HUNTER WATER RESPONSE TO IPART

REVIEW OF WACC METHOD

DRAFT REPORT

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1 INTRODUCTION

Hunter Water welcomes the opportunity to respond to the Independent Pricing and Regulatory Tribunal's (IPART's) *Review of our WACC method – Draft Report, October 2017*.

Hunter Water appreciates IPART's continuing efforts to refine the Weighted Average Cost of Capital (WACC) methodology in line with the principles of accuracy, stability, predictability and replicability. The majority of the draft decisions are consistent with those principles and are therefore supported. This submission focusses on three areas where Hunter Water considers there is likely to be scope for further improvement:

- The benchmark firm and the efficient cost of debt
- Estimating the equity beta
- An accurate inflation estimate

Hunter Water's responses to each of the 31 questions detailed in IPART's draft report are provided in Appendix A.

2 BENCHMARK FIRM AND THE EFFICIENT COST OF DEBT

The draft report notes that most stakeholders disagreed with IPART's preliminary view to place equal weight on estimates of the current and historical cost of debt. IPART continues to support the 50/50 approach, stating that it provides '*the correct balance of incentives for efficient investment and prudent debt management*'.

Our preferred approach

Hunter Water's response to IPART's issues paper strongly supported a ten-year trailing average cost of debt approach. Hunter Water argued that:

- A benchmark efficient firm operating in the water sector would ensure that its debt management strategy recognised the particular risks and challenges associated with financing large infrastructure assets and asset renewals. More specifically, a benchmark firm's debt strategy would need to account for substantial capital investments, large up-front costs and assets with long service lives.
- An independent review of Hunter Water's debt management by Ernst and Young recommended a debt financing strategy based on issuing long term debt to manage refinancing and interest rate risk while maintaining a small level of short term debt to capitalise on periodic flattening of the yield curve.
- Hunter Water's investment decisions take a long term focus and are driven by a regulatory obligation to ensure the delivery of efficient, safe and reliable services against a backdrop of growing demand and aging infrastructure. Consequently, the expenditure for construction of large-scale infrastructure or the renewal of existing assets cannot be readily re-profiled to take advantage of debt market conditions.
- Borrowing costs (and hence water and sewerage prices) are likely to be impacted to the extent that IPART's cost of debt methodology results in the major NSW water businesses all refinancing significant proportions of their debt portfolio in the same determination period.

Hunter Water also notes that credit rating agencies may be concerned if a large proportion of the collective water utilities' debt is refinanced within a short period. This could in turn have implications for borrowing costs if the utilities' ratings were to be downgraded.

Hunter Water strongly encourages IPART to adopt a ten year trailing average cost of debt with annual updates.

Hunter Water's submission to the issues paper detailed a four-step process to implement its preferred approach:

- IPART would set cost of debt parameters for each price determination using a ten-year trailing average referencing actual historical information. IPART would lock in prices for the four-year price path, subject only to CPI movements.
- IPART would track and record the impact of movements in the cost of debt parameters for each of the four years of the price path. IPART would take account of the movement in the annual revenue requirement based on a ten per cent refinancing of debt at the end of each financial year. At the end of each price path, IPART would calculate the net financial impact of movements in the cost of debt

parameters across the four years, again assuming a ten-year historical average with an annual one-tenth adjustment.

- IPART would allow a 'true up' of actual financing costs at the next price determination, based on actual year-to-year movements in the rolling historical cost of debt parameters during the current price path.
- IPART would apply NPV smoothing of revenues and prices for the next price determination to moderate and transition any material bill impacts for customers associated with the 'true up' mechanism.

An alternative approach

IPART sets out a draft decision to update the 50 per cent weighting for the current cost of debt[1] to reflect changes in the actual risk-free rate and actual debt margin throughout the regulatory period. IPART proposes to calculate the current cost of debt based on differences between the initial estimate of the current cost of debt and the actual cost of debt by tracking differences at the end of each month of the regulatory period. IPART would calculate a net adjustment amount at the end of the price period using assumed debt levels for each regulated utility throughout the price period. IPART would allow a true-up of this amount in the following regulatory period.

Hunter Water's current retail price determination is set for four years. Under IPART's proposed approach, there would be 48 monthly updates to the current cost of debt estimate. To exactly match the current cost of debt allowance, Hunter Water would need to borrow 50% of total debt during the 40-day averaging period prior to the start of each regulatory period. Hunter Water would then refinance a portion of this debt (~ 1% of total debt) at the end of each month. This new debt would mature at the end of the regulatory period, and IPART would repeat the same steps for the following regulatory period.

