above average or below average compared to the international sample. Identify a sub-sample of comparators that most closely matches the regulatory regime in Australia and compare the betas of this sample to the international sample as a whole.

In response, we undertook a broader comparison of each international sub-sample with Australian NSPs, using factors that could influence equity beta estimates, as well as historical empirical estimates. Our findings are summarised in Table 1.

We note a 'high' level of comparability does not imply equivalence, and there may still be some differences that could be material. We also note that having a 'high' comparability rating in most of the individual qualitative factors does not necessarily imply that a sub-sample is highly comparable overall to Australian NSPs, because a difference in any one of the qualitative factors could lead to a difference in empirical estimates.

³² Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, pp.23-24.

Table 1 Assessment of international sub-samples' characteristics and comparability with Australian NSPs

Criteria	Australia	US	Canada	Europe	NZ
Sample characteristics					
Sample size	Medium (9 firms)	Large (37 firms)	Medium (5 firms)	Medium (10 firms)	Small (1 firm)
Sample recentness	Mostly delisted	Up to date	Up to date	Up to date	Up to date
Comparability with Australian NSPs					
Local economy	Baseline	High	High	High	High
Regulatory framework	Baseline	Moderate	Moderate	High	High
Firms' operational structure	Baseline	Moderate	Moderate	High	High
Firms' financial structure	Baseline	High (adjusted)	High (adjusted)	High (adjusted)	High (adjusted)
Market index composition	Baseline	Low	High	Moderate	Low
Historical empirical estimates	Baseline	Low	Moderate	Moderate	Moderate

Source: AER analysis.

Our assessment, as set out in Table 1, is based on the following reasons.

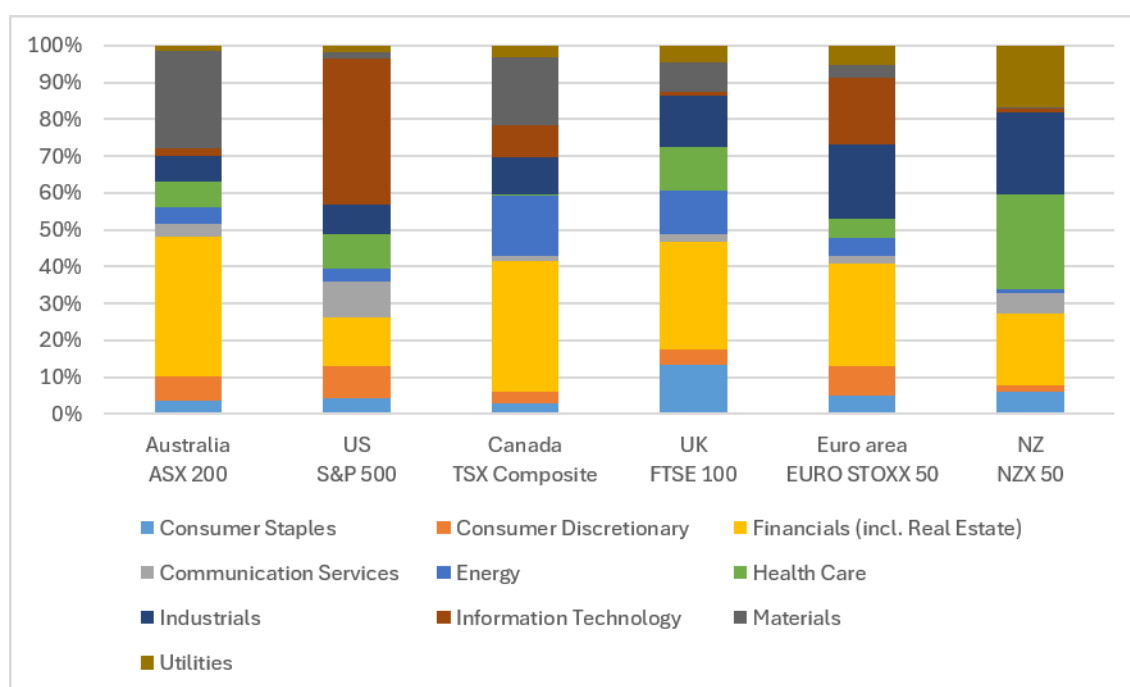
- **Local economy:** All 4 international sub-samples of firms are from developed economies, which are characterised by a relatively high level of industrialisation and infrastructure (including energy utilities) and a high standard of living. They also tend to have stable governments, strong legal and financial systems, and independent institutions, such as regulators. Therefore, we consider the local economies of all 4 international sub-samples to be highly comparable to Australia.
- **Regulatory framework:** We found significant variations among the individual regulators of the jurisdictions covered by each sub-sample. Nevertheless, we found that European and New Zealand regulators are more likely to follow an incentive regulation model,³³ where allowed revenues are set for a multi-year period. US regulators are more likely to follow a cost-of-service model,³⁴ where allowed revenues and changes to the cost of capital are not determined for set periods. Canadian

³³ Council of European Energy Regulators, *Report on Regulatory Frameworks for European Energy Networks 2025*, 22 January 2026; NZCC, *Default price-quality paths for electricity distribution businesses from 1 April 2025 – Final decision, Reasons paper*, 20 November 2024.

³⁴ National Association of Regulatory Utility Commissioners, [Performance-Based Regulation State Tracking Map](#), accessed on 6 October 2026.

regulators tend to be more divided, with some following the incentive model, some following the cost-of-service model, and others using a mix of both. But most firms in our Canadian sub-sample have operations in the US and are partially subject to US regulation. Overall, we consider the European and New Zealand regulatory frameworks to be more comparable to Australia, and the US and Canadian sub-samples to be moderately comparable. Given the complexity of different regulatory regimes, we have limited our analysis to a high-level qualitative assessment of ‘comparability’ between jurisdictions. We have not determined, as the Independent Panel suggested, whether the riskiness of the regulatory regime in Australia is average, above average or below average compared to the international sample.

- Firms’ operational structure: Firms in the European and New Zealand sub-samples tend to be majority-regulated networks, which are more comparable to Australian NSPs. Firms in the US and Canadian sub-samples are more likely to be vertically integrated with generation and retail activities, which may not have the same systematic exposure as ‘pure play’ networks. US and Canadian firms’ financial reports also tend to not separate network and non-network revenue, which meant that we have not been able to exclude all non-comparable firms from our sample. Therefore, we consider the US and Canadian sub-samples of firms to be moderately comparable to Australian NSPs.
- Firms’ financial structure: We have adjusted the financial structures of all international firms by de-levering and re-levering to our benchmark gearing ratio of 60% using a debt beta of 0.1. We consider the adjusted financial structures of all firms in our international sample to be highly comparable to Australian NSPs.
- Market index composition: Compared with the Australian index, the sector weights of the Canadian, UK, Euro area, US, and NZ indices differ by 23%, 32%, 37%, 51% and 54%, respectively. The Canadian index appears to be most comparable to the Australian index, as both are dominated by Financials and Materials sectors. The 2 European indices have relatively large Financials sectors, but not Materials sectors, and are moderately comparable to Australia. The US and New Zealand indices are the least comparable, because the US index is dominated by the IT sector, while the New Zealand index has relatively larger Health Care, Industrials and Utilities sectors compared with the Australian index. (See Figure 1)
- Historical empirical estimates: We compared the historical empirical estimates between majority-regulated domestic firms and each international sub-sample, including using consistent estimation periods. We found that, across multiple historical time periods, the equity beta estimates of all 4 international sub-samples have been higher than the majority-regulated Australian NSPs. This difference is most pronounced for the US sub-sample. (See Appendix C.2)

Figure 1 Comparison of the market compositions of Australia and other countries as at September 2026

Source: AER analysis; [S&P/ASX 200 index](#); [S&P 500 index](#); [S&P/TSX Composite index](#); [S&P/NZX 50 index](#); [iShares Core FTSE 100 UCITS ETF](#); [iShares Core EURO STOXX 50 UCITS ETF](#); all accessed on 8 October 2026.

Note: We have used information from Exchange Traded Funds as proxies to estimate the market compositions of the FTSE 100 index and the EURO STOXX 50 index, because this information was not directly available from the index providers. We have combined the Financials and Real Estate sector weights for consistency.

Overall, we found that the European sub-sample of firms is relatively more comparable to Australian NSPs, while the US sub-sample of firms are the least comparable. Moreover, a comparison between Australian NSPs and international firms are likely to be more challenging and less informative than a comparison of trends over time, as some of the potential drivers of differences between countries are likely to remain relatively constant over time.

The Independent Panel suggested that we use international sub-samples to test other potential differences, such as the impact of vertically integrated and non-regulated activities.³⁵ We found that the equity beta estimates for firms with a higher proportion of regulated network revenue are lower than those of less regulated firms for all international sub-samples over each estimation period tested. (See Appendix A.5)

The Independent Panel suggested that we further investigate the implications of the difference in composition of the share market indices, particularly as to whether it results in bias in beta estimates. It also suggested that we adjust for the different volatility of local

³⁵ Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, p.24.

market indices using the approach set out by Professor Johnstone (2026 RORI review Eligible Expert).³⁶

We note that beta is measured by the covariance of the market with the stock, divided by the variance of the market. An energy network may covary differently with, for example, a market that has more banking and mining stocks than a market that has more technology stocks. Different markets may also have different variances. Therefore, different market indices could lead to differences in beta estimates.

Bazhutov, Betzer, and Stehle (2023) examined how different market indices can affect beta estimates by estimating the betas of 12 European regulated utilities using each firm's national indices, a European index (Stoxx Europe 600), and a world index (MSCI World). The results of their analysis show that using different market indices can cause equity beta estimates to differ by 0.1 or more, despite each firm belonging to all three indices tested.³⁷

We applied Professor Johnstone's method to adjust for different market volatilities and found that most of the international beta estimates became significantly higher than their original estimates. (See Appendix A.6)

3.3.4 Change in NSPs' systematic risk in recent years

The Independent Panel suggested that we explore the differences between the risks faced by the historic domestic sample and the forward-looking risks of Australian NSPs, including changes in regulatory regime, the investment requirements and changes in financial market conditions.³⁸ It also suggested that we consider trends in debt spreads as a cross-check for the equity risk premium.³⁹

Energy Networks Investors (ENI) suggested that Australian electricity networks are exposed to higher systematic risk than in the past because they face increasingly larger and more complex investment programs.⁴⁰

We recognise that all 5 firms in our majority-regulated domestic sub-sample have been delisted, and their equity beta estimates may not reflect potential changes in NSPs' systematic risk in recent years. Therefore, we examined available evidence on whether, and how, NSPs' systematic risk may have changed, particularly since Spark Infrastructure and AusNet Services were delisted in 2021 and 2022, respectively. Our observations are summarised below.

³⁶ Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, p.25.

³⁷ Bazhutov, D., Betzer, A. and Stehle, R. *Beta estimation in the European network regulation context: what matters, what doesn't, and what is indispensable*. Financial Markets and Portfolio Management, 2023.

³⁸ Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, pp.22-23.

³⁹ Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, p.28.

⁴⁰ ENI, *Submission on draft 2026 RORI*, 31 July 2026, p.7.

- Empirical estimates of APA Group and international firms: The longest-period equity beta estimates are stable, while the 5-year estimates have declined and are currently at or near their lowest point since 2011. (See Figure 3 in Appendix A.1)
- Investment requirements and regulatory regime: More investment is required in the near future than in the past to accommodate the energy transition, particularly for the transmission network service providers (TNSPs), and could lead to an increase in risk. This risk could have a systematic component that is related to broader economic factors and that cannot be fully diversified away. That said, a number of regulatory measures have been put in place, principally in recent years, which help to mitigate any potential increase in NSPs' systematic and non-systematic risk arising from increased investment requirements. Examples of such regulatory measures include inflation protection, reduction in the capital expenditure sharing scheme (CESS), early-works allowances, financeability rule changes, capital expenditure reopener applications, contingent project applications, and cost pass-through applications.
- Investors' perceptions: Recent submissions from investor groups indicate that they are concerned with the proposed reductions in the equity beta and market risk premium (MRP) values in the draft 2026 RORI.⁴¹ Our review of investor surveys tends to suggest there is continued investor interest in investing in Australian NSPs.⁴² This indicative survey evidence is consistent with our cross-check of regulatory asset base (RAB) multiples which remain significantly above 1.⁴³
- NSPs' financial performance: NSPs' revenues have been stable in recent years. (See Appendix B.1). Their return on regulated equity has outperformed the benchmark in recent years, largely due to higher-than-expected inflation, incentive schemes, and outperformances on debt and gearing. However, this outperformance gap has mostly closed in 2025.⁴⁴ NSPs' financeability has been stable since 2018 and 2022.
- Market index composition: The composition of Australia's market index has been stable over time. (See Appendix B.2)
- Debt spreads: Debt risk premiums have been in decline and are currently low compared with historical levels.⁴⁵ This provides weak evidence to suggest that the equity risk premium is also more likely to have decreased rather than increased.

⁴¹ ENI, *Submission on draft 2026 RORI*, 31 July 2026; GIIA, *Submission on draft 2026 RORI*, 31 July 2026; IPA, *Submission on draft 2026 RORI*, 31 July 2026.

⁴² IPA, *Australian Infrastructure Investment Monitor*, 2026; Baringa and GIIA, *The investor lens: Australia's infrastructure landscape*, 22 April 2026; Infrastructure Investor and QIC, *Australia in the spotlight*, September 2025.

⁴³ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, pp.127-128.

⁴⁴ AER, *State of the energy market, Network performance report 2026*, July 2026, pp.70-75.

⁴⁵ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, p.139.

