INCENTIVISING INVESTMENT IN ENERGY INFRASTRUCTURE

NETWORK SHAREHOLDERS GROUP – PRESENTATION TO AER'S WEBINAR ON CASH FLOW IN A LOW INTEREST RATE ENVIRONMENT

June 23, 2021

NETWORK SHAREHOLDERS GROUP (NSG)

INFRASTRUCTURE INVESTORS WITH NEARLY $300 BILLION IN EQUITY INFRASTRUCTURE[1]

MACQUARIE	ifm investors	spark infrastructure	AMP CAPITAL	AustralianSuper	MORRISON&CO	OMERS	Caisse de dépôt et placement du Québec
AUM: $204bn	**AUM:** $155bn	**AUM:** $18bn	**AUM:** $190bn	**AUM:** >$200bn	**AUM:** $20bn	**AUM:** $112bn	**AUM:** $390bn
Equity Infra: $100.5bn	**Equity Infra:** $68.9bn	**Equity Infra:** $3.6bn	**Equity Infra:** $20.4bn	**Equity Infra:** >$20bn	**Equity Infra:** $16bn	**Equity Infra:** $23.6bn	**Equity Infra:** $33.9bn
Markets: Australia, UK/Europe, North America, Asia	**Markets:** Australia, UK/Europe, North America	**Markets:** Australia **ASX Listed**	**Markets:** Australia/NZ, UK/Europe, North America/ Latin America, Asia	**Markets:** Australia, UK/Europe, North America, Asia	**Markets:** Australia/NZ, UK/Europe, North America, Asia	**Markets:** Australia, UK/Europe, North America/ Latin America, Asia	**Markets:** Australia, UK/Europe, North America/ Latin America, Asia

Australian energy investments

Ausgrid · SPARK RENEWABLES · flow systems · SA Power Networks · Powercor AUSTRALIA · CITIPOWER · ElectraNet · TransGrid · Endeavour Energy · evergen · Macarthur Wind Farm · tilt renewables

[1] All data supplied by NSG members, values are in AUD.

Key points

1. Returns were globally uncompetitive before reductions in the risk free rate

2. Changes in methodology should reflect changes in cost and not occur in a biased manner

3. Financeability assessment is an important tool and good regulatory practice

RETURNS ON NETWORK ASSETS IN AUSTRALIA ARE GLOBALLY UNCOMPETITIVE

Australia is an unattractive investment destination

- Australia is ranked in the third quartile for relative attractiveness of investing in regulated networks[2]
- Australia ranked second lowest at 1.6% on the allowed pre-tax WACC (adjusted for inflation and government bond yields to account for sovereign risk)[3]
- The AER's Brattle Report highlighted that the 'outlier' approach of the AER led to an equity return lower than seven other regulators in UK, US, NZ, Italy, and Netherlands[4]

Exhibit 1:

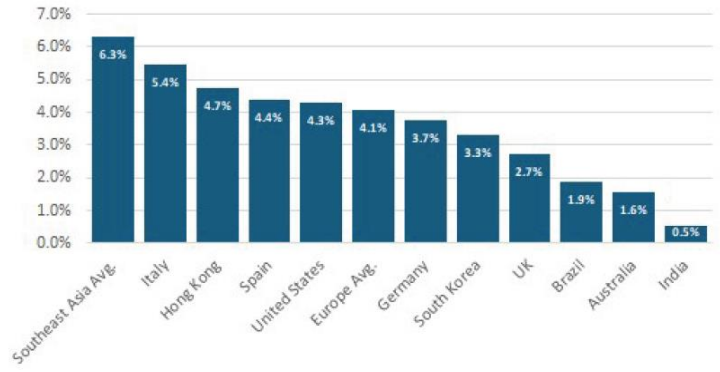
Relative Attractiveness of Regulated Utilities by Region — Ranked by Quartile