If IPART retains the 50/50 cost of debt method, Hunter Water can see merit in updating the current cost of debt estimate throughout the regulatory period. Under the existing 'on the day' method, IPART assumes that the regulated utility borrows 50 per cent of the total debt portfolio at the start of the regulatory period and refinances this debt at the end of the regulatory period. This creates refinancing risk for the utility that can only be managed using more expensive debt products. A well-designed method of updating the current cost of debt should allow the utility to match or closely approximate the actual cost of new debt raised throughout the regulatory period.

IPART is of the view that the draft decision would *'reduce refinancing risk, because a firm would only be exposed (ex post) to the average cost of debt that occurs over the regulatory period, rather than the rate on the day risk as currently'*.

Hunter Water is of the view that IPART's draft decision would not materially reduce refinancing risk and would introduce significant additional borrowing and transaction costs. A utility that was attempting to replicate IPART's method of updating the cost of debt "at all points during this period" would need to constantly refinance a proportion of the 50% current debt portfolio. All of this refinanced debt would mature at the end of the regulatory period when the current debt cost is reset.

[1] Hunter Water's past pricing submissions also use the terms "short-term" and "market" cost of debt to refer to the 50% weighting applied to the current cost of debt.

Hunter Water proposes the following steps for updating the current cost of debt estimate:

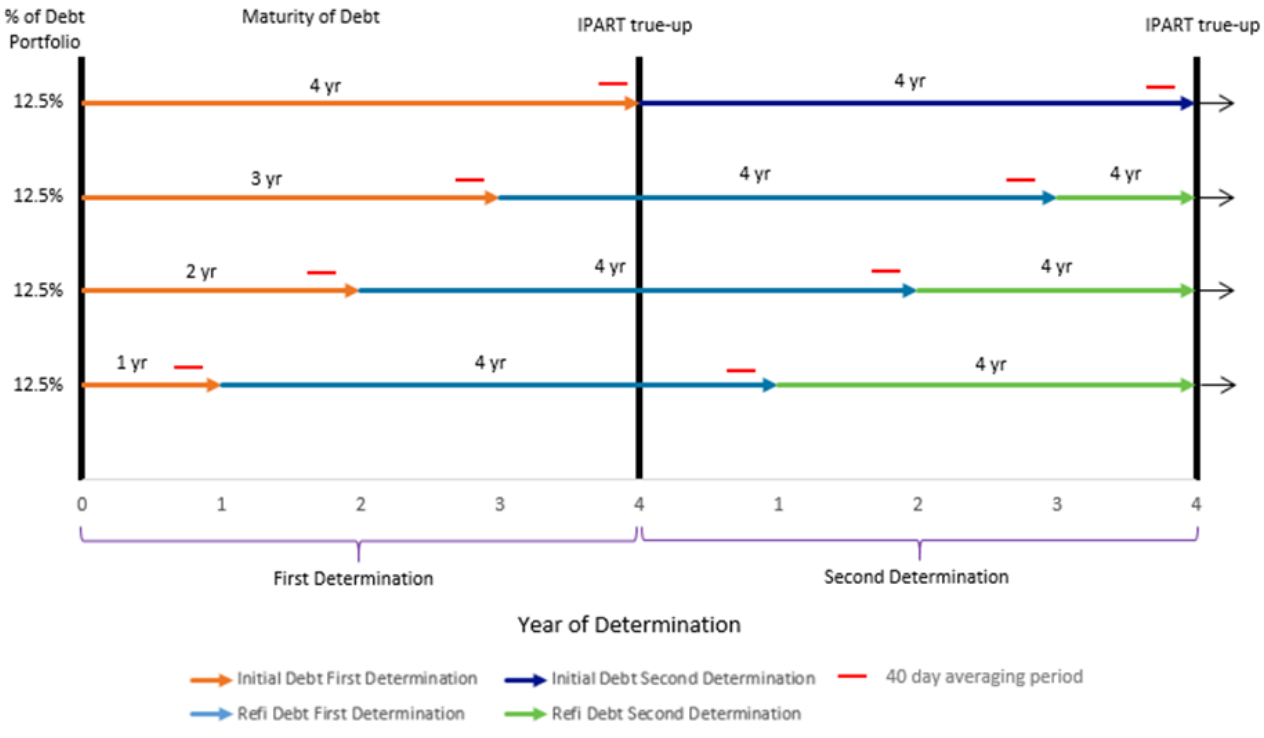
1. IPART sets in place a new WACC method that would apply to each regulated utility at the next price determination. Hunter Water's next price period will start from 1 July 2020.

