INDEPENDENT PRICING AND REGULATORY TRIBUNAL

REVIEW OF THE IPART WACC METHOD

Tribunal Members
Dr Peter Boxall AO, Chairman
Mr Ed Willett and Ms Deborah Cope, Members

Members of the Secretariat
Mr Hugo Harmstorf, CEO, Mr Mike Smart,
Ms Anna Brakey, Ms Melanie Mitchell and Mr Anthony Rush

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OPENING REMARKS

THE CHAIRMAN: Good morning and welcome. I am Peter Boxall and I am Chair of IPART, the Independent Pricing and Regulatory Tribunal.

I would like to begin by acknowledging that we are meeting on the Gadigal land of the Eora people and I would like to show my respects to the traditional custodians of that land and Elders both past and present.

I welcome you to this public hearing, which is part of the consultation process for the review of our standard method that we use to decide the weighted average cost of capital for our regulated businesses and in other cost reviews,

I am joined today by my fellow tribunal members, Ed Willett and Deborah Cope. Assisting the tribunal today are members of the IPART secretariat: Hugo Harmstorf, who is IPART's CEO; Mike Smart, our chief economist; as well as Anna Brakey, Melanie Mitchell and Anthony Rush.

Our WACC method was last updated in 2013 and is generally working well. Overall, it has increased the stability of our regulatory regime for regulated businesses. However, we review it periodically to make sure that it is still functioning as intended and to consider whether we can make incremental improvements where it is feasible and beneficial to do so.

In early July, we published an issues paper which asked questions and put forward our preliminary views on a number of issues. The purpose of today's hearing is to hear your feedback on our preliminary views. We are also interested in your thoughts on any other issues to do with our standard WACC method that we might not have canvassed in our issues paper.

We are also seeking written feedback on questions asked in our issues paper. The closing date for submissions is 18 August, which is this Friday. At the end of this hearing, we will assess whether this gives everyone sufficient time to respond to any issues raised today or if we need to allow a bit more time.

We will consider all submissions and the feedback we receive at this hearing and we will undertake further analysis. We will release a draft report in October and there will be an opportunity to make further submissions on that.

The hearing today is split into three **session**s. The first session this morning will consider our preliminary views and questions on the cost of debt; the second session will consider issues concerning the cost of equity; the third session will consider other implementation issues including how we sample parameters, measure inflation and apply the WACC decision rule.

We will have a break after the first two sessions at about 11.45.

To begin each session, a member of the IPART secretariat will introduce a topic and I will then invite discussion from representatives at the table and then any further comments from the audience.

As this hearing is being recorded and transcribed. I ask that speakers please identify themselves and, where relevant, their organisation and to speak clearly and loudly. Thank you.

I now call on Anthony Rush from the IPART secretariat, to introduce our first session on the cost of debt.

Session 1: The cost of debt

MR RUSH: Thank you, Dr Boxall.

In this session, we seek stakeholder feedback to our preliminary views and questions on the cost of debt. These are contained in chapter 4 of our issues paper.

To summarise, we currently set the cost of debt at the start of each regulatory period and apply this value for the whole period. We do this by adding estimates of the 10-year risk-free rate and the risk premium on 10-year BBB rated corporate bonds with an allowance for debt raising costs.

We calculate a current estimate averaged over a 40-day period and the historical average over the past 10 years of the risk-free rate and the risk premium. We then take the midpoint of the current and historical averages.

We considered three potential refinements to our update:

1. Whether we should update the cost of debt within a regulatory period or continue to set a single cost of debt for the period;
2. When estimating the cost of debt what mix of current observations and historical averages should be used;
3. Whether adjustments to published bond yield data should be made to reflect long-term borrowing costs. This includes whether we should annualise yields that are based on semi-annual rates of return and whether any adjustment should be made for the fact that the cost of debt is measured from coupon-paying bonds.

We now seek your feedback on these questions.

THE CHAIRMAN: Would anybody in particular like to start off? Otherwise I will just hone in and grab someone. How about Justin from the Sydney Desalination Plant?