	DDM Analysis		Multi-Factor Analysis		Average	
Region / Country	Net Equity Return	DDM Ranking	Score	Multi-Factor Ranking	Combined Ranking	Quartile
Europe	6.2%	2	5.7	3	2.5	1st
Hong Kong	4.9%	4	6.7	1	2.5	1st
United States	4.5%	6	5.7	2	4.0	2nd
India	7.4%	1	3.1	7	4.0	2nd
Australia	5.3%	3	3.8	6	4.5	3rd
Southeast Asia	3.9%	7	5.3	4	5.5	3rd
South Korea	4.7%	5	2.6	8	6.5	4th
Brazil	2.3%	8	4.6	5	6.5	4th

Note: For Net Equity Returns and the Multi-Factor Analysis Score, higher numbers are better. For rankings, lower numbers are better. Data as of 3/26/2021. Source: Eikon, IMF, Morgan Stanley Research estimates

Exhibit 13:

Allowed Pre-Tax WACC (adjusted for inflation and sovereign risk)



Source: Morgan Stanley Research estimates

OBSERVED DIFFERENCES AND SIMILARITIES

Equity and debt premiums

- We calculate equity and debt premiums as the difference between:
  - the authorised return on equity (or debt) and
  - the regulator's determination of the risk-free rate

		AER	ACM	FERC	STB	ARERA	NZCC	Ofgem	Ofwat
Decision year		2020	2016	2020	2018	2019	2019	2019	2019
Nominal risk-free rate	[1]	1.03%	1.28%	2.70%	3.02%		1.12%		
Real risk-free rate	[2]	-1.24%				1.89%		-0.75%	-1.39%
Equity premium	[3]	3.66%	3.74%	7.35%	10.84%	3.88%	4.75%	5.55%	5.58%
Debt premium	[4]	3.73%	0.76%		1.14%	0.50%	1.60%	2.68%	3.43%

Notes:
Please see Brattle paper for sources and calculations.
All figures relate to energy transport utilities except STB (rail) and Ofwat (water).

The focus should be on correcting low returns, not seeking methodological changes that would reduce them further

[2] Morgan Stanley "Utilities Global Lens: Where to Invest in Regulated Utilities Amidst Global Macro Environment", April 2021, p3
[3] Ibid, p11
[4] The Brattle Group "International Approaches to Regulated Rates of Return", September 2020, p11

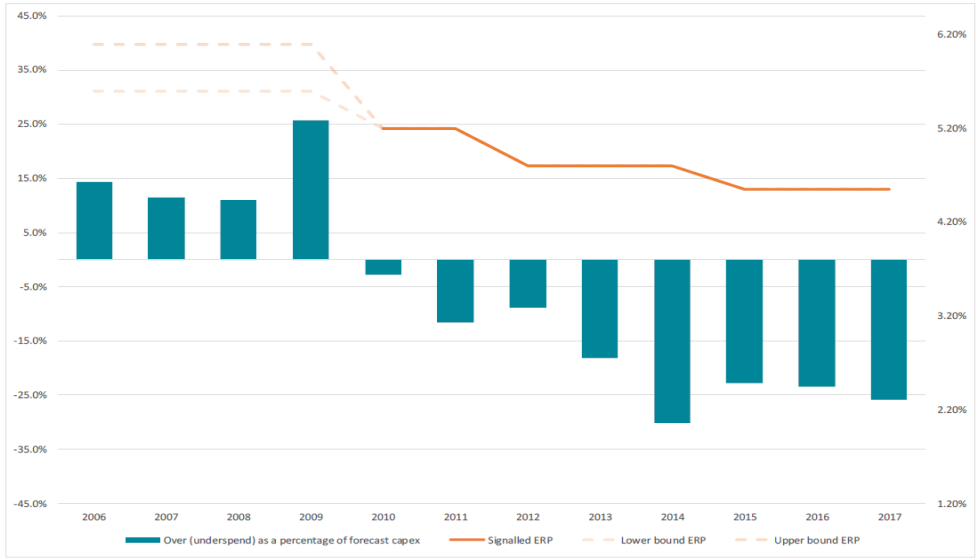
RETURNS THAT ARE TOO LOW DO DAMPEN INVESTMENT

It remains difficult to explain investment below allowances if returns are sufficient – should be investigated not ignored

- The NEL/NGL contemplates that investment is impacted by returns – incentives for efficient investment
  - Required to be taken into account in making the RORI

- HoustonKemp 2018
  - Historical outcomes show a statistically significant, positive relationship between the ERP signalled by the regulator and the ratio of actual to allowed (forecast) capital expenditure.
  - This means that a reduction in signalled ERP can be expected to result in a reduction in capital expenditure relative to the efficient capex allowance determined by the regulator.