2. IPART calculates the current cost of debt based estimate using the risk-free rate and debt margin from a 40-day trailing average period within the March to May period in 2020 (as per the existing WACC method).

3. IPART keeps a record of cost of debt movements throughout the regulatory period, assuming a trailing period based on the number of years in the price period. Under a four-year price period, 25% of the current (short-term) debt portfolio would roll off after year 1, another 25% after year 2, and another 25% after year 3. This amounts to 12.5% of the total debt portfolio given the 50% weighting for current debt costs. The figure below illustrates how this would work in practice.

4. IPART calculates the cost of debt for each 12.5% tranche using a 40-day trailing average within the March to May period of the relevant year. IPART assumes that the regulated utility locks in this cost of debt for a four year period for each tranche. Consequently, the cost of debt calculation period extends into the following price period for the 12.5% tranches at the end of year 1, year 2 and year 3.

5. IPART calculates a true-up amount at the end of the determination period based on the actual cost of debt in each 40-day window of each year compared with the estimated cost of debt at the start of the pricing period. IPART applies NPV-smoothing to any adjustment amount across the following price path.



Hunter Water accepts that there is an added degree of complexity in this approach, relative to IPART's 2013 WACC method. Future price reviews (beyond the next price period) will need to take account of the cost borrowings from the previous regulatory period when setting the current cost of debt allowance.

Hunter Water considers that this approach is a more practical method of calculating the current cost of debt and better approximates a prudent and efficient debt management approach.

IPART's draft decision allowed for an end-of-period true up of any adjustment amount. Hunter Water supports this approach over the alternative of annual price changes. Hunter Water considers that a true-up and smoothing approach is fit for purpose given the likely incremental adjustment to the revenue requirement, the administrative costs of updating prices annually, and the difficulty of explaining to customers how financing costs result in price movements. Hunter Water understands that annual price adjustments may work better for other regulated utilities, however our preference is to not add further complexity to the price setting process.

Hunter Water would not require any transitional mechanism to accommodate the proposed current cost of debt method outlined above.

3 ESTIMATING THE EQUITY BETA

Hunter Water's response to IPART's issues paper expressed the view that the data set used for the equity beta analysis should take a long-term perspective, drawing in all statistically strong estimates of comparator companies. The period for measuring the beta estimate should not be limited by a short rolling time period. Hunter Water also noted that IPART should have a clear and transparent methodology for selecting proxy companies to reinforce principles of transparency, replicability and predictability. The selection of proxy companies could occur under a consultative process whereby utilities can provide comment on selected companies and weighting applied to comparators.

Hunter Water considers that IPART's draft decision to use the broadest possible selection of proxy companies to estimate equity beta is a step in the right direction in addressing the above concerns. However, the draft decision is broadly worded and does not indicate how issues like the proxy selection process, time periods and consultation with utilities are to be specifically addressed.

IPART's draft report was generally supportive of the practicality of Frontier Economics suggestions on behalf of Sydney Desalination Plant as to how to improve the selection of proxy firms. Hunter Water considers that IPART's draft decision could be strengthened by adopting key elements of the Frontier Economics' report. If this approach were to be taken then IPART would:

- use the longest history of returns data available for each of the firms in the selected comparator set
- generate a preliminary list of companies from the main data sources used in Australia for beta estimation (Bloomberg and Thomson Reuters) classified as falling within the relevant industry
- supplement the preliminary list of companies using any additional comparators identified by other Australian regulators, and
- consult with stakeholders whenever IPART is considering revisions to its comparator sample.

4 INFLATION ESTIMATE

Hunter Water's response to IPART's draft issues paper noted that there was a reasonable case to argue that a more accurate WACC inflation estimate would use a market-based approach, rather than a method that is designed not to deviate materially from 2.5 per cent. Accordingly, Hunter Water encouraged IPART to undertake a more detailed examination of the Break Even Inflation (BEI) measure.

Hunter Water appreciates the analysis and discussion of the BEI approach contained in IPART's draft report. Hunter Water notes IPART's conclusion that there remains a concern around liquidity risk which could impact the accuracy of the BEI method at various points in the economic cycle. IPART also considers that due to data limitations, the BEI method is a slightly more complex, and less replicable, method compared to a geometric average. IPART therefore proposes to continue using the geometric average method to calculate inflation whilst recognising the in-principle benefits of using the BEI method.