MR JUSTIN DE LORENZO (Sydney Desalination Plant): Thank you, Mr Chairman. Firstly, we are pleased that the review is on foot. We welcome it today and we intend to participate fully in it.

We are still formalising our views on our positions, but one thing we were interested in is actually a question, so I will now turn a comment into a question, if that is okay.

THE CHAIRMAN: Yes, sure.

MR DE LORENZO: In terms of the benchmark efficient entity - and there is a little bit of discussion about that in the issues paper - we would be interested in whether the secretariat, IPART, has a view about particular debt management strategies that flow from a particular view of benchmark efficient entities and whether you have any comment on that.

THE CHAIRMAN: Anthony?

MR RUSH: We might leave that to session 3.

THE CHAIRMAN: Yes, so hold that question, Justin.

MR DE LORENZO: Thank you, Chair.

THE CHAIRMAN: Thank you very much, Justin. Hunter Water, Peter or Jayne?

MR PETER SHIELDS (Hunter Water):   Overall, I suppose we favour a shift away from the current approach. That is the position we held through the 2013 review and also the position we have put in our 2015 price submission. We think that there should be a greater weighting, if not a full weighting, to the historic trailing average. Again it is simply that we have average asset lives of 60 to 70 years, long-term investments in large capital assets, and this creates some instability, so we think there should be a move to a full trailing average or at least that greater weighting be given to historic rates.

THE CHAIRMAN: Thanks, Peter. What about Sydney Water? Jeff, Zoran?

MR JEFF GRAHAM (Sydney Water):   I would probably agree. We have similar views to Hunter. With a benchmark entity like Sydney Water borrowing long term for long-lived assets, it is hard to see an entity like that, in the theory of the method at the moment, refinancing 50 per cent of their debt every four years or using some products to do that. I do not think a benchmark entity would do that. Given the long tail, I think a 10-year trailing average is probably more appropriate, as we see it, and a much better risk match for us compared with the current method. In theory, it has a refinancing risk that is quite significant if we were to refinance 50 per cent of our debt every four years. So those are our reasons.

MS COPE: Could I ask a question on that?

THE CHAIRMAN: Sure.

MS COPE: We regulate a range of industries and they have different characteristics. Are you suggesting that the trailing average should apply across the whole so that the WACC formula is consistent across different sectors or are you saying that what we need to do is have different ways of targeting that depending on the nature of the businesses that have been stipulated, or are you just saying that, for you, that is what you think should apply?

MR GRAHAM: Yes, for us that is what it is. I cannot really speak for other agencies as to how they would normally set up a benchmark firm in their industry. I know for Sydney Water, and anyone with long-lived assets, it would be unusual if you had the choice, to be refinancing 50 per cent of your debt every four years or setting up a derivative structure to meet that.

There are advantages in borrowing long term for us and there is liquidity in that market for us. To move out of that would probably increase our costs, whether it be derivatives or a move away from that.

MS COPE: Is there anyone around the table who is in a different sector who has a similar or different view on what is appropriate for them?

THE CHAIRMAN: Justin?

MR DE LORENZO: Yes, if I could, and I acknowledge that there are different ways to manage debt. I think in the private sector world, and probably maybe looking over in the AER world, where there are private sector regulated entities, there are different approaches to debt management that would involve hedging differently to just issuing of physical debt. A benchmark efficient entity could have numerous ways and numerous debt strategies to deal efficiently with their debt management.

As I say, we have not finalised our views, but it is important just to acknowledge that that is the case. I think in our submission we will be talking about a broader set of debt management strategies than one single approach. That is not to say that, in any way, the approach that other entities use is not efficient. We are not saying that at all, but there is more than one efficient way is probably the way we would put it.

THE CHAIRMAN: Thank you, Justin. Michael?