Figure 2: Actual capex over (under) spend as a percentage of forecast capex and the signalled ERP – all electricity networks[8]



"Our analysis highlights the real risk to future investments associated with a reduction in the future ERP and the effective return on equity more broadly. In an environment in which the energy sector is acknowledged to be transforming and in which additional capital expenditure to facilitate the least cost transition is widely anticipated to be accepted by the AER and reflected in future capex allowances, the proposed reduction to equity returns may not be in the long-term interests of consumers making it inconsistent with the NEO/NGO."

DOES THE METHOD PRODUCE THE EFFICIENT COST OF EQUITY?

The relationship is important but so is the objective, data and start point – must be free from bias

- What did the experts say (2018 process)?
  - Experts agreed that Historical Excess Returns (HER) MRP estimates, Dividend Growth Model (DGM) estimates and analyst surveys are all relevant to estimate the MRP. [1]
  - No experts supported a constant MRP or a constant market return. [2]
  - The parameters of the cost of equity are not constant over time and are not independent. [3]
  - ➢ AER gave zero weight to DGM and analyst surveys and adopted a constant MRP independent of RFR

- The Brattle Group survey of other regulators (2020)
  - MRP of between 5.05% and 8.6% (AER 6.1%)
  - Equity risk premium of between 3.66% (AER) and 10.84%
  - The parameters of the cost of equity are not constant over time and are not independent.[1]
  - ➢ Recommendation - Give forward looking estimates of MRP non-zero weight

- Options that support a higher cost of equity and address volatility
  - Give greater weight to forward looking data and increasing the MRP when the RFR falls
  - Long term risk free rate matched with long term MRP
  - Adjustments to recognise anomalous conditions (including intervention by the RBA)

We all have an interest in addressing uncertainty and volatility – between periods and across periods

1. CEPA, Expert Joint Report, p. 58. 2. CEPA, Expert Joint Report, p.61. 3. The Brattle Group, AER Forum, 16 September 2020.

THE MRP/RFR THEORETICAL LOTTERY?

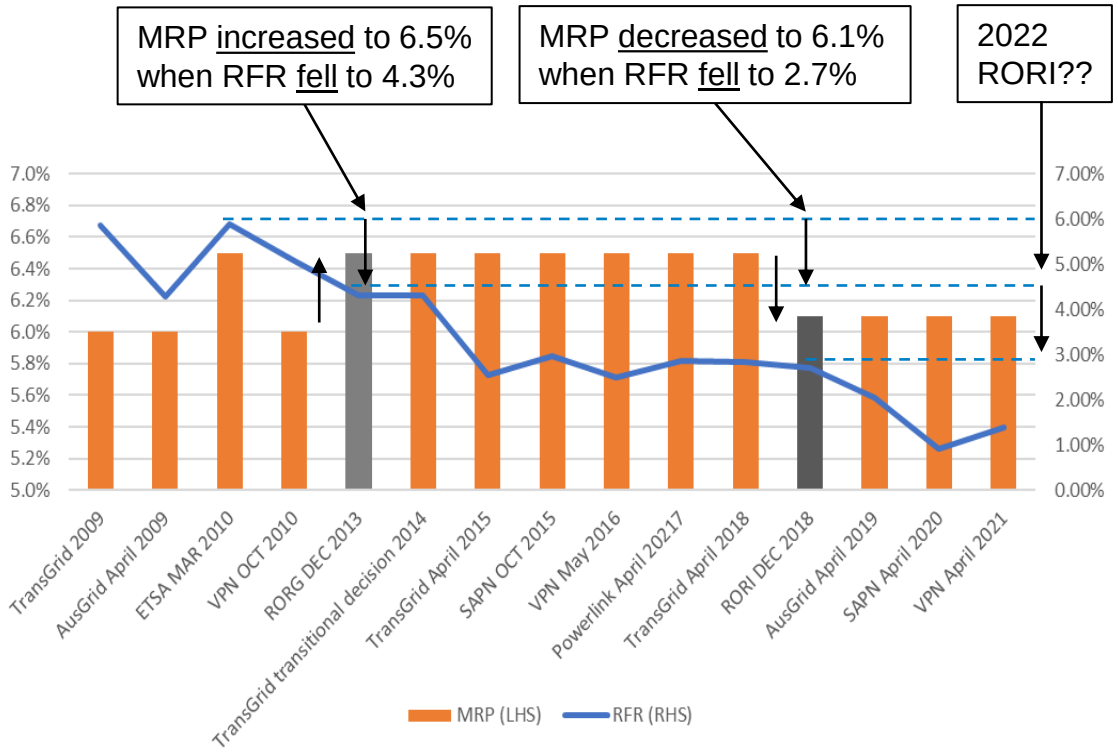
Changing views and application has created uncertainty and mistrust over time