3.4 Other regulators' decisions

Our draft decision was to consider other regulators' approaches to estimating equity beta, but to not use their point estimates to directly inform our point estimate for the 2026 RORI.⁴⁶

The Independent Panel suggested that there is value in using other regulators' estimates on equity beta (adjusted for gearing differences) and the equity risk premium (ERP, or beta multiplied by the MRP) as a cross-check.⁴⁷

We examined the following regulators' decisions on the values of equity beta, MRP, and ERP.

- Economic Regulation Authority Western Australia's (ERAWA) draft 2026 gas RORI.⁴⁸
- New Zealand Commerce Commission's (NZCC) 2023 Input Methodologies Review.⁴⁹
- Great Britain's Office of Gas and Electricity Markets' (Ofgem) 2025 RIIO-3 final determinations.⁵⁰
- United States Federal Energy Regulatory Commission's (FERC) recent decision.⁵¹

We present these in Table 2, including both the original values and values adjusted for gearing differences. We note that the other regulators' gearing ratios tend to be the same as or below our benchmark value of 60%. This means that the other regulators' beta estimates, when adjusted to our higher gearing ratio, also become higher. However, a higher gearing ratio does not lead to a higher overall rate of return, because it also has an equal and counteracting effect by giving greater weight to the cost of debt, which is lower than the cost of equity.

An alternative approach would have been to compare each regulator's decision on unlevered (asset) betas. However, we have not done this because each regulator used different values of debt betas in their de-levering approaches, which influenced their resulting asset beta estimates.

⁴⁶ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, pp.49-50.

⁴⁷ Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, p.28.

⁴⁸ ERAWA, *Explanatory statement for the 2026 draft gas rate of return instrument, Overview*, 27 July 2026.

⁴⁹ NZCC, *Cost of capital topic paper, Part 4 Input Methodologies Review 2023 – Final decision*, 13 December 2023.

⁵⁰ Ofgem, *RIIO-3 Final Determinations – Finance Annex*, 4 December 2025.

⁵¹ FERC, *Opinion no. 594, Order on remand, briefs, and initial decisions*, 19 March 2026.

Table 2 Regulators’ decisions on equity beta, MRP, and ERP

Regulatory decision	Equity beta (original)	Equity beta (adjusted)	MRP (original)	ERP (original)	ERP (adjusted)
AER (2026, draft)	0.55	0.55	6.10%	3.36%	3.36%
AER (2022)	0.60	0.60	6.20%	3.72%	3.72%
ERAWA (2026, gas, draft)	0.70	0.78	5.80%	4.06%	4.50%
NZCC (2023, electricity)	0.61	0.85	7.00%	4.27%	5.97%
NZCC (2023, gas)	0.69	0.97	7.00%	4.83%	6.79%
Ofgem (2025, electricity)	0.74	0.82	4.60%	3.40%	3.77%
Ofgem (2025, gas)	0.83	0.83	4.60%	3.82%	3.82%

Sources: AER analysis; ERAWA, *Explanatory statement for the 2026 draft gas rate of return instrument, Overview*, 27 July 2026, pp. 5, 7; NZCC, *Cost of capital topic paper, Part 4 Input Methodologies Review 2023 – Final decision*, 13 December 2023, pp. 169, 172; Ofgem, *RIO-3 Final Determinations – Finance Annex*, 4 December 2025, p. 44.

Notes: The adjusted columns refer to figures adjusted to our benchmark gearing ratio of 60% using a debt beta of 0.1. We have de-levered and re-levered the equity beta values of each regulator to estimate the adjusted equity beta value. Ofgem used different benchmark gearing ratios for its electricity and gas sectors. Therefore, the adjusted equity beta values for these are similar. Ofgem also used a total market returns approach, which did not have a fixed value of MRP, and we have estimated an implied MRP based on its recent decision.

We have excluded FERC from the above table because its approach to estimating the cost of capital does not involve setting a single value of beta. It also does not de-lever and re-lever its equity betas to a benchmark gearing ratio. Nevertheless, we note that in a recent decision, the equity beta estimates of the proxy firms used in its capital asset pricing model (CAPM) estimate ranged from 0.5 to 0.95. These estimates have been Blume adjusted; that is, by giving two-thirds weight to the raw beta estimates and one-third weight to a value of 1. If we were to reverse the Blume adjustment (as we do not apply it to our own estimates), this range would become 0.25 to 0.93. The MRP values FERC used ranged from 8.58% to 9.43%.⁵²

We found the above regulators’ equity beta point estimates are all higher than ours, primarily for 2 reasons:

- Timing and duration of estimation periods: Other regulators have used 10- or 15-year periods where the equity beta estimates have been higher compared to the estimates derived from the longest period. We note that the recent 5-year estimates are now below the longest-period estimates. ERAWA also observed a decline in the recent 5-year estimates.⁵³

⁵² FERC, *Opinion no. 594, Order on remand, briefs, and initial decisions*, 19 March 2026, pp. 122-126, 177-178, 305-324.

⁵³ ERAWA, *Explanatory statement for the 2026 draft gas rate of return instrument, Overview*, 27 July 2026, pp.62-65.

- Comparator firms: Other regulators all rely (either primarily or entirely) on international (non-Australian) comparators, which tend to have higher equity beta estimates than Australian NSPs. A comparison of different regulators' decisions is subject to the same comparability issues as using international comparator firms.

We have investigated the methodologies used by other regulators and these have informed our approach to estimating domestic and international betas.

A comparison of ERPs is further complicated by different regulators' approaches to estimating MRP. Ofgem used a total market returns approach that does not set a fixed value for MRP.⁵⁴ NZCC used the simplified Brennan-Lally CAPM, which uses a tax-adjusted MRP that is calculated differently to the MRP used in the SL CAPM.⁵⁵ Overseas regulators' MRP estimates are also affected by differences in tax regimes and local market indices.

Lastly, we note that our lower equity beta estimate, relative to other regulators, does not necessarily translate to a lower overall rate of return. For example, Australia has historically had a higher risk-free rate compared with the countries of the other regulators, which may wholly or partly offset the effect of a lower ERP.

3.5 Empirical estimates

We have updated our equity beta estimates using data up to September 2026.

Table 3 shows the results for domestic equity beta estimates. Over the longest period, using a debt beta of 0.1, the average re-levered equity beta is 0.37 for our majority-regulated domestic firms, and 0.55 for all our domestic firms. The beta estimates of the 5 majority-regulated domestic firms are lower than those of the minority-regulated firms across every estimation period, where data is available.

⁵⁴ Ofgem, *RIO-3 Sector Specific Methodology Decision – Finance Annex*, 18 July 2024, pp.64-65.

⁵⁵ NZCC, *Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons paper*, December 2010, p.177.

Table 3 Domestic equity beta estimates, weekly OLS, re-levered to 60% gearing using a debt beta of 0.1, as at September 2026

Firm name	Ticker	Start	End	Long est	PT EGC	PG EC	5 yrs	10 yrs	15 yrs	20 yrs
AusNet Services Limited	AST	Dec 2005	Feb 2022	0.36	0.56	0.65	N/A	0.28	0.49	0.36
DUET Group	DUE	Aug 2004	Apr 2017	0.36	0.37	0.36	N/A	N/A	0.32	0.38
Envestra Limited	ENV	Aug 1997	Sep 2014	0.36	0.42	0.59	N/A	N/A	N/A	0.48
GasNet Australia Group	GAS	Dec 2001	Nov 2006	0.34	0.35	N/A	N/A	N/A	N/A	N/A
Spark Infrastructure Group	SKI	Mar 2007	Nov 2021	0.44	0.51	0.50	N/A	0.43	0.44	0.44
Average (majority-regulated firms)	N/A	N/A	N/A	0.37	0.44	0.53	N/A	0.35	0.42	0.41
Alinta Limited	AAN	Oct 2000	Aug 2007	0.85	0.97	N/A	N/A	N/A	N/A	N/A
Australian Gas Light Company	AGL	May 1992	Oct 2006	0.60	0.63	N/A	N/A	N/A	N/A	N/A
APA Group	APA	Jun 2000	Sep 2026	0.64	0.68	0.69	0.37	0.63	0.68	0.67
Hastings Diversified Utilities Fund	HDF	Dec 2004	Nov 2012	1.03	0.90	0.78	N/A	N/A	N/A	1.09
Average (minority-regulated firms)	N/A	N/A	N/A	0.78	0.80	0.74	0.37	0.63	0.68	0.88
Average (all domestic firms)	N/A	N/A	N/A	0.55	0.60	0.60	0.37	0.45	0.48	0.57

Source: AER analysis; Bloomberg.

Note: We have only used data from May 1992 onwards when comprehensive index data became available. AusNet Services Limited (AST) was previously named SP AusNet (SPN) before being renamed in 2014. The SKI data is available from December 2005, but we have only used data from March 2007 onwards. This is because data prior to March 2007 reflects stapled securities traded as instalment receipts, which require further leverage adjustment and make beta estimation difficult.

Table 4 compares the domestic and international equity beta estimates. Over the longest period, using a debt beta of 0.1, the average re-levered equity beta of our international sample is 0.65, which is materially higher than our domestic averages. The estimates of our majority-regulated domestic firms are the lowest in every estimation period compared with each of the international sub-samples.

There is a noticeable difference between the international sub-sample estimates. Over the longest period, the average estimate of the European sub-sample (which we consider to be relatively more comparable to Australian NSPs) is 0.58. The average estimate of all international firms, excluding those from the US (which we consider to be the least comparable to Australian NSPs), is also 0.58.

If we were to exclude Hera Group from our international sample, as discussed earlier, then it would reduce the European estimate to 0.56, over the longest period.

Table 4 Average domestic and international equity beta estimates, weekly OLS, re-levered to 60% gearing using a debt beta of 0.1, as at September 2026

Sample / sub-sample	Firms	Long est	PT EGC	PG EC	5 yrs	10 yrs	15 yrs	20 yrs
Domestic sample								
Domestic (full sample)	9	0.55	0.60	0.60	0.37	0.45	0.48	0.57
Domestic (majority-regulated)	5	0.37	0.44	0.53	N/A	0.35	0.42	0.41
Domestic (minority-regulated)	4	0.78	0.80	0.74	0.37	0.63	0.68	0.88
International sample								
International (full sample)	53	0.65	0.58	0.53	0.46	0.77	0.74	0.76
International (US)	37	0.69	0.60	0.51	0.45	0.82	0.78	0.81
International (Canada)	5	0.54	0.54	0.59	0.49	0.68	0.71	0.66
International (Europe)	10	0.58	0.53	0.57	0.46	0.64	0.61	0.61
International (NZ)	1	0.66	0.69	0.60	0.66	0.68	0.64	0.65

Source: AER analysis; Bloomberg.

3.6 Consultation questions

Interested stakeholders are invited to make a submission on the targeted consultation questions on equity beta, as set out below. Please provide reasons for your answers, directly addressing the questions below and the analysis set out in this paper.

Table 5 Consultation questions – equity beta

#	Questions
1.	Given the difference between majority- and minority-regulated firms in the AER's domestic sample, what would be the case for the AER to treat all domestic firms equally?
2.	(a) Given the long-term stability of domestic data, what would be the case for the AER to place reliance on international data? (b) Should the AER give consideration to the decrease in the most recent 5-year estimates of equity beta for both domestic (APA Group) and international firms?
3.	(a) Do you agree with the inclusion of 5 additional European firms to the AER's proposed international sample of firms, as suggested by the Independent Panel in its report? (b) Should the AER remove Hera Group from the proposed international sample of firms, given that a relatively small proportion of its energy revenue is derived from regulated networks?

4 Market risk premium

The MRP is the difference between the expected return on a market portfolio and the return on the risk-free asset. It compensates an investor for the systematic risk of investing in the market portfolio. This risk affects all firms and cannot be diversified away by investing in a wide pool of firms.⁵⁶

The MRP is one of three inputs we use to set the allowed return on equity, alongside the risk-free rate and equity beta. Equity beta measures how much systematic risk the businesses we regulate carry relative to the market. The MRP is the premium (over the risk-free asset return) investors require for bearing one unit of market risk. We multiply the MRP by equity beta to calculate the equity risk premium (ERP). We add this to the risk-free rate to calculate the allowed return on equity.

The MRP cannot be observed directly. It is estimated and then fixed in the RORI for four years.

We estimate an *unconditional* MRP, which remains relatively stable through time and does not change with market conditions. A *conditional* MRP, in contrast, varies with market conditions.⁵⁷ In the 2022 RORI review, we concluded that it was not possible to accurately model a conditional MRP over time.⁵⁸

To set the MRP, we use the arithmetic averages of the HER across different sampling periods to establish a *range*. We then select a *point estimate* within this range.⁵⁹ We give the HER evidence the most weight. We give less weight to other evidence, including the dividend growth model (DGM), surveys, implied volatility, dividend yields and credit spreads.⁶⁰ This methodology has not changed between the 2022 RORI and the draft 2026 RORI.⁶¹

This chapter sets out the further analysis we have undertaken on the MRP in response to the Independent Panel's recommendation, in particular on what has driven the decline in the DGM estimates since the 2022 RORI review.

4.1 Background

4.1.1 Draft 2026 RORI position

In the 2022 RORI review, we concluded that the unconditional MRP was likely to be towards the lower end of our range of 6.1% to 6.6%. We selected 6.2% in the final decision, which

⁵⁶ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, p. 91.

⁵⁷ AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 131.

⁵⁸ AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 131.

⁵⁹ AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 131.

⁶⁰ AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 165.

⁶¹ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, pp. 100-101.

coincided with the arithmetic average for 1988–2022. In reaching that view, we also considered the DGM, survey evidence and market indicators, as we had in the 2018 RORI review, and did not consider that evidence sufficiently persuasive to move away from 6.2%.⁶²

In the draft 2026 RORI, we set an MRP of 6.1%, down from 6.2% in the 2022 RORI. We estimated that this would reduce regulated network revenues by around \$190 million over the 2026 RORI period.⁶³ We applied the same methodology as in the 2022 RORI review.⁶⁴

4.1.1.1 What the HER evidence showed

The arithmetic average range is unchanged from 2022 at 6.1% to 6.6%. However, two estimates within the range increased by 0.1%, including the 1988-onward arithmetic series which went from 6.2% (1988–2022) to 6.3% (1988–2025).⁶⁵ We noted that 6.3% is broadly consistent with the midpoint of the range.