MR MICHAEL REDDICK (Tcorp): With capital, in terms of utilities, I would think they would lend themselves more towards the trailing average, whereas if you are looking at regulating ticket prices for buses, that is completely different. I would think with the capital intensive nature of utilities, their debt management practice would, in the absence of regulation, lend itself more towards a trailing average.

THE CHAIRMAN: Thanks very much, Michael. Anybody else? Stephen Gray?

MR STEPHEN GRAY (Frontier Economics): In IPART's last WACC review, the same submissions, the same issues were raised and IPART came down fairly strongly with the view that that 50:50 weighting would be, in IPART's view, representative of the benchmark efficient approach at that time.

I guess one of the other sort of attractive features of that was the symmetry with what was being done in relation to return on equity. Also the terms of reference and the issues paper indicated that IPART thought that the current approach was working very well in looking at more incremental changes. This would be a very fundamental change. Is that something that is on IPART's radar? Are you looking for more incremental changes around the 50:50 approach that you currently have?

THE CHAIRMAN: Before the last review, back around 2011, the WACC was on the short term only. In the major review then, to which Stephen alludes, we looked at it and we came up with a 50:50 approach. We do think that that works well and it has worked well over the last four or five years. It is predictable. There was a regulatory upgrade from Moody's, for example.

In terms of the WACC being controversial at the time of price reviews, it is much less of an issue now because the regulated entities know very much where they stand. But that does not mean to say we are not prepared to contemplate large changes. The trailing average issue has come up from time to time, and it has come up again, and we will definitely consider it.

Basically everything is on the table, but we do think it has worked well, so we would need to look at the arguments and look at the issues that are put forward.

Would anybody else like to comment? I'll just start to work around the table. Jonathan from ARTC?

MR JONATHAN TEUBNER (ARTC): From our perspective, whilst I think that the full trailing average approach probably reflects better how you deal with debt, I support what Stephen was saying about the alignment with the cost of equity.

The other thing that impacts us is the predictability in terms of the return. If you are reassessing your return every year, you have no certainty over the five-year period as to what that return will be, so that will impact on your investment decision. Although it may not be strictly sort of aligned with how you do the funding, I think predictability probably has more weight in that respect.

THE CHAIRMAN: Thank you. Yolanda from WaterNSW?

MS YOLANDA CHORA (WaterNSW): The only thing that we would want to add is with the 10-year trailing average approach, we are looking at it with an annual update, therefore, you are getting less of a price adjustment for customers with that approach. Really, we have more in mind the impact on customers, that is why we would be supporting that approach.

THE CHAIRMAN: Thank you, Yolanda. Lisa, do you want to say something?

MS LISA WELSH (Sydney Desalination Plant): No, I have nothing further to add to what Justin has said.

THE CHAIRMAN: PIAC, Thea or Miyuru?

MR MIYURU EDIRIWEERA (PIAC): Being a New South Wales consumer advocate, we would like any change to the WACC methodology that may be considered, and any discussion of that, to be very much framed around what the impact to consumers would be in terms of what the cost on prices would be and any changes to those - whether it is smaller incremental changes or larger step changes are needed at the end of a regulatory period - and what is actually in the best interests for consumers.

THE CHAIRMAN: We have been very focused on that as well as other issues.

MR GRAY: Can I ask a question on that?

THE CHAIRMAN: Yes, sure, Stephen.

MR GRAY: Is there a preferred outcome then? Suppose that there is agreement about the trajectory of prices. Is PIAC of the view that it would be better to have five small incremental changes during a regulatory period more so than store up those changes and have a large step change at the end of the period given the sort of NPV of all of that is the same? Is there a preferred choice between those two?

MR EDIRIWEERA: I am not sure if there is a correct answer, certainly not one that I am aware of at the moment. I think that is definitely an important discussion to have, as to which is actually in the best interest of consumers.

THE CHAIRMAN: We do take that into account. Leaving aside WACC for a minute, when we are doing a pricing review if there is, say, a large increase based on the evidence, we do often look at phasing that in over time so that it is NPV neutral in order to avoid bill shock.