- Prior to 2013, the AER appeared to recognise an inverse relationship between the RFR and the MRP and Dividend Growth Model (DGM)
  - ➢ **Outcome** - MRP of 6% was adopted when it expected RFR to be high and was increased to 6.5% when it expected the RFR to lower

- In the 2013 RORG, the AER recognised an inverse relationship between the RFR and the MRP and gave weight to dividend growth model (**DGM**) estimates of MRP
  - ➢ **Outcome** - The AER increased the MRP to 6.5% when the RFR fell to around 4%

- In 2018 RORI, the AER ignored any inverse relationship between the RFR and MRP when the RFR fell to 2.7% and relied entirely on historical excess returns (**HERs**) to reduce the MRP to 6.1%
  - ➢ **Outcome** - the AER reduced the MRP when the RFR fell

- What will happen in the 2022 RORI?
  - Recognising an inverse relationship supports an MRP that is higher than the 2018 RORI given the significant falls in the RFR
  - Recognising forward looking DGM estimates of MRP would support an MRP higher than 6.5%



How can this review process contribute to increased confidence in the future?

CURRENT AER APPROACH IGNORES MARKET PRACTICE

Investors match MRP with long term RFR assumptions for long term assets

- The typical independent valuer approach applies MRP as a premium over a long-term average risk free rate.
  - *Ilan Sadeh, AER Concurrent evidence sessions, 5 April 2018*
- Australia has the highest market cost of equity of the selected developed economies at 8.8%
  - *KPMG Valuation Practices Survey 2019, p. 5*
- Combining multiple MRP estimation approaches is more likely to achieve the best estimate of return on equity across a wide range of future (uncertain) capital market environments.
  - *David Johnston, QTC, AER forum, 16 September 2020*
- 6% MRP applied to a 50/50 blend of spot RFR and long term average, ERP of 5-6%
  - *Rob Koh, Morgan Stanley, AER forum 16 September 2020*

Independent expert reports in recent Australian scheme of arrangement situations have adopted either a 'normalised' or long term risk free rate (June to August 2020)

Most valuation practitioners adopt the yield on government bonds of a term matching the cash flow projection period as a proxy.

However, current yields are unlikely to be maintained in the long term and are not necessarily reflective of a long term risk free rate for estimating an appropriate cost of equity.