The weighted average for the same period rose from 5.9% to 6.0% and remains lower than the arithmetic range for that period.⁶⁶ This is shown in Table 24 in Appendix D.

4.1.1.2 What the other evidence showed

We also observed the DGM, survey evidence and market indicators. DGM estimates have declined materially. Credit spreads have narrowed. Dividend yields and implied volatility are below their long run averages. Survey evidence shows no material change.⁶⁷ This is shown in Table 25, Table 26, Figure 11, Figure 12, Figure 13 and in Figure 14 Appendix D.

4.1.1.3 Our conclusion in the draft 2026 RORI

While the arithmetic average of the HER, considered in isolation, could support an increase in the MRP, we said the DGM estimates and market indicators pointed in the opposite direction.⁶⁸

We concluded that current conditional MRP evidence had materially decreased since 2022. This supported moving the MRP back to the lower bound of the range at 6.1%.⁶⁹

4.1.2 Independent Panel

In its report on the draft 2026 RORI, the Independent Panel found that the updated data that we considered does not make a persuasive case for a reduction in the MRP.

⁶² AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 131.

⁶³ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, p. 91.

⁶⁴ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, pp. 100–101.

⁶⁵ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, pp. 100–101.

⁶⁶ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, p. 92.

⁶⁷ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, p. 96.

⁶⁸ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, p. 100.

⁶⁹ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, p. 101.

The Panel noted that the arithmetic average is higher, while survey data is unchanged, and the ASX200 volatility index (VIX) and credit spreads are similar to 2022. In their view, this evidence does not support a change in the MRP. Only the DGM results and dividend yields declined.

The Panel did not say that an MRP of 6.1% is incorrect, but that it would require a different and more expansive rationale.⁷⁰ The Panel asked us to:

- explain the relationship between the MRP and the DGM.
- give a clearer rationale for which HER estimates we prefer.
- give a clearer rationale for the choice of point estimate.⁷¹

We will also respond to all of the Independent Panel's recommendations in the Explanatory statement to the final 2026 RORI.

4.2 Further analysis

4.2.1 Purpose of further analysis

We examined the relationship between the MRP and the DGM at length during the 2022 RORI review, and our position on that relationship has not changed. Consistent with past RORI reviews, we consider the DGM provides some trend information, noting its sensitivity to inputs and assumptions.⁷² We also note that in the 2022 RORI review, ENA supported stronger use of DGM estimates, in a calibrated formulation we did not consider appropriate.⁷³

In response to the Independent Panel's recommendation, we have examined what has driven the decline in the DGM results since that review.

The decline was one of the reasons we gave for the MRP reduction in the draft 2026 RORI. On a 12-month average, the two-stage model declined from 5.8% in 2022 to 4.0%, and the three-stage model from 5.3% to 4.3%. This is shown in Table 25 in Appendix D.

These results indicate that investors require a lower premium for bearing market risk. To test whether that is what it shows, we have disaggregated the decline into the contribution of each input that changed.

4.2.2 How the DGM works

The DGM starts from two observable inputs: the current price of the market; and analyst forecasts of dividends for the following three years. It then solves for the rate of return at

⁷⁰ Independent Panel, *Independent Panel Report – 2026 RORI Review*, 17 July 2026, p. 32.

⁷¹ Independent Panel, *Independent Panel Report – 2026 RORI Review*, 17 July 2026, p. 8; Panel recommendations 13 to 15.

⁷² AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, p. 95; AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 145.

⁷³ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, p. 95; AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 148

which the present value of future dividends equals the current price. That rate is the cost of equity investors are implicitly requiring, and the implied MRP is that cost of equity less the risk-free rate.

We use two DGM specifications. Both use the same price and the same three years of forecasts, and they differ only in the growth assumption applied after year 3. The two-stage model applies the long run growth rate from year 4. The three-stage model moves from the growth rate implied by the forecasts to the long run growth rate over years 4 to 10.⁷⁴

4.2.3 Changes in inputs since 2022

Four inputs changed between the 12 months used at the 2022 RORI review and the 12 months used for the draft 2026 RORI: the risk-free rate increased; the market price and analyst dividend forecasts changed; the long run growth rate moved from 3.85% to 3.84%; and the imputation gross up factor increased slightly. Table 6 applies each change to the 2022 model in isolation, holding all other inputs at their 2022 values.

⁷⁴ AER, *Draft 2022 Rate of Return Instrument, Explanatory Statement*, 16 June 2022, pp. 142–143.

Table 6 Contribution of each input to the change in the DGM estimate, 12-month average (%)

Input changed	Two-stage	Three-stage
2022 RORI estimate	5.83%	5.26%
Risk-free rate alone	-1.22%	-1.22%
Forecast dividend and price alone	-0.62%	+0.26%
Long run growth rate alone	-0.01%	-0.01%
Imputation gross up factor alone	+0.01%	+0.01%
All inputs except the risk-free rate	-0.62%	+0.27%
All four together	-1.84%	-0.95%
Draft 2026 RORI estimate	3.99%	4.31%

Source: Bloomberg; RBA; Consensus Economics; AER analysis.

4.2.4 Effects of the risk-free rate

The 12-month average risk-free rate was 3.20% in 2022, and 4.42% for the draft 2026 RORI period; an increase of 1.22 percentage points.

The DGM solves for the cost of equity independently of the risk-free rate. The implied MRP is then calculated by deducting the risk-free rate from that cost of equity. An increase of 1.22 percentage points in the risk-free rate therefore reduces the DGM implied MRP by 1.22 percentage points, irrespective of any change in the price of the market or in expected dividends. That single input accounts for two-thirds of the total decline in the two-stage estimate and exceeds the entire decline in the three-stage estimate.

This implies that most of the decline is mechanical. It reflects the deduction of a higher risk-free rate, not evidence that investors' required premium has fallen by that amount. Relying on the DGM-implied MRP alone would therefore overstate how far the premium has fallen. The cost of equity each specification produces, before the risk-free rate is deducted, is a clearer measure of what has changed. This is set out below in section 4.2.5.

4.2.5 Cost of equity implied by each DGM specification

The effect of the remaining inputs is most clearly seen in the cost of equity each specification produces, before the risk-free rate is deducted.

Table 7 Cost of equity implied by the DGM, 12-month average

Specification	2022	Draft 2026	Change
Two-stage	9.03%	8.41%	-0.62%
Three-stage	8.46%	8.73%	+0.27%

Source: Bloomberg; RBA; Consensus Economics; AER analysis.

The two DGM specifications moved in opposite directions on the same inputs. The two-stage result indicates that investors require a lower return than in 2022. The three-stage result indicates a higher return. The reason lies in the profile of the analyst forecasts and in how each specification treats dividend growth after year 3.

4.2.6 Why the two DGM specifications diverge

Between the 2022 RORI review and the draft 2026 RORI, the market price increased by around 20%. Analyst forecasts of dividends over the following three years were, in total, about the same as at the 2022 RORI review. However, their profile has changed. At the 2022 RORI review, the forecasts were flat across the three years, whereas for the draft 2026 RORI they start lower in year 1 and rise to year 3, implying growth of around 6% per annum.

The two-stage model uses only the level of forecast dividends over years 1 to 3 and grows them at the long run growth rate of 3.84% from year 4. The price is around 20% higher and forecast dividends are about the same, so the rate of return that reconciles them is lower. This implies that investors are paying more for the same expected dividends, which is consistent with a lower required return on equity.

The three-stage model, on the other hand, also uses the growth rate implied across years 1 to 3. It applies that rate from year 4 and moves it in equal annual steps to the long run rate over years 4 to 10. On the forecasts used for the draft 2026 RORI, this produces an average growth rate of around 5% per annum over years 4 to 10, compared to the long run rate of 3.84%. The three-stage model therefore assumes materially higher dividends over years 4 to 10 than the two-stage model, and a higher cost of equity is required to reconcile those dividends with the same price. On that assumption, investors are paying the same price for more expected dividends, which implies a higher required return on equity.

Analyst forecasts do not extend beyond year 3. Therefore, the results of each specification over years 4 to 10 reflect the growth assumption applied by that specification rather than

forecast data. Consistent with our approach in the 2018 and 2022 RORI reviews, we observe the trend in both estimates.⁷⁵

4.2.7 Other inputs

The long run growth rate moved from 3.85% at the 2022 RORI review to 3.84% for the draft 2026 RORI, reducing both estimates by around 0.01 percentage points. The imputation gross up factor increased slightly, adding around 0.01 percentage points to both.

4.2.8 Summary

Between the 2022 RORI review and the draft 2026 RORI:

- the market price increased by around 20%, while analyst forecasts of dividends over the following three years were about the same in total
- the observed dividend yield declined
- the cost of equity implied by the two-stage DGM declined, from 9.03% to 8.41%
- the cost of equity implied by the three-stage DGM increased, from 8.46% to 8.73%.

The first three results are consistent with one another, and with investors accepting a lower return on a higher market price. The three-stage result moved the other way.

Neither the two-stage nor the three-stage DGM has forecast data beyond year 3. Each makes an assumption about how dividends grow from year 4. The two-stage DGM assumes that dividends grow at the long run rate of 3.84%. The three-stage DGM assumes that dividends keep growing at the faster pace implied by the forecasts, slowing gradually to the long run rate by year 10.

⁷⁵ AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 147.

4.3 Empirical estimates

4.3.1 The HER evidence

The range is built from the arithmetic averages of the HER. Table 8 shows the range and the 1988 series averages at each review and annual update since 2018, and the point estimate adopted.

Table 8 Arithmetic HER range, 1988 series and MRP point estimates

Publication	Arithmetic range	1988 data series: arithmetic	1988 data series: geometric	1988 data series: weighted	Outcome
2018 RORI	6.0 – 6.6%	6.1%	4.6%	N/A	6.1% adopted in final decision
2019 annual update	5.8 – 6.4%	5.8%	4.3%	N/A	
2020 annual update	6.0 – 6.5%	6.0%	4.5%	N/A	
2021 annual update	6.1 – 6.6%	6.3%	4.8%	N/A	
2022 RORI	6.1 – 6.6%	6.2%	4.9%	5.9%	6.2% adopted in final decision
2023 annual update	6.1 – 6.6%	6.2%	4.9%	5.9%	
2024 annual update	6.1 – 6.6%	6.2%	4.8%	5.8%	
2025 annual update	6.2 – 6.7%	6.4%	5.1%	6.0%	
Draft 2026 RORI	6.1 – 6.6%	6.3%	5.0%	6.0%	6.1% proposed in draft decision

Source: AER, Explanatory Statements to the 2018, 2022 and draft 2026 RORIs; AER annual updates 2019 to 2025

The range is recalculated each year as a further year of data is added. Since 2018, the lower bound of the range has sat between 5.8% and 6.2%, and the upper bound between 6.4% and 6.7%. The AER selects a point estimate within the range, and only at each review. For the draft 2026 RORI, the range was 6.1% to 6.6%; the same as at the 2022 RORI.

Within the range, we have regard to the 1988 series. In 2022, we considered that, while the longer periods are likely to be more statistically robust, the period from 1988 is most likely to provide an estimate that is more representative of current investor expectations and

macroeconomic conditions and has the advantage of only including data after the commencement of the imputation tax system.⁷⁶

We also noted that the HER data is relatively volatile over short periods, and that the estimate from 1988 onwards had varied from year to year, while the estimate from 1958 onwards had remained steady.⁷⁷

Table 8 shows how each average for the 1988 series has moved since 2018. The arithmetic average has varied between 5.8% and 6.4%. The geometric average has varied between 4.3% and 5.1%. The weighted average, which we introduced in the 2022 RORI review, has varied between 5.8% and 6.0%.

In every year shown in Table 8, the geometric and weighted averages were below the arithmetic range for that year. In the 2022 RORI review, we noted that the literature suggests a weighted average is likely to be the least biased estimate over a multi-year horizon.⁷⁸

4.3.2 The DGM evidence

Section 4.2 sets out what has driven the decline in the DGM results since the 2022 RORI review. Most of the decline is mechanical. It reflects the deduction of a higher risk-free rate, not evidence that investors' required premium has fallen by that amount. Setting that effect aside, the cost of equity implied by the two-stage DGM has declined and the cost of equity implied by the three-stage DGM has increased, for the reasons set out in section 4.2.6.

Our judgement is that the dividend growth assumed in the three-stage model over years 4 to 10 is unlikely to persist beyond the forecast period. On the current data, we consider the two-stage result to be the more informative of the two. We continue to observe both specifications, and in having regard to their results, we form a judgement on which is the more plausible on the forecasts and market data available at the time.

While the DGM has moved, the HER evidence is in a similar position to the 2022 RORI review. The arithmetic average range is unchanged at 6.1% to 6.6%, the geometric averages remain well below it, and the weighted average of the 1988 series sits below the lower bound of the range, as it did in 2022. Credit spreads and implied volatility are also around the levels observed at that time.⁷⁹

4.3.3 Selection of the point estimate in previous reviews

In the 2018 RORI review, we set the MRP range from the arithmetic averages across the sampling periods, at 6.0% to 6.6%. We gave most weight to the arithmetic averages, had regard to the geometric averages, and placed less weight on the DGM, survey evidence and

⁷⁶ AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 141.