MR GRAY: Can I follow up on that?

THE CHAIRMAN: Yes, go ahead, Stephen.

MR GRAY: Another case would be where there are two approaches. Suppose there are two approaches that both involve the same average prices to customers over the long run, so the average price is the same over the long run. One approach involves much more stable prices, the other approach has more volatile prices, but they average out to be the same. Would PIAC have a view that the low volatility trajectory would be preferred to the high volatility given that the mean is the same?

MR EDIRIWEERA: I think the lower volatility would probably be preferable, specifically for vulnerable and low-income households to be able to budget for that.

THE CHAIRMAN: From the household budget perspective, yes. Yes, Zoran?

MR ZORAN PEROSKI (Sydney Water): Leading up to the last price determination, we asked our customers this question. They were strongly in favour of bill stability, particularly around the choice of retaining a higher long run marginal cost in their water usage prices.

We have done a little bit of modelling on the adoption of yearly updates with the cost of debt and the 10-year trailing average and there are some pretty extreme assumptions. We do not see that the impact will be very large - in the range of, in nominal terms, about $4-$5 per year on their total bill. We were actually in favour of adopting the yearly update with a 10-year trailing average, but rather than introducing small incremental price increases, which are probably a little bit more difficult to explain to customers, that we move away from this fixed bill stability for customers, and that was in our research leading up to our price determination. We prefer or we believe our customers prefer an NPV neutral true-up leading into the next price determination, where that store or increase is then spread over the remaining period of the determination.

THE CHAIRMAN: Just to clarify, at least in my mind and possibly for others, the research that Sydney Water did was more to do with variable and fixed costs of a bill. I know it does have an impact on volatility, but this would be a different sort of volatility.

MR PEROSKI: It would be, but they are not unrelated issues.

THE CHAIRMAN: No, they are not unrelated.

MR PEROSKI: I think going into our 2020 submission, there will be more research on that particular question so we will have more ability to be able to answer this.

THE CHAIRMAN: We look forward to that. We are just recovering from two years of price reviews on water. Thanks very much, Zoran. Mary-Clare from Essential Energy?

MS MARY-CLARE CROWLEY (Essential Energy): No, I have nothing further to add.

THE CHAIRMAN: That's fine. Peter from Treasury?

MR PETER MILLER (NSW Treasury): I would like to reiterate some of the earlier comments. If a regulatory framework drives actions which differ from what would happen in a competitive market of non-regulated businesses, you would have to wonder is this efficient? Is the regulatory tail wagging the dog?

THE CHAIRMAN: We do wonder about that, which is one reason why we have our benchmarking.

MR MILLER: With that general principle in mind, the trailing average - a 10-year trailing average - seems to be a preferable approach.

THE CHAIRMAN: Are there any other comments around the table? Is there anybody from the floor who would like to ask a question or make a comment? Would you like to say anything, Mike?

MR SMART: No, thank you.

THE CHAIRMAN: Well, let us move on. There is plenty of time to revisit issues. Let us move on to the next session which is the cost of equity

MR GRAY: Sorry, just before we do --

THE CHAIRMAN: Yes, Stephen?

MR GRAY: I have a sort of framework question about the role of the definition of the "benchmark efficient entity". IPART has, up to this point, suggested that the benchmark efficient entity would adopt a sort of 50:50 debt management approach. There are two debt pools, if you like - a short-term and long-term debt pool - that kind of underpin that. Neither of those debt pools can be managed in a way that, in practice, is exactly consistent with the IPART allowance. So is it IPART's view that the benchmark efficient entity and the benchmark efficient cost of debt should be estimated in a way that reflects an implementable debt strategy?

THE CHAIRMAN: The short answer to that is yes, but the longer answer, which I think is relevant and which I will now attempt to give, is that IPART's view is very much along the lines of what Peter Miller said, in that in regulating an entity - even a large entity like Sydney Water or Hunter Water and also private ferries, buses, transport and things like that - what we try to do, to the best of our ability, is set a price which is consistent with the sort of price that a firm operating in a competitive market would set.

