

22 May 2020

Mr Mike Smart
Chief Economist
Independent Pricing and Regulatory Tribunal of NSW
Level 15, 2-24 Rawson Place
SYDNEY NSW 2000

Dear Mr Smart,

IPART's uncertainty index for the WACC is outside of its 'normal' range

On 27 March 2020, IPART published its draft report on the method for calculating the equity beta to apply to reviews that commence from 1 July 2020.

WaterNSW has provided comments throughout IPART's review of the equity beta and are generally supportive of the IPART's amendments as summarised below.

- Use weekly returns rather than monthly returns and examine all five possible reference days (ie, weekly average Monday to Friday, Tuesday to Monday, Wednesday to Tuesday, Thursday to Wednesday, and Friday to Thursday) to estimate beta;
- Change the threshold for inclusion of a proxy firm to 60 months minimum available return data rather than 36 months;
- Use the market value of equity to calculate gearing and use the average gearing over the sample period to de-lever observed equity betas rather than gearing measured at the end of the estimation period;
- Use the Brealey-Myers de-levering formula, which omits the tax term, rather than the Hamada formula; and
- Adopt the decision rule that before considering any revision to an established beta value for a price review:
 - The prior beta estimate is more than one standard deviation from mean of current sample; and
 - There is persistent evidence over long period (ie, a regulatory period or longer) of changed beta.

WaterNSW's specific comments are summarised below and in the attached CEG memorandum on "Equity beta estimates using IPART's approach" from 20 May 2020 :

- **Gearing and de-levering:** Whether IPART is using the book value of total debt or the book value of net debt when calculating the gearing of each company;
- **Sample period:** Whether IPART is referring to the longest time series available when it refers to the "sample period", or whether IPART intends to use a shorter period;
- **Decision rule:**
 - Whether IPART's decision rule will be applied to the median equity beta estimate or the mean equity beta estimate;

- Whether IPART's decision rule is based on the sample standard deviation or the standard deviation of the sample mean; and
- **Programming code:** Whether IPART intends to publish new programming code that incorporates all of the changes set out in its draft decision, including:
 - Inserting a workaround to the deprecated RDatastream package; and
 - Providing code that sets out every step to be used for obtaining the median re-levered beta estimate and the corresponding standard deviation. This includes:
 - The sample selection and filtering procedure;
 - The method for obtaining market returns and risk free rates;
 - The data series and calculations used to obtain the gearing estimate; and
 - The method used to calculate weekly estimates for each of the five weekdays.

CEG has reviewed IPART's Equity Beta 'R model' source code and has noted the following issues:

- When applying IPART's proposed methodology along with some necessary adjustments as detailed in the attached CEG memorandum, the median equity beta estimate among companies with positive net debt (0.83) is within one standard deviation of the sample. Thus, according to IPART's decision rule, the benchmark equity beta estimate will not be revised from the current 0.7 estimate;
- The code relies on the RDatastream package to extract data from Reuters Datastream. However, this code has since been deprecated due to changes to Reuters' API and can no longer be used;
- The code omits several important steps or imports data from an external file, without which IPART's benchmark equity beta estimates and the associated standard deviation cannot be easily replicated. These include:
 - the sample selection and filtering procedure;
 - the method for obtaining market returns and risk free rates;
 - the data series and calculations used to obtain the gearing estimate; and
 - the method used to calculate weekly estimates for each of the five weekdays; and
- The code implements IPART's methodology as set out in the fact sheet, but no corresponding code was published for the methodology from the draft report.

WaterNSW would like to confirm whether IPART intends to publish new programming code that addresses the issues highlighted above and incorporates all of the changes set out in its draft decision.

If you would like to discuss this response further, please do not hesitate to contact Mr. Michael Martinson, Manager Economic Regulation, on [REDACTED].

Yours sincerely,

[REDACTED]
Joseph Pizzinga
Chief Financial Officer