⁷⁷ AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 159

⁷⁸ AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 144

⁷⁹ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, pp. 98–100; Independent Panel, *Independent Panel Report – 2026 RORI Review*, 17 July 2026, p. 32.

conditioning variables.⁸⁰ We selected 6.1%, towards the lower end of the range, but neither at the lower bound nor at the midpoint. We noted that 6.1% corresponded with the arithmetic average of the 1988 series.⁸¹

In the 2022 RORI review, we set the MRP range in the same way, at 6.1% to 6.6%. We considered that all sampling periods provide useful information and that more recent data may be more representative of the unconditional MRP going forward.⁸² We again gave most weight to the arithmetic averages and had regard to the geometric averages.⁸³ We introduced the weighted averages, which give effect to that approach within each sampling period by placing most of the weight on the arithmetic average and the remainder on the geometric average.⁸⁴ We placed less weight on the DGM, survey evidence and conditioning variables.⁸⁵ We selected 6.2%, which is again towards the lower end of the range, but neither at the lower bound nor at the midpoint. We noted that 6.2% coincided with the arithmetic average of the 1988 series.⁸⁶

For the draft 2026 RORI, the HER evidence is in the same range. The arithmetic average range is unchanged at 6.1% to 6.6%. The geometric and weighted averages of the 1988 series remain below the range, as they were in 2022. Having regard to the material decline in DGM estimates and the position of other market indicators relative to their long run averages, we set the MRP at 6.1%, the lower bound of the range.⁸⁷

We note that stakeholder submissions on the draft 2026 RORI call for both lower and higher point estimates. We will consider the merits of these submissions, together with submissions received on this consultation paper, for our final decision.

We are interested in stakeholder views on the weight to be given to the DGM evidence in estimating the MRP, having regard to the analysis in Section 4.2.

⁸⁰ AER, *Rate of Return Instrument, Explanatory Statement*, December 2018, pp. 92–94, 268; AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 142.

⁸¹ AER, *Rate of Return Instrument, Explanatory Statement*, December 2018, p. 268

⁸² AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 141.

⁸³ AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, p. 142.

⁸⁴ AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, pp. 145, 159–160.

⁸⁵ AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, pp. 147, 155.

⁸⁶ AER, *Rate of Return Instrument, Explanatory Statement*, 24 February 2023, pp. 131, 166.

⁸⁷ AER, *Draft 2026 Rate of Return Instrument, Explanatory Statement*, 29 May 2026, pp. 92, 101.

4.4 Consultation question

Interested stakeholders are invited to make a submission on the targeted consultation question on the market risk premium, as set out below. Please provide reasons for your answers, directly addressing the question below and the analysis set out in this paper.

Table 9 Consultation question – market risk premium

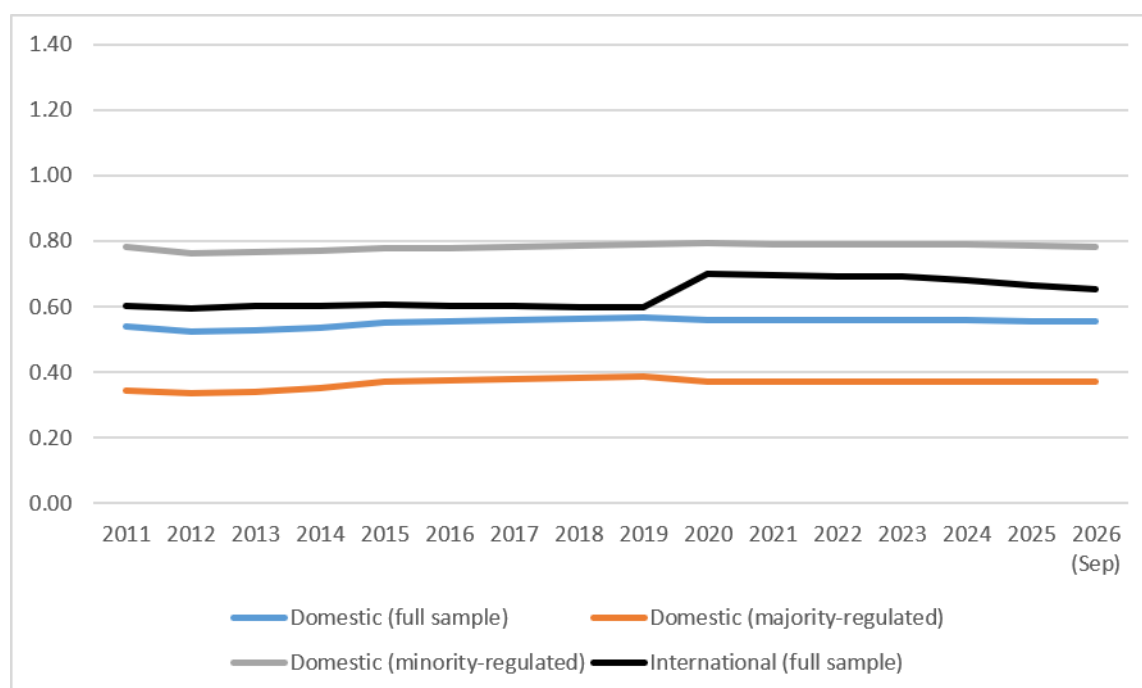
#	Question
1.	Section 4.2 sets out our further analysis of what has driven the decline in the DGM estimates since the 2022 RORI review. What is the case for giving weight to the DGM evidence in estimating the MRP, having regard to that analysis?

A Equity beta – Additional empirical estimates

A.1 Estimates over time

Figure 2 compares the average longest-period rolling estimates for domestic and international equity betas. The estimates of our majority-regulated firms have consistently been lower than those of our full domestic sample and international sample. All four estimates have been relatively stable over time, although the stability of domestic estimates is partly a result of most of the domestic firms having been delisted over the years. There is a small but noticeable divergence during the COVID-19 period in 2020, when international estimates increased while domestic estimates decreased.

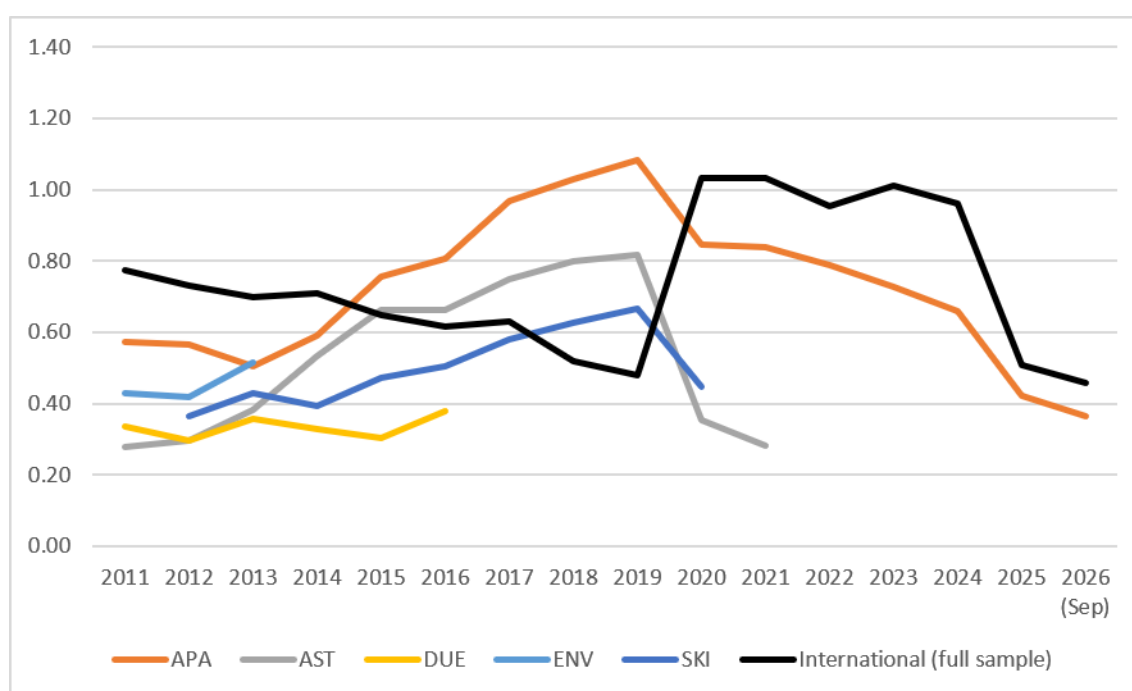
Figure 2 Comparison of average domestic and international beta estimates, longest-period rolling, weekly OLS, re-levered to 60% gearing using a debt beta of 0.1, as at December each year



Source: AER analysis; Bloomberg.

Figure 3 shows the movements in 5-year rolling equity betas. Both domestic (APA Group) and international 5-year equity beta estimates have declined since the making of the 2022 RORI. Moreover, domestic betas increased from 2011 to 2019 but declined from 2019 to 2020 during the COVID-19 period, while international betas decreased from 2011 to 2019 and then rose sharply from 2019 to 2020.

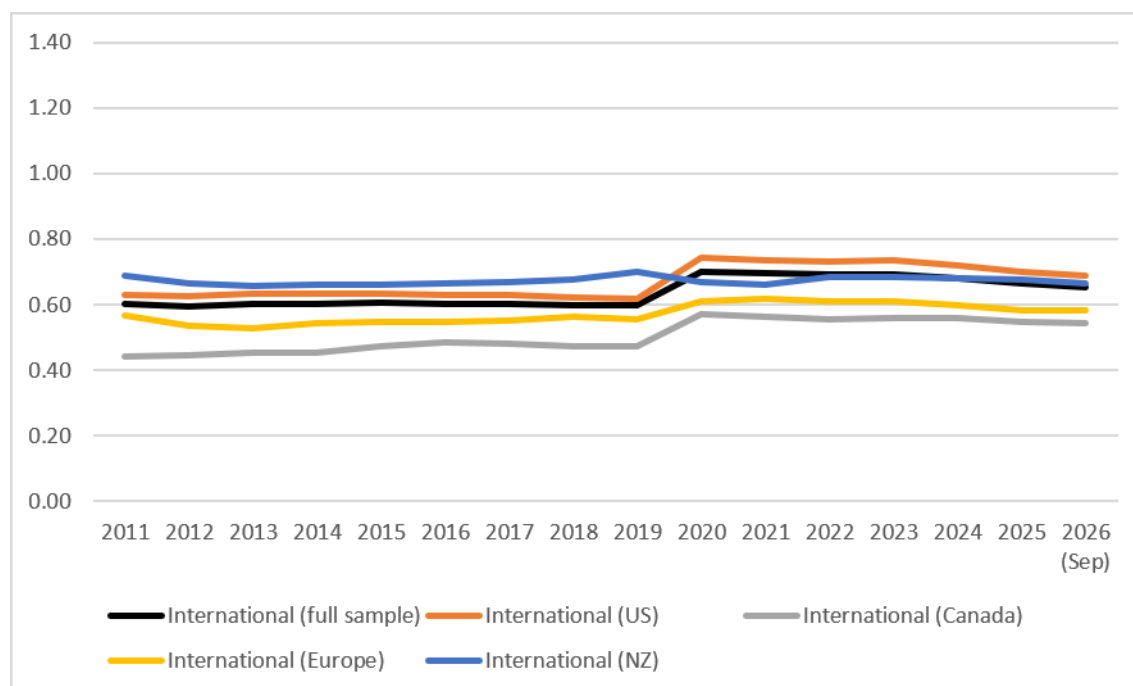
Figure 3 Comparison of domestic and international beta estimates, 5 years rolling, weekly OLS, re-levered to 60% gearing using a debt beta of 0.1, as at December each year



Source: AER analysis; Bloomberg.

Figure 4 compares the longest-period rolling estimates since 2011 for each international sub-sample, all of which have been relatively stable over time. Except for the New Zealand sub-sample (which has just 1 firm), the estimates of all other international sub-samples increased in 2020.

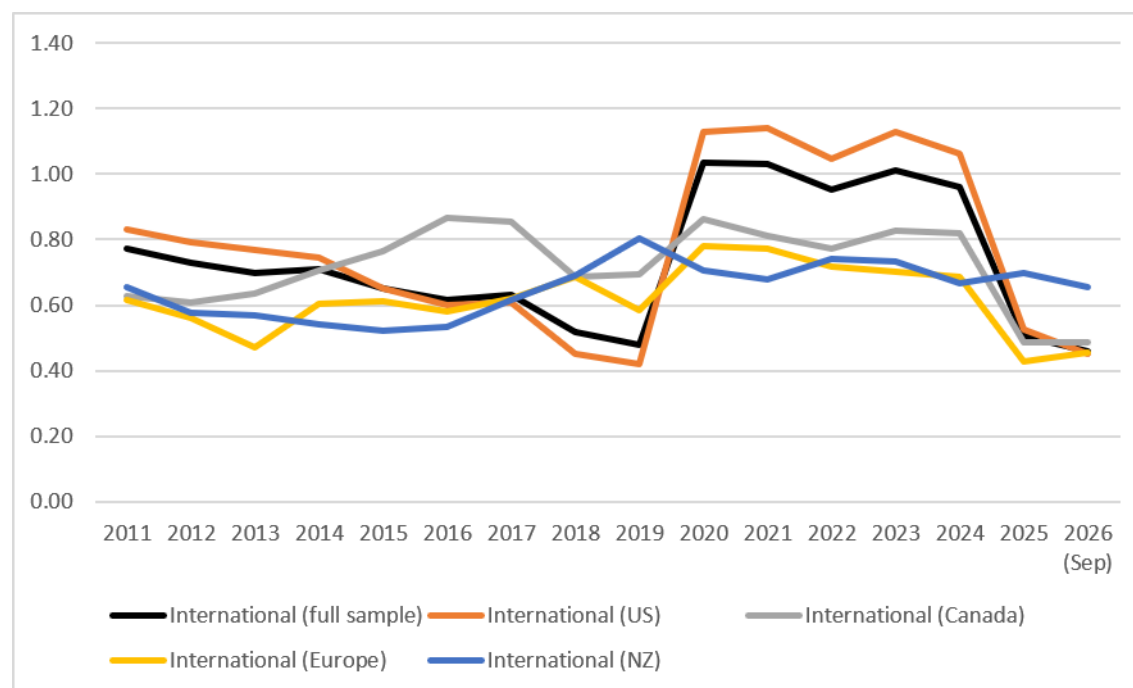
Figure 4 Beta estimates of international sub-samples, longest-period rolling, weekly OLS, re-levered to 60% gearing using a debt beta of 0.1, as at December each year



Source: AER analysis; Bloomberg.