There is an alternative model which says that we should regulate according to what a regulated entity would do in a monopolistic market. We are saying that we set a price, and we very much try to set a price which would be the outcome in the hypothetical situation of a firm that is operating in a competitive market.

From there you move to various issues when you are doing that, and one issue is: what is the weighted average cost of capital? That is where we sort of start. A point that Jonathan made is that is also about what is practical, what is implementable, what is predictable, what reduces administrative complexity and transparent as well. So a number of these factors come in when you come to a final landing.

MR GRAY: If you take the long-term debt bill, for example, the kind of strategy that underpins that, the allowance for the long term is like there is a trailing average debt strategy, and a business in a competitive market, say, an infrastructure-type business that operates in a workably competitive market implementing that long-term debt strategy would issue debt on a sort of staggered maturity trailing average basis. That would seem to imply with it an annual update of the allowed return on debt. Whether that gets to flow through to prices immediately each year or is stored up is another matter, but that would imply an annual update for prices each year because that would be the cost that would be borne by an efficient firm operating that particular strategy.

THE CHAIRMAN: Yes, I agree, and that is where issues come in. Then you get to issues such as: how does that do in terms of setting prices for five years, what is the impact on customers, and things like that. So you get to do those sorts of trade-offs.

MR GRAY: In our submission - I guess we are looking for some guidance - it would be helpful if we could make submissions that reflect the implementability of a strategy, that if for this particular debt pool, the efficient unregulated infrastructure firm would be doing these kinds of things and this would be the cost of debt that they would be bearing if they did that.

THE CHAIRMAN: Yes, and it would be helpful if people bring to our attention and make submissions on issues which can be implementable, not just for the WACC but also the implication of having a different WACC and what that does to prices and how that is implementable in terms of doing a price review every four or five years.

MR WILLETT: One follow up from me. Stephen, you are suggesting that you can suggest some ways which would then encourage a regulated industry to engage in the competitive finance market more in the way that a competitor would engage in this finance market?

MR GRAY: Yes, yes

MR WILLETT: We would be very interested in that.

MR GRAY: That sort of begs another question, which might be a little more complicated. I get that you want to set an allowance based on an efficient benchmark firm and that definition of "efficient benchmark firm" is a similar kind of firm operating in a workably competitive market. However, it seems to me that you cannot ignore the incentives that the regulatory allowance will place on businesses, that businesses that are under IPART's regulation will, quite rationally, seek to match as best they can the regulatory allowance with their actual cost and --

THE CHAIRMAN: We agree

MR GRAY: So does that then imply that if IPART were considering a change to its return on debt allowance, it would take into account the prudent debt management approaches that businesses have undertaken in response to the incentives created by the current regulatory environment?

MS BRAKEY: Are you suggesting some grandfathering, a transitional arrangement or --

MR GRAY: Yes, some kind of transition to reflect that what a business might have done up to today is entirely prudent, and what we all would have done if we were receiving a regulated set of cash flows under the current approach, and that if there is a change to some new approach and whether there would be some sort of transition in place to --

THE CHAIRMAN: That's a good point and we would welcome submissions on that. That says that, in the event if we were to make a change to the WACC methodology which was substantial enough that it meant that, going forward, the regulated businesses would be conducting their debt management in a different way, then we would need to think about that transition.

One thing that comes to mind is that when the tribunal does the next price review for a particular entity, they would take that into account. That is the often the way these things are done.

That is a good point and those sorts of issues raised in submissions would be very welcome. Basically anything is welcome. We have been honest. We think it works pretty well and that is the feedback we have had. So obviously to make changes, we would like to see substantive arguments and good arguments and we will look at them and try and do our best. That is a good point, Stephen.

Yes, Anna?

MS BRAKEY: Stephen, I was wondering would you propose, if we were to move to a trailing average, that that would just replace the 50 per cent long-term estimate and we would still balance off with the 50 per cent short term, or do you propose to replace the long terms and the current?