Hunter Water supports IPART's draft decision to adjust WACC inputs by the expected rate of inflation over the regulatory period rather than the longer 10-year term. IPART's revised approach will make the nominal to real WACC adjustment more reflective of current conditions.

Hunter Water supports IPART's draft decision to reconsider a move to the BEI method at the next WACC review.

APPENDIX A: DRAFT DECISIONS AND RESPONSES

Measuring WACC inputs		
1.	**Maintain our definition of the efficient benchmark firm as 'a firm operating in a competitive market and facing similar risks to the regulated business'.**	Agree. Hunter Water's submission to IPART's issues paper also noted the importance of ensuring that the benchmark entity takes into consideration the risks of investing in and operating infrastructure assets. This will recognise the risks of substantial up-front costs and capital investment, long lives of assets and long and detailed planning process which drives investment decision making in a regulated business such as Hunter Water.
2.	**Synchronise the sampling dates for the risk-free rate, debt margin, current MRP, inflation and the uncertainty index.**	Agree. Consistent with Hunter Water's response to IPART's issues paper.
3.	**Adopt a sampling period of two months from the sampling date for the risk-free rate and debt margin.**	Agree. Consistent with Hunter Water's response to IPART's issues paper.
4.	**Continue to provide the regulated business with confidential, advance notice of the sampling dates.**	Agree. Consistent with Hunter Water's response to IPART's issues paper.
Determining the cost of debt		
5.	**Continue to estimate the cost of debt as the midpoint between our estimates of the current and historical cost of debt when the uncertainty index is at, or within one standard deviation of, its long-term average.**	Hunter Water's continues to support a ten year trailing average cost of debt approach as set out in section 2.

6.	**Adjust our estimate of the current cost of debt to reflect the cumulative monthly change in the actual cost of debt during the regulatory period, and to make this adjustment through a regulatory true-up:** – **at the beginning of the following regulatory period, and** – **in the notional revenue requirement (NRR) for the next regulatory period.**	Hunter Water strongly prefers adoption of a single cost of debt based on the ten year trailing average approach. However, as outlined in section 2, if IPART remains committed to adopting the midpoint between estimates of the current and historical cost of debt then Hunter Water considers that its proposed approach should be modified to: – provide for annual rather than monthly changes in the current cost of debt during the regulatory pricing period, and – allow for debt to mature over the following price period (i.e essentially a four year trailing average approach assuming a four year regulatory period).
7.	**Continue to use the 10-year BBB corporate bond spreads published by the RBA to measure the debt margin across all industries.**	Agree. Consistent with Hunter Water's response to IPART's issues paper.
8.	**Convert published bond yield data into annualised yields.**	Agree. Consistent with Hunter Water's response to IPART's issues paper.
9.	**Continue to use the 10-year coupon-paying bond yield data to estimate the cost of debt.**	Agree. Consistent with Hunter Water's response to IPART's issues paper.
10.	**Continue to use a 10-year term to maturity to estimate the cost of debt.**	Agree. Consistent with Hunter Water's response to IPART's issues paper.

Determining the cost of equity		
11.	**Continue to use the Sharpe-Lintner CAPM to estimate the cost of equity, and monitor the impact that the FFM would have if we adopted it at a future review.**	IPART's issues paper did not raise the issue of alternatives to the Sharpe-Lintner CAPM (SL-CAPM). Hunter Water notes that the implications of adopting an alternative approach towards measuring the cost of equity such as the Fama-French model (FFM) would need to be carefully assessed. Hunter Water agrees with IPART that there is insufficient evidence at this time to support implementing an alternative to the SL-CAPM. Accordingly, it makes sense to continue to use the SL-CAPM whilst tracking the relative performance of the FFM over the next five years to inform future WACC reviews.
12.	**Continue to estimate the cost of equity as the midpoint between our estimates of the current cost of equity and the historical cost of equity when the uncertainty index is at, or within one standard deviation of, its long-term average.**	Agree. Consistent with Hunter Water's response to IPART's issues paper.
13.	**Continue to use a range with a midpoint of 6% as the estimate of historical MRP**	Agree. Consistent with Hunter Water's response to IPART's issues paper.
14.	**Continue to use our existing six methods to measure the current MRP.**	Agree. Hunter Water notes that stakeholders generally support continued use of the six methods.
15.	**Continue to use the ASX 200 share price index and consensus earnings per share forecasts to measure the current MRP using the Damodaran and Bloomberg methods and the two Bank of England methods.**	Agree. Hunter Water supports Sydney Water's view that more work needs to be done on the underlying causes of volatility in the short term market risk premium to support any proposed modifications to these methods.
16.	**Modify the indicators we use to measure the current MRP using the market indicator method by replacing two of our existing indicators – the dividend yield and the risk-free rate – with one new indicator – the earnings yield less the risk-free rate.**	Agree. IPART's reasoning that the modified approach will be less impacted by corporate regime factors and avoids double counting of common factors makes sense.