Figure 5 compares the movements in 5-year rolling equity betas of our international sub-samples. Except for the New Zealand sub-sample (which has only 1 firm), the estimates of all the sub-samples have declined since 2022 and are at or near their lowest point since 2011.

Figure 5 Equity beta estimates of international sub-samples, 5 years rolling, weekly OLS, re-levered to 60% gearing using a debt beta of 0.1, as at December each year



Source: AER analysis; Bloomberg.

A.2 Other international samples

We compared our international estimates with other samples of international energy firms, including:

1. our sample of international firms used in the draft 2026 RORI⁸⁸
2. our previous sample of international firms that we used in the 2018 and 2022 RORIs⁸⁹
3. the samples of other regulators, including NZCC, ERAWA and QCA⁹⁰

⁸⁸ AER, Draft 2026 RORI - Sample of international firms tickers, 29 May 2026.

⁸⁹ CEG, *Information on equity beta from US companies*, June 2013, pp.44-46.

⁹⁰ NZCC, *Cost of capital topic paper, Part 4 Input Methodologies Review 2023 – Final decision*, December 2023, pp.348-350; ERAWA, *Explanatory statement for the 2026 draft gas rate of return instrument, Attachment 5: Equity*, 27 July 2026, pp.69-73; QCA, *Rate of return review, Version 4*, September 2024, pp.124-126.

4. the samples proposed by submitting stakeholders, including ENA and ECA⁹¹
5. a combined sample of all firms included in the above samples.

When analysing the samples of other regulators and those of submitting stakeholders, we only included international (non-Australian) energy firms. Due to differences in estimation methodology, our results may be different to those published in the original sources of the other international samples.

Our preliminary estimates for the final 2026 RORI are relatively lower compared with most other international samples. This is in part because our sample includes firms from continental Europe, which tend to have lower estimates, while most other samples do not.

Table 10 Average estimates of different international samples, weekly OLS, re-levered to 60% gearing using a debt beta of 0.1, as at September 2026

International sample	Firms	Long est	PT EGC	PG EC	5 yrs	10 yrs	15 yrs	20 yrs
AER (2026 PDDDP)	53	0.65	0.58	0.53	0.46	0.77	0.74	0.76
AER (2026 draft)	48	0.67	0.60	0.53	0.47	0.79	0.76	0.78
AER (2022)	56	0.72	0.71	0.62	0.48	0.86	0.78	0.87
NZCC (2023)	48	0.76	0.69	0.61	0.53	0.90	0.86	0.90
ERAWA (2026 draft)	52	0.68	0.62	0.57	0.49	0.83	0.80	0.81
QCA (2021)	26	0.68	0.61	0.51	0.44	0.79	0.76	0.79
ENA (2024)	41	0.65	0.59	0.53	0.41	0.72	0.72	0.75
ECA (2025)	3	0.66	0.57	0.56	0.65	0.67	0.65	0.66
All international samples	98	0.69	0.67	0.63	0.51	0.80	0.77	0.81

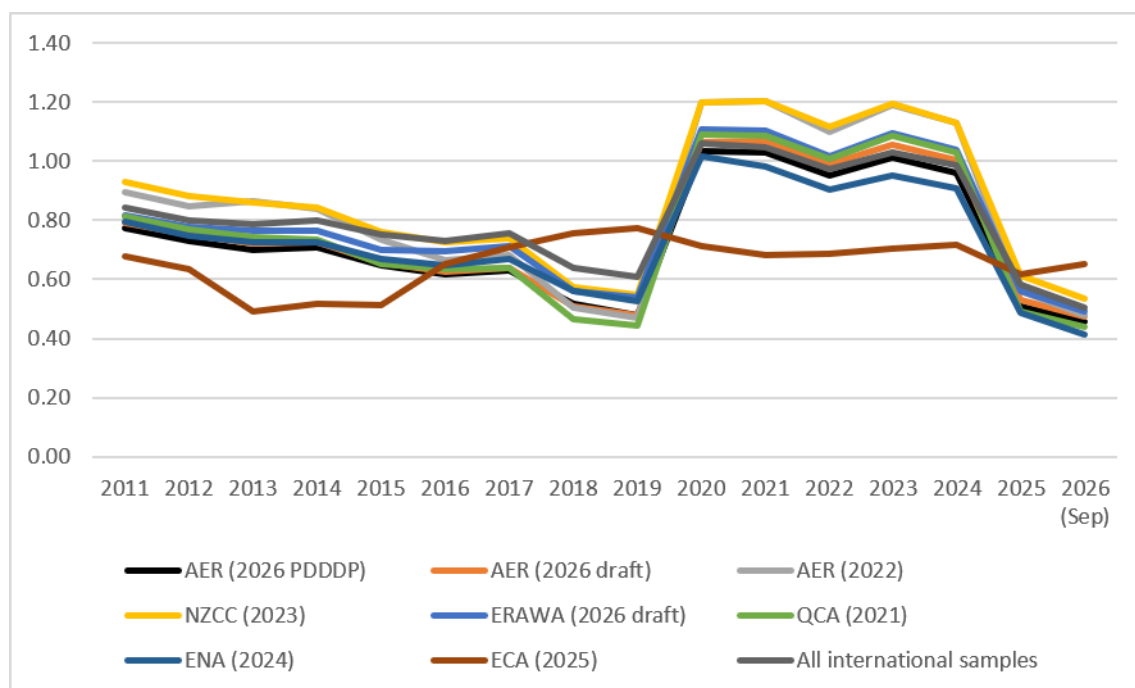
Source: AER analysis; Bloomberg.

Notes: PDDDP refers to this discussion paper ('post draft decision discussion paper').

Figure 6 compares the movements in 5-year rolling equity betas of our international sample with the other samples since 2011. It shows that these international samples are highly correlated with each other, due to the significant overlap in the firms in these samples. Moreover, the equity beta movements of these samples are similar to that of our US sub-sample in Figure 5 above, because US firms tend to dominate these samples. One notable exception is the estimates of the ECA (2025) sample, which have been relatively flat compared with the other samples. The ECA sample consists of only 3 non-US firms and has less overlap with the other samples.

⁹¹ ENA, *CEG Response Appendix A: firm profile with analysis*, December 2024; ECA, *Attachment - EMAS Report for Energy Consumer Australia's Submission to the AER's 2026 Rate of Return Instrument Review*, December 2025, p.32.

Figure 6 Average estimates of different international samples, 5 years rolling, weekly OLS, re-levered to 60% gearing using a debt beta of 0.1, as at December each year



Source: AER analysis; Bloomberg.

Notes: PDDDP refers to this discussion paper ('post draft decision discussion paper').

A.3 Median estimates

Table 11 shows the median estimates of our domestic and international samples including sub-samples. The results are broadly consistent with the average estimates presented earlier. A notable exception is our full domestic sample, which has an average estimate of 0.55 and a median estimate of 0.44 over the longest period. This indicates that the estimates of our domestic sample are skewed to the right (concentrated at lower values and having a long tail toward higher values), likely due to the inclusion of a mix of majority and minority-regulated firms.

Table 11 Median estimates of domestic and international equity beta estimates, weekly OLS, re-levered to 60% gearing using a debt beta of 0.1, as at September 2026

Sample / sub-sample	Firms	Long est	PT EGC	PG EC	5 yrs	10 yrs	15 yrs	20 yrs
Our domestic sample								
Domestic (full sample)	9	0.44	0.56	0.62	0.37	0.43	0.47	0.46
Domestic (majority-regulated)	5	0.36	0.42	0.55	N/A	0.35	0.44	0.41
Domestic (minority-regulated)	4	0.75	0.79	0.74	0.37	0.63	0.68	0.88
Our international sample								
International (full sample)	53	0.68	0.60	0.53	0.42	0.79	0.75	0.77
International (US)	37	0.72	0.60	0.50	0.44	0.81	0.77	0.82
International (Canada)	5	0.57	0.54	0.58	0.42	0.58	0.60	0.60
International (Europe)	10	0.61	0.61	0.62	0.41	0.61	0.65	0.64
International (NZ)	1	0.66	0.69	0.60	0.66	0.68	0.64	0.65

Source: AER analysis; Bloomberg.

A.4 Estimates using alternative debt beta values

Table 12 shows the equity beta estimates that were de-levered and re-levered to 60% gearing using the following debt beta values:

- Our central estimate of 0.1, as used in the draft 2026 RORI.
- Alternative estimates of 0.075 and 0.125, which the Independent Panel suggested that we undertake sensitivity tests with.⁹²
- Our previous estimate of 0, as used in past RORIs.

⁹² Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, p.25.

The equity beta estimates of majority-regulated domestic firms do not seem to differ materially under each of the different debt beta values tested. The equity beta estimates of minority-regulated domestic firms and those of international firms also do not differ materially under debt beta values of 0.1, 0.075, and 0.125, but are noticeably higher under a debt beta value of 0.

Table 12 Average equity beta estimates over the longest period using different debt beta values, weekly OLS, re-levered to 60% gearing, as at September 2026

Sample / sub-sample	Firms	Debt beta = 0.1	Debt beta = 0.075	Debt beta = 0.125	Debt beta = 0
Our domestic sample					
Domestic (full sample)	9	0.55	0.56	0.55	0.57
Domestic (majority-regulated)	5	0.37	0.37	0.38	0.36
Domestic (minority-regulated)	4	0.78	0.79	0.77	0.83
Our international sample					
International (full sample)	53	0.65	0.66	0.65	0.69
International (US)	37	0.69	0.70	0.68	0.72
International (Canada)	5	0.54	0.55	0.54	0.57
International (Europe)	10	0.58	0.59	0.58	0.61
International (NZ)	1	0.66	0.67	0.66	0.70

Source: AER analysis; Bloomberg.

A.5 Impact of regulation on equity beta estimates

We examined the impact of regulation on equity beta estimates, as suggested by the Independent Panel.⁹³ For our domestic firms, we compared the 5 majority-regulated firms with the 4 minority-regulated firms. For the international sub-samples, we compared the firms that are included in our sample with other energy firms that were excluded in our filtering process due to an insufficient proportion of regulated network revenue. The results for every sub-sample across every estimation period analysed, where data is available, show that highly regulated firms tend to have lower equity beta estimates than less regulated firms.

Table 13 Impact of regulation on equity beta estimates, weekly OLS, re-levered to 60% gearing using a debt beta of 0.1, as at September 2026

Sub-sample	Firms	Long est	PT EGC	PG EC	5 yrs	10 yrs	15 yrs	20 yrs
Domestic								
Majority-regulated	5	0.37	0.44	0.53	N/A	0.35	0.42	0.41
Minority-regulated	4	0.78	0.80	0.74	0.37	0.63	0.68	0.88
US								
Included	37	0.69	0.60	0.51	0.45	0.82	0.78	0.81
Excluded	8	0.77	0.77	0.78	0.53	0.94	0.94	1.03
Canada								
Included	5	0.54	0.54	0.59	0.49	0.68	0.71	0.66
Excluded	2	0.69	0.74	0.77	0.50	0.92	1.01	0.91
Europe								
Included	10	0.58	0.53	0.57	0.46	0.64	0.61	0.61
Excluded	6	0.79	0.76	0.78	0.50	0.72	0.78	0.80
NZ								
Included	1	0.66	0.69	0.60	0.66	0.68	0.64	0.65
Excluded	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: AER analysis; Bloomberg.

⁹³ Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, pp.24-25.

A.6 Transformed international estimates

The Independent Panel recommended that we use a method proposed by Professor David Johnstone (2026 RORI review Eligible Expert) to transform the equity beta estimate of international firms into equivalent domestic estimates.⁹⁴ We have restated Professor Johnstone's formula as follows.⁹⁵

Equation 1 Formula for transforming international equity beta estimates

$$\beta_{Aust} = TF \cdot \beta_{Intl}$$

$$TF = \left(\frac{k_{Aust}^f}{Var_{Aust}(r_M)} \right) \left(\frac{Var_{Intl}(r_M)}{k_{Intl}^f} \right)$$

Where:

- β_{Aust} , β_{Intl} = equity betas of an equivalent Australian firm and a selected international firm
- TF = transformation factor
- k_{Aust}^f , k_{Intl}^f = risk-free rates of Australia and of the country of the international firm
- $Var_{Aust}(r_M)$, $Var_{Intl}(r_M)$ = variances of the returns of the Australian market index and of the index of the international firm

Table 14 shows the transformation factors we have estimated using the above formula. On average, compared with Australia, most other countries have a higher variance of market returns and a lower risk-free rate. This results in most of the transformation factors being above 1, meaning that the transformed international estimates would be higher than the original international estimates.

⁹⁴ Independent Panel, *Independent Panel Report, AER Draft Rate of Return Instrument*, July 2026, p.25.

⁹⁵ Eligible Experts, *2026 Rate of Return Instrument review – Eligible Experts' joint report*, 24 November 2025, p.12.

Table 14 Transformation factors over the longest period (May 1992 to September 2026)

Country / region	Market index variance (using weekly returns)	Risk-free rate (%)	Transformation factor
Australia	0.00039	4.92	1.00
US	0.00055	4.00	1.74
Canada	0.00049	3.98	1.54
UK	0.00051	4.14	1.57
Euro area	0.00080	3.90	2.60
NZ	0.00030	5.12	0.74

Source: AER analysis; OECD Data Explorer; Bloomberg.