MR GRAY: It depends sort of what "incremental" means. The issues paper said that IPART was looking for "incremental" changes. The first approach that you described was putting in the incremental changes. Rather than have a 10-year allowance that was fixed for the whole five-year period, which is not really - well, it's not replicable by a business. It does not match an actual implementable finance strategy, an incremental change for just that 50 per cent debt pool would be to have the 10-year trailing average with the annual updates, and that would reflect an approach that is actually implementable. So that would be an incremental change just to that 50 per cent debt pool.

MR WILLETT: I would not read too much into the preference for incremental change in terms of things you might suggest we are doing which might not be right. If you think we are totally wrong, I would like to hear that. What that means in terms of what we actually think about it is that it should not change these things drastically at any one point in time. I think that is the second step. I think we would like to see what the first-step approach is first and where you think we could improve our approaches. I want to hear that unconstrained by the notion of --

MR GRAY: If there was that more fundamental change, so option number two, then that transition issue becomes even more important, because I think it is quite reasonable to say that it is perfectly prudent for a business that had operated under the current IPART allowance to have sought to match that 50 per cent short-term debt in a way that gives the best possible match. That would be a very big change to go into 100 per cent trailing average. A business that had matched that short-term allowance cannot go back 10 years and re-price debt at historical rates anymore, so --

MR WILLETT: That's right, but it does not mean we do not want to hear it and we do not want to discuss it

MR GRAY: Yes, I understand.

THE CHAIRMAN: Good, thank you very much.

MS BRAKEY: Mr Chairman, could I ask another question?

THE CHAIRMAN: Yes.

MS BRAKEY: I notice that nobody addressed the issues under point 3. Does anybody have views on those two proposed changes?

MR GRAY: Maybe no-one addressed them because they are so obviously correct.

MS BRAKEY: That's good, thank you.

THE CHAIRMAN: Is everybody okay to move on to cost of equity? So that will be Mike.

Session 2: The cost of equity

MR SMART: Thank you. To estimate the equity component of WACC, we focus on two measurement issues: First the current market risk premium or MRP; and, second, the appropriate equity beta for the regulated firm.

Taking the MRP first, we use both long term and short term, or current estimates. The long-term estimate of MRP of 6.5 per cent does not vary from year to year. In contrast, we re-estimate the current MRP for each review. It is difficult to observe the current MRP directly so we employ a variety of inferential approaches under the headings of market indicator approach and dividend discount model approach. We then combine these estimates to derive a final current MRP figure.

We would like your comments on our current approach, but also on some contemplated changes to it, which I will briefly outline here.

A potential change to the market indicators approach is to modify the indicators we use. Instead of using separate indicators for dividend yield and risk-free rates, we could use an indicator that is the earnings yield less the risk-free rate.

Two potential changes to the dividend discount model approach are to, first, synchronise the sampling dates for analyst earnings forecasts and equity prices; and, second, to use analyst share price targets instead of the actual equity prices.

A potential change to the way these estimates are then combined is to, first, take the median of all the dividend discount model estimates of the MRP - and that is in contrast to what we do now, which is the midpoint of the highest and the lowest - and then obtain the ultimate current MRP by calculating the weighted average of the market indicator estimate and the median dividend discount model estimate.

Turning next to the equity beta, we would like your comments on our measurement approach. Like many other, regulators, we estimate beta by performing a regression analysis on a group of proxy companies. We choose these proxies based on their risk characteristics. Ideally, they would have similar systematic risks to the regulated firm. However, it is often difficult to find close matches.

To focus our discussion today, we will concentrate on three questions, although comments are, of course, welcome on any other aspect. The first question is when should we re-estimate beta; the second question, can we improve on proxy company selection; and, third, should we adjust beta for estimation bias? Thank you.

THE CHAIRMAN: Thanks very much, Mike. Would anybody like to start off on comments on the cost of equity? Sydney Water? Jeff, Zoran, do you have anything?

