

Consumer Reference Group

**International equity beta - Issues raised in the ERA
2022 gas rate of return Focussed Consultation
Discussion Paper**

Presentation – 27 April 2022

International Beta Issues

- The issue of a small sample and potentially high standard error is not solved by choosing comparators **from a different population – because of the scope for bias**
- The 'pure play' concept ideally requires the comparators to be engaged solely in the same business as the regulated entity, Beta needs to relate to the regulated activity only.
- What is the evidence demonstrating sufficient comparability of international energy equity betas and hence limited bias?
- Impact is economically important.
- ERA Mean of OLS estimates of equity beta – 5 years July 2016 to June 2021
 - Australia 0.46
 - US 1.1, Canada 0.9, UK 0.92, New Zealand 0.65
- ERA Mean of all methods of estimates of equity beta – 5 years July 2016 to June 2021
 - Australia 0.54
 - US 0.97, Canada 0.84, UK 0.84, New Zealand 0.61
- Effect on WACC

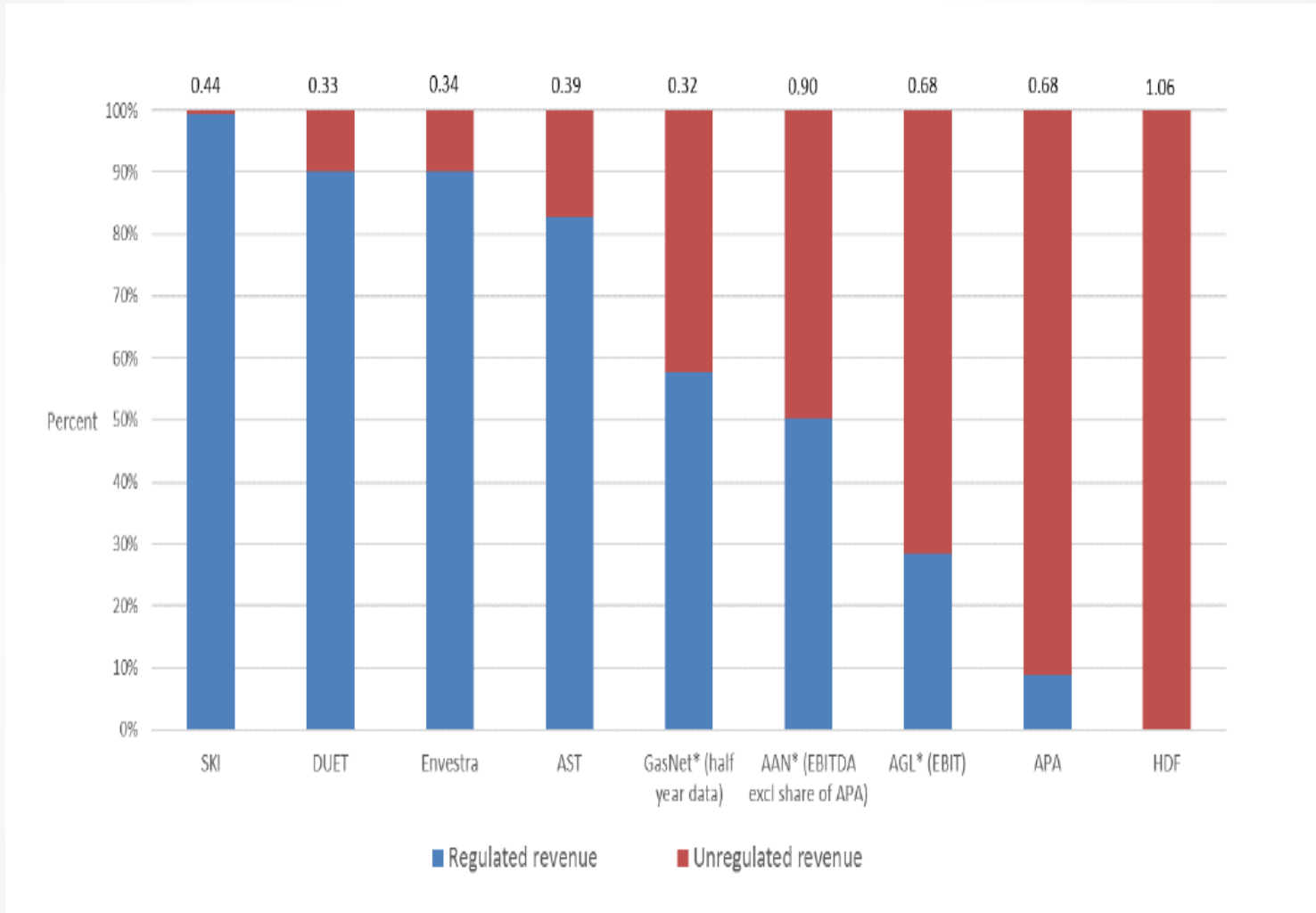
Equity Beta	After tax nominal WACC % (forecast inflation 2.4%)
0.4	3,79
0.5	4.06
0.7	4.60
0.9	5,14

International Beta Issues

- The foreign market portfolio itself will have a different composition to the Australian market portfolio. Systematic risk is not measured relative to Australian market. Changing the composition not a widely used technique and reliability not known. International CAPM not practical.
- Various economic, operational and institutional conditions, structural characteristics, leverage and extent of regulation affect systematic risk.
- US energy utilities are generally vertically integrated businesses that include construction, energy retailing, electricity generation and/or natural gas wholesaling; and are not just providers of electricity network or gas pipeline access. The upstream and downstream activities that they are engaged in are riskier than is the provision of natural monopoly infrastructure services i.e. the energy transport functions.
- 7 out of the 8 Canadian firms are vertically integrated with an energy generation business operation, 1 of the 2 UK firms also has a generation business, the New Zealand firm Vector also provides broadband services.

Impact of regulation

Figure 14 Regulated revenue percentage and beta estimates



AER, Rate of return instrument. Explanatory statement, December 2018, p. 174

Impact of regulation

Table 1: AER equity beta estimates for domestic energy network business comparators (OLS estimates for weekly data for various periods from June 2000 to August 2021)

Equal and value weighted portfolio estimates	Whole comparator set (9 firms and different combinations)	Still listed firms (APA Group, Spark Infrastructure, AusNet Services)	Still listed majority regulated firms (Spark Infrastructure, AusNet Services,
Longest period			
2018 review	0.42 – 0.67	0.52 – 0.55	0.42 – 0.43
2021 update	0.40 – 0.68	0.51 – 0.55	0.40 – 0.41
Recent 5 years			
2018 review	0.49 – 0.88	0.81 – 0.88	0.70 – 0.72
2021 update	0.37 – 0.70	0.53 – 0.59	0.37 – 0.38

Source AER 2021a pp. 103-104.

Impact of regulation

ERA equity beta estimates – domestic sample
5 years July 2016 to June 2021

Asset	OLS	LAD	Regulated revenue
APA	0.759	0.896	Minority
AST	0.286	0.532	Majority
DUE	0.466	0.430	Majority
SKI	0.383	0.505	Majority