Table 15 compares the original and transformed international equity beta estimates. The transformed international estimates are mostly above their original estimates. For the US and European sub-samples, the transformed estimates have become higher than 1.

Table 15 Average transformed equity betas over the longest period, weekly OLS, re-levered to 60% gearing using a debt beta of 0.1, as at September 2026

Sample / sub-sample	No. of firms	Original estimates	Transformed estimates
Our domestic sample			
Domestic (full sample)	9	0.55	0.55
Domestic (majority-regulated)	5	0.37	0.37
Domestic (minority-regulated)	4	0.78	0.78
Our international sample			
International (full sample)	53	0.65	1.23
International (US)	37	0.69	1.24
International (Canada)	5	0.54	0.87
International (Europe)	10	0.58	1.50
International (NZ)	1	0.66	0.49

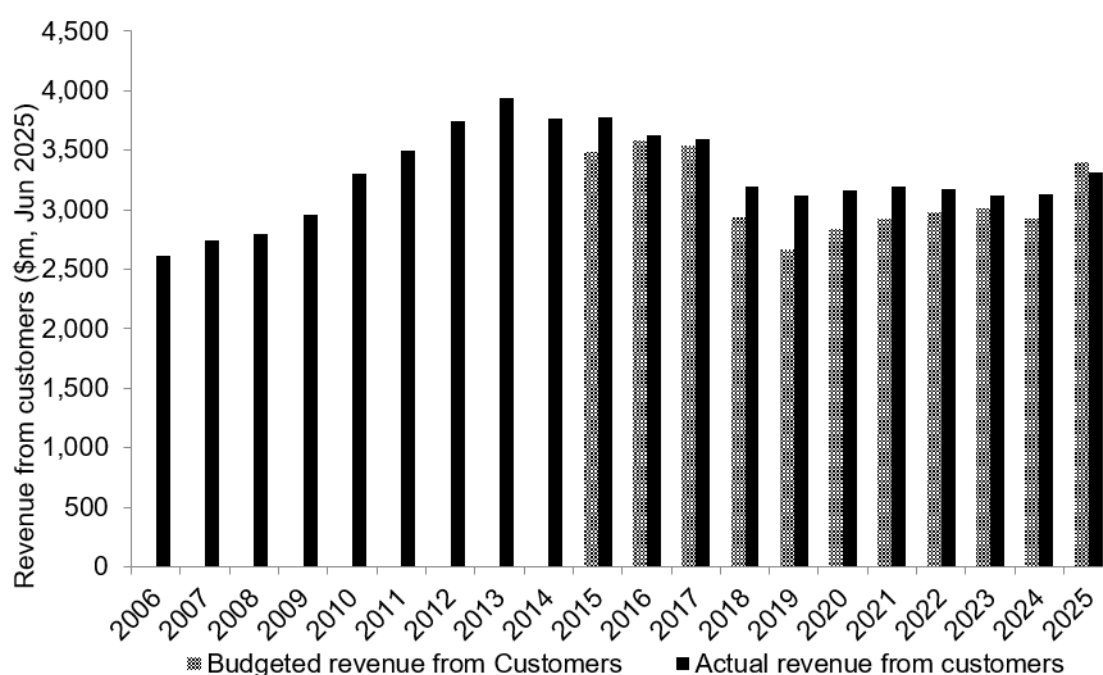
Source: AER analysis; OECD Data Explorer; Bloomberg.

B Equity beta – Change in NSPs' systematic risk in recent years

B.1 NSPs' revenue over time

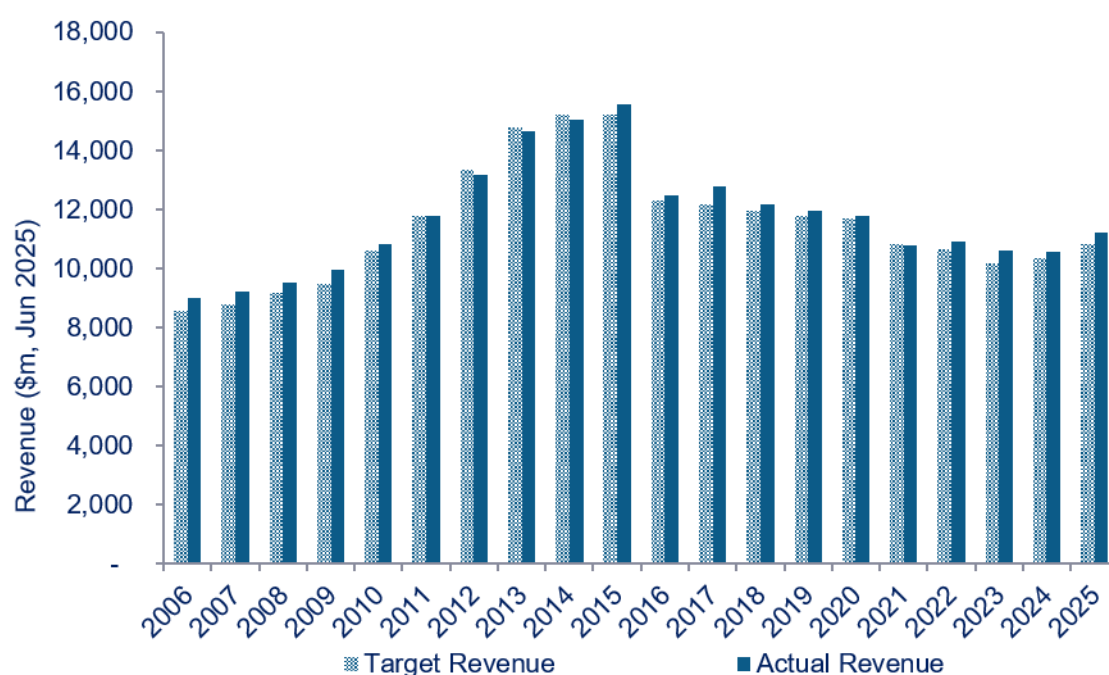
The figures below are sourced from the *2026 Electricity and gas networks performance report*. They show that NSPs' revenue has been relatively stable in recent years.

Figure 7 Electricity TNSPs' revenue over time



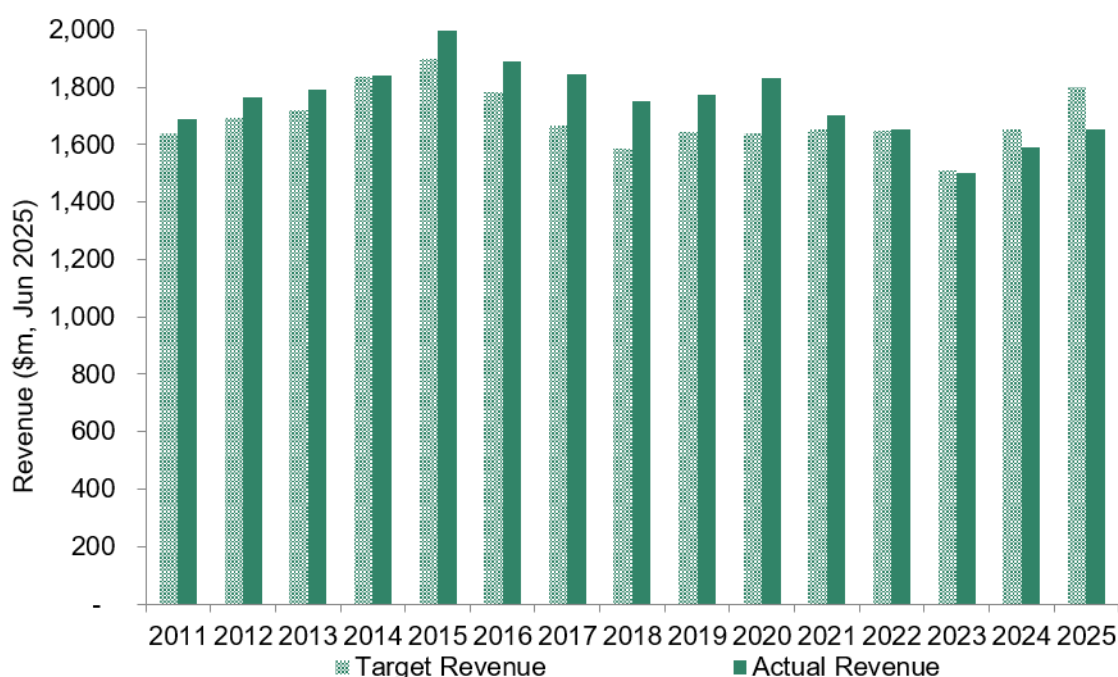
Source: AER, *Operational performance data 2026 - Electricity transmission networks - Public*, July 2026.

Figure 8 Electricity DNSPs' revenue over time



Source: AER, *Operational performance data 2026 - Electricity distribution networks - Public*, July 2026.

Figure 9 Gas DNSPs' revenue over time



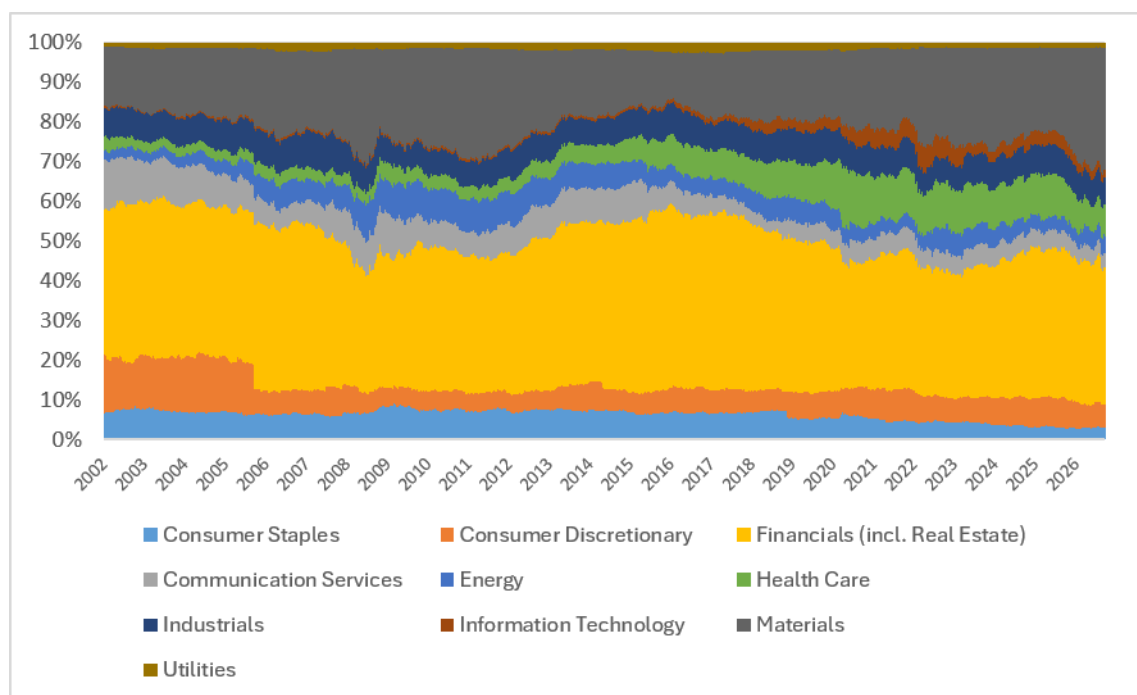
Source: AER, *Operational performance data 2026 - Gas distribution networks - Public*, July 2026.

B.2 Market index composition

The equity betas of Australian NSPs are measured against Australia's market index. This means that, if there is a change in the composition of the underlying market index, it could affect the beta estimates of NSPs.

Figure 10 shows that the Australian market continues to be dominated by the Financials and Materials sectors. We found no evidence of substantial change in the composition of the Australian market index in recent years.

Figure 10 Change in Australia's market index composition over time



Source: AER analysis; Bloomberg.

Note: A Real Estate sector was created in 2016, which makes up less than 10% of the market. Its constituents were previously classified under the Financials sector. We have combined the Financials and Real Estate sector weights to allow for comparison over time.

C Equity beta – Econometric analyses

C.1 Hansen test for parameter instability

We undertook the Hansen test for parameter instability for our domestic beta estimates over the longest period, as described and explained in Hansen (1992).⁹⁶

We tested the stability of beta coefficients, as well as the joint stability of alpha, beta, and residual variance, within our OLS regressions. The regression model used to estimate beta is restated as follows.

Equation 2 OLS regression model to estimate beta

$$R_{i,t} = \alpha + \beta R_{m,t} + \epsilon_t$$

Where:

- $R_{i,t}$ = return of the firm “i” at period “t”.
- $R_{m,t}$ = return of the market index at period “t”.
- α, β = regression coefficients.
- ϵ_t = residual term at period “t”.

The Hansen test has a null hypothesis that the OLS regression parameter(s) are constant over time, and an alternative hypothesis that the parameter(s) change over time.

Table 16 shows the results of this test. At the 5% significance level, the test on beta did not find evidence of instability for any of the majority-regulated domestic firms. The joint test found evidence of instability for several firms. However, this is due to instability of residual variance (which reflects changes in firm-specific risk), rather than the beta coefficient.

⁹⁶ Hansen, B. E., *Testing for parameter instability in linear models*, Journal of Policy Modeling, 1992.