MR PEROSKI: I do not have that much to add other than, given the discussion around the cost of debt, there is probably a natural question around the long-term market risk premiums just to maintain the internal consistency of the WACC. That is our primary focus, we would suggest.

THE CHAIRMAN: Thank you. Tcorp?

MR REDDICK: I would say with regard to the adjustments - so your third question - we would propose using the Vasicek adjustment. We think it has a little more science around it than the other adjustment.

If you want to change or estimate beta, we think it probably should be done in advance of a determination, so that all parties know in advance what that will be so there would be no surprises there.

THE CHAIRMAN: Thank you, Michael. Hunter Water?

MS JAYNE GRIBBLE (Hunter Water): We are still firming up our views on the market risk premium, but in terms of the equity beta, to mirror what Michael just said, I guess we would ideally like to know the equity beta prior to our price submission planning and price modelling to better inform our financeability assessments and customer impacts to help with adjustments on our modelling going into a pricing submission.

THE CHAIRMAN: So that would be like about 12 months or 15 months before?

MS GRIBBLE: Yes, we did not have a firm view of whether it could be mid-cycle. I guess mid-cycle for us is not mid-cycle for everyone, so it is a bit hard to have a firm view on when that review should occur, whether there could be a different cycle basis or whether it is in relation to market events. But, yes, it would be nice to know that in advance.

We also see merit in the Vasicek adjustment as, I guess, a transparent adjustment without subjective judgment.

THE CHAIRMAN: Thanks very much, Jayne. Stephen, do you want to make a comment on this one?

MR GRAY: Maybe two quick points. First, I think IPART's approach of pairing the long-run historical risk-free rate, with the long-run historical MRP and then prevailing risk-free rate with the prevailing MRP is like the gold standard of Australian regulation, and that is a comment.

In terms of beta, one of the things that was raised in the issues paper is how frequently betas might be updated. I think it is probably important to use a wide set of comparator firms and a relatively long history.

A recent example in WA makes the point. The Western Australian regulator has the approach of using a small set of comparators - only four - for energy businesses, and using only the most recent five years of data. In a previous round of regulatory determinations, it used the four comparators and their five-year history and concluded that the best statistical estimate that came out of that was a beta of 0.5, but then there were a number of reasons extraneous to that evidence that resulted in an uplift to 0.7.

They performed that analysis three years later and found that the best statistical estimate at that time was 0.7 and decided that it had, in fact, been wrong to make any uplift at all. Although it did not change its beta allowance, the statistical evidence had changed very materially, and that is because it was a very small set of comparators and a very short history. There was just like a lot of noise around those beta estimates, so they had to go to extraordinary lengths to sort of contort their reasons as to why the beta allowance was, in fact, going to stay the same.

I guess the moral of that story is there is really some value in having a decent size set of comparator businesses, even if one has to look offshore, and a relatively long history of data with some kind of stability, because there is just no way that the true systematic risk and the actual returns that investors are requiring are jumping around as much as a small comparator set with a short history might suggest.

THE CHAIRMAN: Thank you very much, Stephen.

MR WILLETT: To follow up on what you just said, Stephen, so do you endorse the approach that looks at those long-term and short-term measures and combines them?

MR GRAY: Yes, absolutely, for the MRP, yes. So beta is independent of that, right? So the same beta number would be plugged into the CAPM equation. We have short term estimates of risk-free rate MRP and long-term estimates of risk-free rate MRP. I think that is entirely sensible. You can see that, over time, IPART's short/short estimate and long/long estimate for required return on equity is actually quite stable. Both of those are quite stable and they kind of crisscross one another over time, and that is entirely plausible.

THE CHAIRMAN: Lisa or Justin?

MR DE LORENZO: I have just a very short comment to add to what has been said. From SDP's point of view, we value stability in the WACC overall, and particularly in this area of cost of equity. In the area of beta in particular, just to probably pick up on something Stephen said, using the correct or a long-run sample and a broad set of comparator firms, we think would bring stability around the beta estimate.