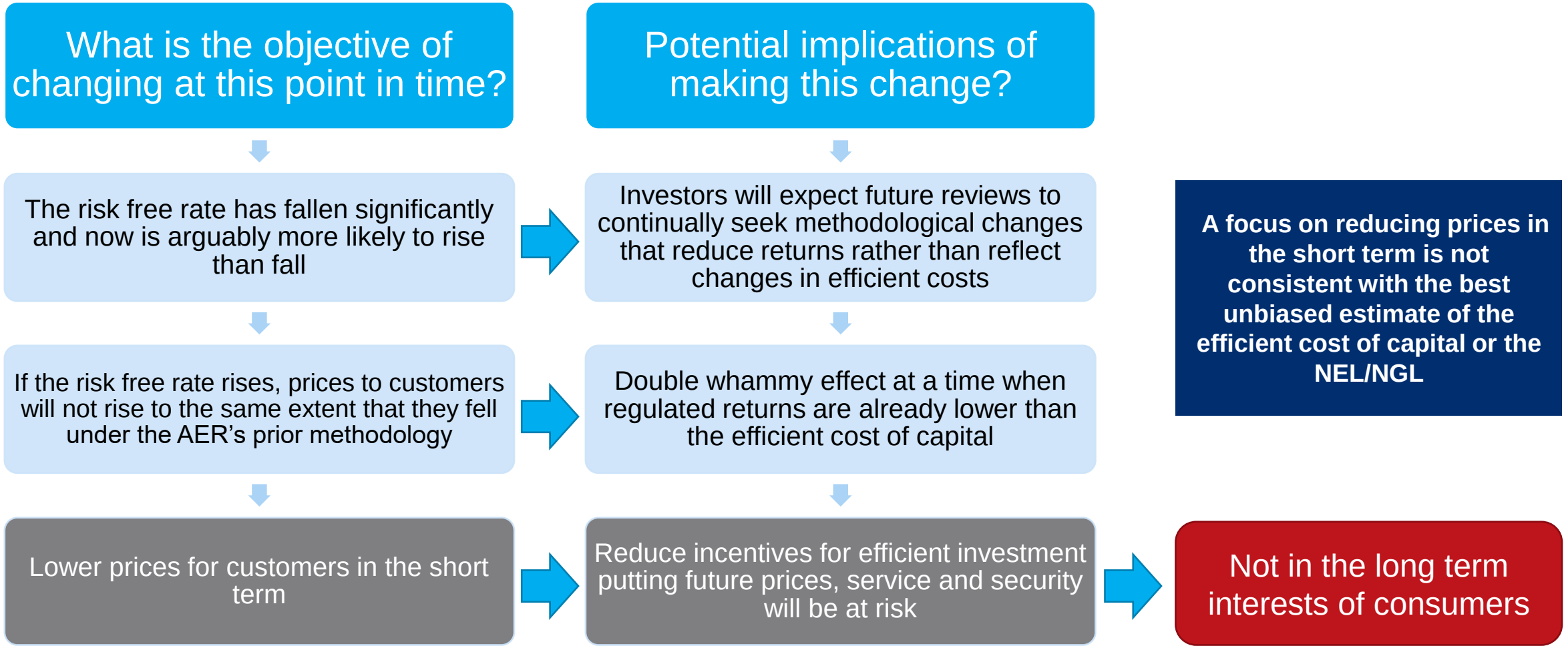
In practice, many valuers have either used a normalised risk free rate, increased their estimates of the market risk premium or have included an additional risk factor in their calculations of the cost of equity.

Valuation analysis, June 2020.

Risk Free Rate	■ 3.0% risk free rate adopted, represents 200 bps above spot rate to reflect "normalised" risk-free rates	■ One-year forward risk-free rates meaning multiple WACCs are derived and used to discount cash flows in corresponding years	■ 2.98% risk free rate adopted, based on long-term average to maintain consistency between the risk free and market risk premium	■ 3.0% risk free rate, "normalised" risk free rate based on a blend of historical averages and current spot rates
Market Risk Premium	■ 6% premium in line with long term view	■ 7.5% tax-adjusted market risk based on midpoint of market practice range of 7.0-8.0% for NZ companies	■ 6% premium in line with long term view	■ 6.5% market risk premium, based on historical premia and various investor surveys

PRICES TO REFLECT EFFICIENT COSTS - NOT ONLY IF THEY ARE LOWER

Theory and practice suggests a higher cost of equity



FINANCEABILITY IS GOOD REGULATORY PRACTICE

It is not clear why it is not adopted by the AER when it is the law and practice for other regulators around the world

- A Financeability assessment demonstrates that:
  - The assumptions are internally consistent.
    - ➢ That is, a BEE with a BBB+ credit rating is able to achieve and maintain that credit rating
  - The overall rate of return is consistent with the efficient cost of capital determined under the Rate of Return Instrument.
    - ➢ That is, the BEE is not expected to call on unregulated service revenue or balance sheet to provide regulated services.