Table 16 Summary results of Hansen test for parameter instability for domestic firms over the longest period, weekly OLS, as at September 2026

Firm ticker	L-stat on alpha	Significance	L-stat on beta	Significance	L-stat on variance	Significance	Joint L-stat	Significance
Majority-regulated domestic firms								
AST	0.11	N/S	0.32	N/S	0.40	10%	0.84	N/S
DUE	0.08	N/S	0.05	N/S	0.55	5%	0.60	N/S
ENV	0.19	N/S	0.41	10%	0.91	1%	1.50	1%
GAS	0.05	N/S	0.04	N/S	0.70	5%	0.96	10%
SKI	0.05	N/S	0.02	N/S	0.94	1%	0.98	10%
Minority-regulated domestic firms								
AAN	0.07	N/S	0.52	5%	0.05	N/S	0.72	N/S
AGL	0.07	N/S	0.35	N/S	1.09	1%	1.55	1%
APA	0.11	N/S	0.14	N/S	0.40	10%	0.64	N/S
HDF	0.15	N/S	0.07	N/S	0.23	N/S	0.69	N/S
Critical values								
1%	0.75		0.75		0.75		1.35	
5%	0.47		0.47		0.47		1.01	
10%	0.35		0.35		0.35		0.85	

Source: AER analysis; Hansen (1992).

Notes: Where an L-stat is found to be statistically significant at the given significance level (e.g., $\alpha = 5\%$), it indicates that the null hypothesis (parameter constancy) is to be rejected in favour of the alternative hypothesis (parameter instability) with “ $1 - \alpha$ ” confidence (i.e., 95%). “N/S” means not statistically significant.

C.2 Testing difference in equity beta estimates between sub-samples

We tested the difference in equity beta estimates of each sub-sample relative to the majority-regulated domestic firms. We analysed all firms in our domestic and international samples over the longest period, as well as consistent samples of firms that were listed over the entirety of 5 specific periods. We selected the specific periods based on the overlapping listing periods of our majority-regulated domestic firms.

Table 17 shows the average estimates of each sub-sample over each period analysed.

Table 17 Average equity beta estimates of sub-samples using firms listed during specific periods, weekly OLS, re-levered to 60% gearing using a debt beta of 0.1, as at September 2026

Time period	0	1	2	3	4	5
Domestic majority-regulated firms	All firms over the longest period	ENV GAS	AST DUE ENV	AST DUE ENV SKI	AST DUE SKI	AST SKI
Start	N/A	Dec 2001	Dec 2005	Mar 2007	Mar 2007	Mar 2007
End	N/A	Nov 2006	Sep 2014	Sep 2014	Apr 2017	Nov 2021
Domestic majority-regulated	0.37	0.28	0.37	0.38	0.40	0.40
Domestic minority-regulated	0.78	0.68	0.62	0.62	0.68	0.72
US	0.69	0.73	0.83	0.83	0.80	0.91
Canada	0.54	0.27	0.63	0.64	0.67	0.73
Europe	0.58	0.27	0.63	0.60	0.61	0.67
NZ	0.66	N/A	0.63	0.63	0.64	0.65

Source: AER analysis; Bloomberg.

To test for the difference in equity beta estimates between sub-samples, we ran the following regression model:

Equation 3 Regression model to test for difference in equity beta estimates between sub-samples

$$\beta_i = b_0 + \sum_{j=1}^K b_j D_{i,j} + \epsilon_i$$

Where:

- β_i = equity beta estimate of firm “i”.
- b_0 = the intercept, or the equity beta of the majority-regulated Australian firms (baseline sub-sample).
- b_j = incremental difference in equity beta for each sub-sample “j”, compared with majority-regulated Australian firms.
- $D_{i,j}$ = dummy variable that equals 1 if firm “i” is part of sub-sample “j”, and 0 otherwise.

We used both OLS as well as weighted least squares (WLS) regressions. The WLS regressions use the inverse of the standard errors of the equity beta estimates as weights,

thereby giving relatively more weight to firms' equity beta estimates that are more precisely estimated.

We found that, compared with the majority-regulated domestic firms, the equity betas of US firms have consistently been higher, and this difference has been statistically significant. The estimates of other sub-samples have also generally been higher than the majority-regulated domestic firms, although the differences were not always statistically significant; likely due to the relatively small number of firms within the relevant sub-sample. The F-tests show that the dummy variables are jointly significantly different from zero. The regression outputs are shown in the following tables.

We note that these analyses are primarily based on cross-sectional sample variation and may not adequately account for longitudinal variation.

Table 18 Difference in equity beta estimates between sub-samples, estimated regression outputs (using all firms over the longest period)

Variable / measure	No. of firms	Ordinary least squares			Weighted least squares		
		Value	Std. error	P-value	Value	Std. error	P-value
Intercept (baseline: domestic majority-regulated)	5	0.37	0.06	0.00	0.37	0.07	0.00
Domestic minority-regulated (dummy)	4	0.41	0.09	0.00	0.29	0.14	0.04
US (dummy)	37	0.32	0.07	0.00	0.30	0.07	0.00
Canada (dummy)	5	0.17	0.09	0.05	0.12	0.09	0.16
Europe (dummy)	10	0.21	0.08	0.01	0.16	0.08	0.04
NZ (dummy)	1	0.29	0.15	0.06	0.29	0.19	0.14
Observations		62			62		
R-squared		0.36			0.35		
Adjusted R-squared		0.31			0.30		
F-statistic		6.38			6.11		
P-value of F		0.00			0.00		

Source: AER analysis; Bloomberg.

Table 19 Difference in equity beta estimates between sub-samples, estimated regression outputs (using firms listed during the entire period from December 2001 to November 2006)

Variable / measure	No. of firms	Ordinary least squares			Weighted least squares		
		Value	Std. error	P-value	Value	Std. error	P-value
Intercept (baseline: domestic majority-regulated)	2	0.28	0.21	0.19	0.27	0.13	0.04
Domestic minority-regulated (dummy)	2	0.40	0.30	0.19	0.29	0.33	0.38
US (dummy)	33	0.44	0.22	0.05	0.41	0.13	0.00
Canada (dummy)	4	-0.01	0.26	0.97	-0.02	0.19	0.91
Europe (dummy)	3	-0.01	0.27	0.97	-0.02	0.17	0.91
NZ (dummy)	0	N/A	N/A	N/A	N/A	N/A	N/A
Observations		44			44		
R-squared		0.29			0.39		
Adjusted R-squared		0.22			0.33		
F-statistic		4.06			6.21		
P-value of F		0.01			0.00		

Source: AER analysis; Bloomberg.

Note: The majority-regulated domestic firms over this period are Envestra Limited and GasNet Australia Group.

Table 20 Difference in equity beta estimates between sub-samples, estimated regression outputs (using firms listed during the entire period from December 2005 to September 2014)

Variable / measure	No. of firms	Ordinary least squares			Weighted least squares		
		Value	Std. error	P-value	Value	Std. error	P-value
Intercept (baseline: domestic majority-regulated)	3	0.37	0.12	0.00	0.37	0.11	0.00
Domestic minority-regulated (dummy)	1	0.25	0.24	0.30	0.25	0.27	0.35
US (dummy)	34	0.46	0.12	0.00	0.45	0.12	0.00
Canada (dummy)	4	0.26	0.16	0.11	0.21	0.16	0.20
Europe (dummy)	7	0.26	0.14	0.08	0.12	0.13	0.35
NZ (dummy)	1	0.26	0.24	0.28	0.27	0.35	0.46
Observations		50			50		
R-squared		0.31			0.43		
Adjusted R-squared		0.24			0.36		
F-statistic		4.02			6.61		
P-value of F		0.00			0.00		

Source: AER analysis; Bloomberg.

Note: The majority-regulated domestic firms over this period are AusNet Services Limited, DUET Group, and Envestra Limited.

Table 21 Difference in equity beta estimates between sub-samples, estimated regression outputs (using firms listed during the entire period from March 2007 to September 2014)

Variable / measure	No. of firms	Ordinary least squares			Weighted least squares		
		Value	Std. error	P-value	Value	Std. error	P-value
Intercept (baseline: domestic majority-regulated)	4	0.38	0.10	0.00	0.38	0.10	0.00
Domestic minority-regulated (dummy)	1	0.23	0.22	0.29	0.24	0.24	0.32
US (dummy)	35	0.45	0.10	0.00	0.44	0.10	0.00
Canada (dummy)	4	0.25	0.14	0.07	0.21	0.14	0.15
Europe (dummy)	8	0.22	0.12	0.08	0.12	0.11	0.31
NZ (dummy)	1	0.24	0.22	0.27	0.25	0.34	0.47
Observations		53			53		
R-squared		0.36			0.45		
Adjusted R-squared		0.30			0.39		
F-statistic		5.35			7.71		
P-value of F		0.00			0.00		

Source: AER analysis; Bloomberg.

Note: The majority-regulated domestic firms over this period are AusNet Services Limited, DUET Group, Envestra Limited, and Spark Infrastructure Group.

Table 22 Difference in equity beta estimates between sub-samples, estimated regression outputs (using firms listed during the entire period from March 2007 to April 2017)

Variable / measure	No. of firms	Ordinary least squares			Weighted least squares		
		Value	Std. error	P-value	Value	Std. error	P-value
Intercept (baseline: domestic majority-regulated)	3	0.40	0.11	0.00	0.40	0.10	0.00
Domestic minority-regulated (dummy)	1	0.27	0.21	0.21	0.28	0.23	0.23
US (dummy)	35	0.40	0.11	0.00	0.39	0.11	0.00
Canada (dummy)	4	0.27	0.14	0.06	0.22	0.14	0.13
Europe (dummy)	8	0.21	0.12	0.10	0.12	0.12	0.29
NZ (dummy)	1	0.24	0.21	0.27	0.24	0.31	0.45
Observations		52			52		
R-squared		0.29			0.38		
Adjusted R-squared		0.21			0.31		
F-statistic		3.71			5.59		
P-value of F		0.01			0.00		

Source: AER analysis; Bloomberg.

Note: The majority-regulated domestic firms over this period are AusNet Services Limited, DUET Group, and Spark Infrastructure Group.

Table 23 Difference in equity beta estimates between sub-samples, estimated regression outputs (using firms listed during the entire period from March 2007 to November 2021)

Variable / measure	No. of firms	Ordinary least squares			Weighted least squares		
		Value	Std. error	P-value	Value	Std. error	P-value
Intercept (baseline: domestic majority-regulated)	2	0.40	0.11	0.00	0.40	0.11	0.00
Domestic minority-regulated (dummy)	1	0.32	0.20	0.12	0.32	0.21	0.14
US (dummy)	36	0.51	0.12	0.00	0.50	0.12	0.00
Canada (dummy)	4	0.33	0.14	0.02	0.25	0.13	0.06
Europe (dummy)	8	0.27	0.13	0.04	0.21	0.12	0.09
NZ (dummy)	1	0.24	0.20	0.23	0.24	0.24	0.31
Observations		52			52		
R-squared		0.42			0.50		
Adjusted R-squared		0.36			0.45		
F-statistic		6.74			9.27		
P-value of F		0.00			0.00		

Source: AER analysis; Bloomberg.

Note: The majority-regulated domestic firms over this period are AusNet Services Limited and Spark Infrastructure Group.

D Market risk premium evidence in the draft 2026 RORI

D.1 Historical excess return

We have calculated the historical excess return (HER), updated to the end of calendar year 2025, and the annual market returns above the risk-free rate for different time periods. The arithmetic, geometric and weighted averages for five sampling periods are presented in Table 24.

Table 24 Historical excess returns (10-year term as at 31 December 2025; 2022 RORI review estimates in brackets)

Sampling Period	Arithmetic average (%)	Geometric average (%)	Weighted average (%)
1883-2025 (1883-2022)	6.4% (6.3%)	5.1% (5.0%)	6.3% (6.3%)
1937-2025 (1937-2022)	6.1% (6.1%)	4.4% (4.4%)	6.0% (5.9%)
1958-2025 (1958-2022)	6.6% (6.6%)	4.5% (4.4%)	6.3% (6.3%)
1980-2025 (1980-2022)	6.6% (6.6%)	4.7% (4.6%)	6.2% (6.1%)
1988-2025 (1988-2022)	6.3% (6.2%)	5.0% (4.9%)	6.0% (5.9%)

Comparator: Table 7.3 (p. 159) of the 2022 RORI Explanatory Statement.

Source: Handley, *An estimate of the historical equity risk premium for the period 1883 to 2011*, April 2012, p. 6; AER update for 2012–2025 market data.

Note: Calculated using an assumed imputation utilisation value (or theta value) of 0.641706711.

D.2 Dividend growth model

The Dividend Growth Model (DGM) uses analyst forecasts of current dividends, combined with estimates of dividend growth and the current share price, to estimate an implied MRP. We use the two-stage and three-stage DGM to observe the trend of the implied MRP, as set out in Table 25.

Table 25 Dividend growth model estimates (two-stage and three-stage models, updated to February 2026; 2022 RORI review estimates in brackets)

Averaging period	Two-stage model	Three-stage model
2-month average ending February 2026 (December 2022)	3.6% (5.5%)	4.0% (5.0%)
6-month average ending February 2026 (December 2022)	3.7% (5.7%)	4.0% (5.2%)
12-month average ending February 2026 (December 2022)	4.0% (5.8%)	4.3% (5.3%)

Comparator: Table 7.4 (p. 160) of the 2022 RORI Explanatory Statement.

Source: Bloomberg; AER analysis; Consensus Economics.

Note: The growth rate of 3.84% applied in both the two-stage and three-stage DGM for 2026 was calculated from long term forecast of real GDP growth and expected inflation sourced from Consensus Economics, less a 1% deduction for net new share issuance from new companies and new share issues from existing companies.

D.3 MRP survey results

MRP survey evidence comes from market practitioners who are asked what they expect the MRP to be in the Australian market. These surveys take on different forms and can vary in different ways, including questions asked, type of participants and number of participants. In the approach to date, we have used survey evidence to inform our MRP estimate, as set out in Table 26. It informs us about investors' and market practitioners' expectations and/or what they apply in practice.