17.	**In combining different DDM MRP estimates, move from the midpoint to a median approach, but do not exclude outliers.**	Agree. Hunter Water considers that this approach will provide a more representative estimate of the six dividend discount model (DDM) market risk premium (MRP) estimates. IPART could monitor the relative accuracy of using midpoints, medians and means in the lead up to the next WACC review.
18.	**Determine the point estimate of current MRP as the weighted average of the market indicators MRP and the median DDM MRP, with a one-third weight to the market indicators MRP and two-thirds weight to the median DDM MRP.**	Agree. Hunter Water considers that IPART should monitor the relative accuracy of using these and other weightings in the lead up to the next WACC review.
19.	**Continue to re-estimate equity betas at each price review to inform our assessment of whether the existing estimates remain appropriate.**	Hunter Water's response to IPART's issues paper noted the significant impact that movements in the beta can have on utilities' revenue requirements. Accordingly, Hunter Water maintains its preference that IPART provide advance notice of the equity beta estimate prior to the commencement of each price review. An alternative would be that IPART indicate ahead of a price review the likelihood of changes to the beta in the context of new market data or significant financial events. This would be consistent with IPART's statement in the draft report that it would only change the equity beta estimate if there is sufficient evidence.
20.	**Use the broadest possible selection of proxy companies to estimate equity beta, but exclude thinly traded stocks.**	Hunter Water supports this draft decision subject to inclusion of some specific process steps to enhance transparency, replicability and predictability as outlined in section 3.
21.	**Determine the appropriate equity beta having regard to equity betas calculated using the OLS method with the Vasicek adjustment.**	Agree. Consistent with Hunter Water's response to IPART's issues paper.
Combining measurements to derive the WACC		
22.	**Maintain our 2013 method of constructing the uncertainty index.**	Agree. Consistent with Hunter Water's response to IPART's issues paper.
23.	**Maintain our 2013 method decision rule.**	Agree. Consistent with Hunter Water's response to IPART's issues paper.

24.	**Continue to use our discretion to determine the appropriate weighting of current and historical average market data when the market is in an abnormal state, and to consult with stakeholders before we make our decisions.**	Agree. Consistent with Hunter Water's response to IPART's issues paper.
25.	**Continue to re-estimate the gearing of the benchmark entity at each price review to inform our assessment of whether the existing estimates remain appropriate.**	Hunter Water maintains the view, contained in its response to IPART's issues paper, that gearing should be reviewed prior to a price review to allow for enhanced accuracy in price submission planning and modelling. An alternative would be that IPART indicate ahead of a price review the likelihood of gearing changes in the context of new market data, significant financial events or regulatory policy developments.
Measuring inflation and gamma		
26.	**In converting our nominal WACC inputs into real terms, adjust them by the expected rate of inflation over the regulatory period.**	Hunter Water's response to IPART's issues paper questioned whether IPART's inflation adjustment should more appropriately reflect parameters inherent in the nominal WACC, as well as conditions likely to be experienced over the course of the regulatory period (rather than the longer term). Hunter Water supports IPART's draft decision to adjust nominal WACC inputs by expected inflation over the regulatory period.
27.	**Calculate the average expected inflation rate as the geometric average of:** – **the RBA's 1-year ahead inflation forecast in its most recently issued Statement of Monetary Policy for the first year of the regulatory period, and** – **the midpoint of the RBA's target inflation band (2.5%), for the remaining years in the regulatory period.**	Hunter Water supports this approach as outlined in section 4.
28.	**Reconsider whether we should move to a break-even inflation method to calculate the average expected inflation rate at the next review of our WACC method.**	Agree.

29.	**Calculate expected inflation as the geometric average of the change in the level of prices.**	Agree.
30.	**Define the 1-year ahead RBA forecast we use to estimate inflation, as the inflation forecast:** – **In the RBA's most recently issued Statement of Monetary Policy, and** – **That is closest to 12 months ahead of the start of the regulatory period.**	Hunter Water agrees with IPART that this decision would provide more clarity in terms of the RBA data that will be used for inflation estimates using the geometric average approach.
31.	**Continue to use 0.25 as the value for gamma.**	Agree. Consistent with Hunter Water's response to IPART's issues paper.