- The counter measures that the AER has identified for an NSP to take are inconsistent with the NEL/NGL
  - Change gearing compared to benchmark – increases costs above the efficient cost and results in a return not commensurate with risk
  - Reduce expenditure – invest less than the efficient allowance for providing services
  - Reduce dividends – pay equity investors less than the regulated return on equity

- ➢ There should be an explanation for why a BEE would not be able to achieve the benchmark credit rating if provided with the cost of capital based on that credit rating

- ➢ There should be an assessment of the impact on investment, incentives or the long term interests of consumers if a financeability test is not met

Provides confidence in the regulatory process - more important in the absence of any review process

WE SUPPORT A TEST, BUT IT SHOULD BE RELEVANT AND MEANINGFUL

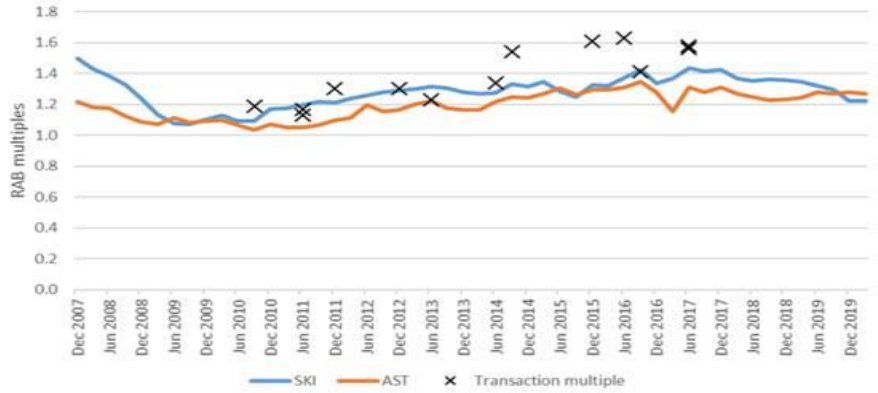
REJECTED FINANCEABILITY ASSESSMENT BUT APPLIED AN IRRELEVANT TEST

"Regulated NSPs have become less profitable in recent years, following reductions in allowed rates of return. Nonetheless, our analysis of market evidence suggests that investors continue to view allowed returns as being at least sufficient to attract efficient investment"

AER, Electricity Network Performance Report, 2020

- In reaching its conclusion, the AER:
  - Used data for businesses not yet subject to the 2018 RORI[1]
  - Relied on a very small sample (two listed companies) for trading multiples
  - Relied on unverified transaction multiples before the reductions in the 2018 RORI were foreshadowed
  - Did not adjust for performance under incentive mechanisms or unregulated earnings and future growth prospects that are not attributed to the regulated NSP
- Did not seek to investigate reasons for investment lower than efficient allowances

Figure 6-8 AER regulated NSPs – transaction and trading multiples



Source: Morgan Stanley Research, AER analysis.

Note: SKI is Spark Infrastructure, which holds ownership stakes in SA Power Networks (49%), Victoria Power Networks (49%) and TransGrid (15%). AST is AusNet Services, which owns a Victorian electricity distribution network, electricity transmission network and gas distribution network.

Recognising that the drivers of RAB multiples are difficult to quantify precisely, we consider the evidence on RAB multiples in combination with the other analysis in this report. In aggregate, we consider these measures support a view that investors view regulated returns as being at least sufficient to attract investment. Put conversely, it would be difficult to explain the persistence of premiums in both trading and transaction multiples if investors perceived systematic deficiencies in allowed returns.

We support a relevant test to demonstrate the best unbiased estimate consistent with the NGO/NEO

1. Note that the 2018 RORI was first applied in July 2019 and will not apply to all regulated electricity NSPs until 2022

Key points

1. Returns were globally uncompetitive before reductions in the risk free rate
   - Significant falls in the risk free rate have exacerbated the issue.
2. Changes in methodology should reflect changes in costs and not occur in a biased manner
   - Focus should be on reducing uncertainty and volatility, not short term prices
   - Theory and practice support a higher MRP and cost of equity
3. Financeability assessment is an important tool and good regulatory practice
   - Provides confidence in the regulatory process