Table 26 MRP survey results (2012 to 2025)

Survey	Number of responses	Mean (%)	Median (%)	Mode (%)
Fernandez et al (2012)	73	5.9	6.0	n/a
Fernandez et al (2013)	17	6.8	5.8	n/a
Fernandez et al (2014)	93	5.9	6.0	n/a
Fernandez et al (2015)	40	6.0	5.1	n/a
Fernandez et al (2016)	87	6.0	6.0	n/a
Fernandez et al (2017)	26	7.3	7.6	n/a
Fernandez et al (2018)	74	6.6	7.1	n/a
Fernandez et al (2019)	54	6.5	6.1	n/a
Fernandez et al (2020)	37	7.9	6.2	n/a
Fernandez et al (2021)	31	6.4	6.3	n/a
Fernandez et al (2022)	34	6.3	6.0	n/a
Fernandez et al (2023)	39	6.2	6.0	n/a
Fernandez et al (2024)	34	5.5	5.4	n/a
Fernandez et al (2025)	27	6.3	6.0	n/a
KPMG (2013)	19	n/a	6.0	6.0
KPMG (2015)	~27	n/a	6.0	6.0
KPMG (2017)	45	n/a	6.0	6.0
KPMG (2018)	56	5.5	6.0	6.0
KPMG (2019)	59	5.9	6.0	6.0
Asher and Hickling (2013)	46	4.8	5.0	6.0

Survey	Number of responses	Mean (%)	Median (%)	Mode (%)
Asher and Hickling (2014)	27	4.4	4.6	6.0
Asher and Carruther (2015)	29	4.9	n/a	n/a
Carruther (2016)	24	5.3	n/a	n/a

Comparator: Table 7.5 (p. 162) of the 2022 RORI Explanatory Statement.

Source: Fernandez et al, *Survey: Market Risk Premium and Risk-Free Rate used for 88 countries in 2023*, June 2023; Fernandez et al, *Survey: Market Risk Premium and Risk-Free Rate used for 96 countries in 2024*, March 2024; Fernandez et al, *Survey: Market Risk Premium and Risk-Free Rate used for 54 countries in 2025*, May 2025. All other data is the same as published with the 2022 RORI Explanatory Statement.

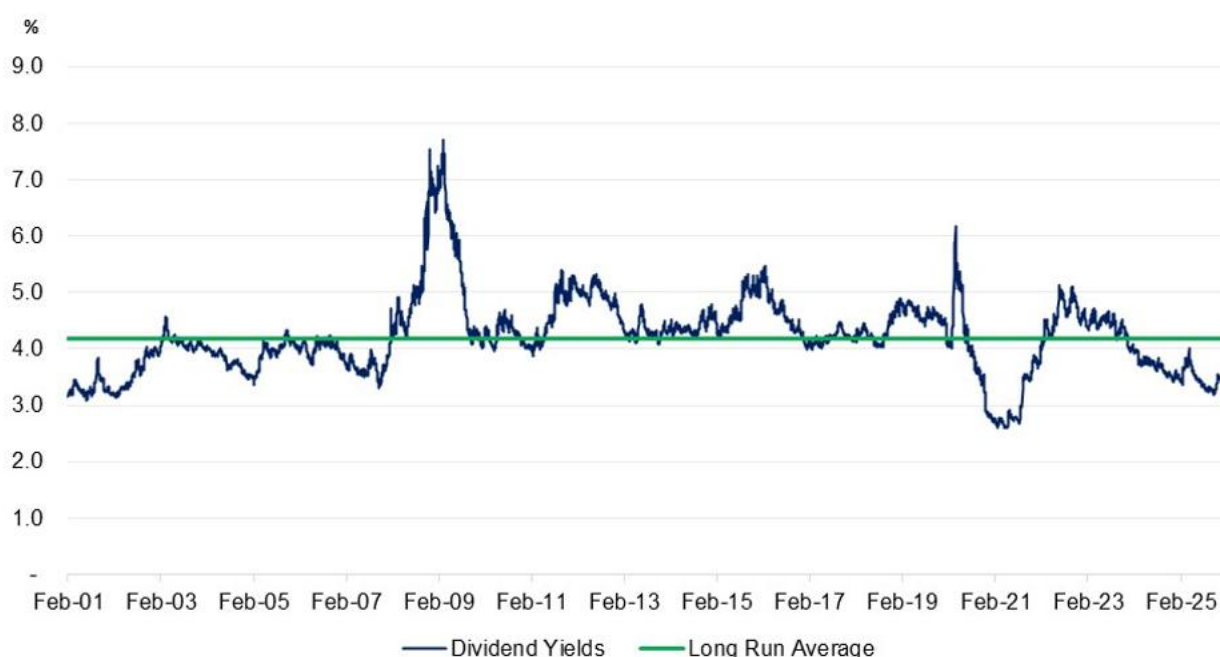
D.4 Conditioning variables

Conditioning variables are market data and indicators that provide information on the potential risk in the market. These include dividend yields, volatility index and credit spreads, as described below.

D.4.1 Dividend Yields

Dividend yields can be measured over time to give a signal of potential risk, as shown in Figure 11 for the ASX200.

Figure 11 Dividend yields from ASX200 (February 2001-2026)



Comparator: Figure 7.5 (p. 164) of the 2022 RORI Explanatory Statement.

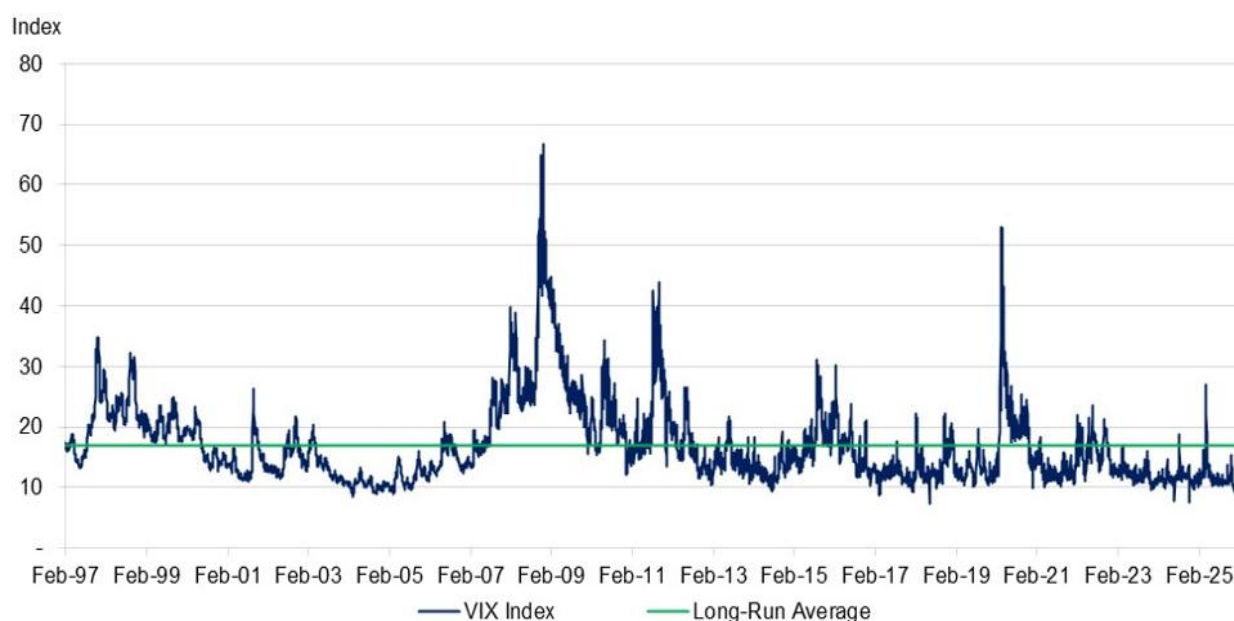
Source: AER analysis; sourced via Bloomberg code AS51.

Note: Long run average taken from the start of the data series in 2000.

D.4.2 Volatility Index

Implied volatility provides a measure of market uncertainty and risk. The ASX200 volatility index (VIX) uses year ahead option prices to arrive at a measure of market volatility over time, as shown in Figure 12.

Figure 12 Implied volatility of ASX200 (February 1997-2026)



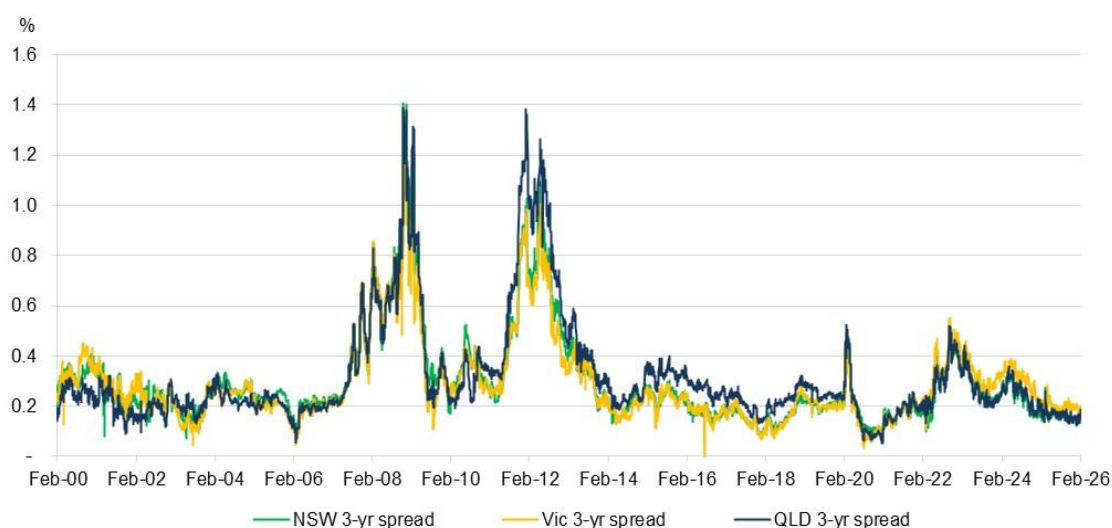
Comparator: Figure 7.4 (p. 163) of the 2022 RORI Explanatory Statement.

Source: AER analysis; ASX200 VIX volatility index, sourced via Bloomberg code AS51VIX from 2 January 2008 and code CITJAVIX prior to 2 January 2008. Long run average taken from the start of the data series in 1997.

D.4.3 Credit Spreads

Credit spreads provide an indication of the compensation required by investors for bearing credit risk. Credit spreads from state governments and corporate debt can indicate risk in the market, as shown in Figure 13 and Figure 14 respectively.

Figure 13 Credit spreads from Australian state government debt (February 2000-2026)

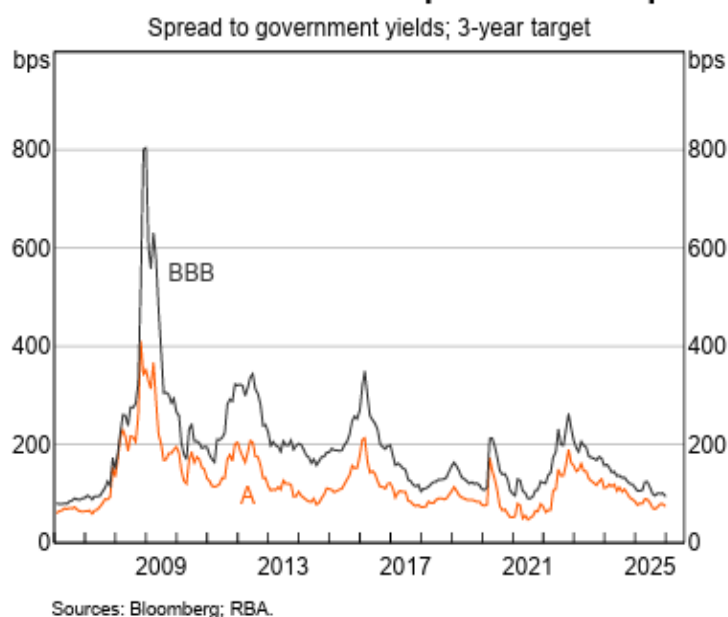


Comparator: Figure 7.6 (p. 164) of the 2022 RORI Explanatory Statement.

Source: AER analysis; Spreads between the Australian Sovereign 3 Year Index and the State Government bonds with a term to maturity of 3 years, sourced via Bloomberg interest rate statistics.

Figure 14 Credit spreads of corporate debt

Australian Non-financial Corporate Bond Spreads



Sources: Bloomberg; RBA.

Source: RBA, *Chart Pack*, downloaded February 2026.

Note: Data updated to 4 February 2026.

Glossary

Term	Definition
AER	Australian Energy Regulator
ASX	Australian Securities Exchange
CAPM	Capital Asset Pricing Model
CESS	Capital expenditure sharing scheme
CRG	Consumer Reference Group
DGM	Dividend growth model
ECA	Energy Consumers Australia
ENA	Energy Networks Australia
ERAWA	Economic Regulation Authority Western Australia
ERP	Equity risk premium
FERC	(United States) Federal Energy Regulatory Commission
GFC	Global Financial Crisis
HER	Historical excess returns
Instrument (or RORI)	Rate of Return Instrument
MRP	Market risk premium
NEL	National Electricity Law
NGL	National Gas Law
NSP	Network service provider
NZCC	New Zealand Commerce Commission
PGEC	Post Global Financial Crisis, excluding COVID-19
PTEGC	Post technology boom, excluding the Global Financial Crisis and COVID-19
OLS	Ordinary least squares
QCA	Queensland Competition Authority
RAB	Regulatory asset base
RBA	Reserve Bank of Australia
RORI (or Instrument)	Rate of Return Instrument
SL CAPM	Sharpe-Lintner Capital Asset Pricing Model
WLS	Weighted least squares