Also I think in terms of any review that IPART would do from time to time on beta, looking at different comparator firms and periods of time, there needs to be a very high threshold or compelling evidence to change the beta estimate --

THE CHAIRMAN: To change the beta?

MR DE LORENZO: Yes, because it does bring stability and predictability and, as an infrastructure owner, we really appreciate that.

THE CHAIRMAN: Thanks very much, Justin. Anybody else?

MR TEUBNER: I would like to support what Stephen was saying. Our issue in terms of cost of equity is more around the risk-free rate calculation.   That ties back in terms of what you do and how you deal with cost of debt as well. Do you sort of fluctuate cost of debt based on debt risk premium or the fact that the risk-free rate is changing?

The issue is that we have been regulated by multiple jurisdictions and there can be a strong inconsistency in terms of the view that investors require a stable return from an equity point of view. So a lot of the parameters are assessed on long-term instability and then using the risk-free rate as a market rate, which means you import market volatility straight away. I think IPART's view of having a balance on that is very positive and does reflect the fact that cost of equity is more stable going forward than if you import market volatility into that, which seems at odds with the other parameters.

One thing that we noted in terms of the issues paper is that the calculations that showed that importing some view of future costs in terms of the future market movement provided a more accurate return estimate - that is, if there was an improvement that you could provide in terms of the risk-free rate, particularly in an equity sense, to import some view of what the future will be over the next couple of years so you have a balance of historical, on the day and future to balance out what that equity view would be. In terms of beta and market risk premium, I think we are comfortable.

THE CHAIRMAN: Thank you very much, Jonathan. Yolanda?

MS CHORA: We have not formed a view on the use of the share price target instead of actual targets. From the issues paper, it did not seem that IPART was looking to move that way. My only observation is with analyst reports sort of the issue will become absorbed into the share price, and I think we need a bit more thought on that.

Then on the beta, yes, we would be looking at - as some of the others have mentioned - a mid-term review, but we would be looking for something with a bit more transparency and consultation.

THE CHAIRMAN: Thank you very much, Yolanda. PIAC, Miyuru?

MR EDIRIWEERA: Nothing, thank you.

THE CHAIRMAN: Mary-Clare?

MS CROWLEY: No, thank you.

THE CHAIRMAN: Peter?

MR MILLER: Just to echo Yolanda's comments, the equity analysts have optimism bias in their analysis and their share price targets - I can say that being a former broking analyst - and I would steer clear of using that as a source. Also, as Yolanda said, that information is in the market and would be reflected to some degree.

THE CHAIRMAN: To some degree in the price, yes. Okay, thank you, Peter.

Are there any other questions of comments on the cost of equity and beta? Would anybody from the floor like to ask a question or make a comment?

MS BRAKEY: Mr Chairman, I wouldn't mind testing out with the audience the other aspects that we have not talked about because we focused mostly on beta.

THE CHAIRMAN: Sure.

MS BRAKEY: There are another couple of things up on the screen as well. Did anybody have comments on, for example, our weighting of the dividend discount models and the market indicators?

THE CHAIRMAN: Sometimes we get things right, Anna.

There is plenty of time to make comments. What we could do, because we are well ahead of schedule, is move on to session 3 and then, after that, we can have some wrap-up chat.

For session 3, I call on Melanie Mitchell to introduce issues on WACC measurement and implementation issues.

Session 3: Sampling, inflation and other issues

MS MITCHELL: Thank you, Dr Boxall.

This is just a grouping of all the other issues that we raised in our paper that are not debt or equity specific. Starting with the first two issues, the selection of benchmark entity and the sampling dates is something that happens at the beginning of our process.

We spoke briefly about the benchmark entity in the cost of debt session. Just to refresh you the definition we use is:

> A benchmark firm operating in a competitive market and facing similar risks to the regulated business.

That is important in guiding our selection of proxy firms to determine the industry specific parameters that we use in the WACC.

Sample dates refers primarily to our current costs. We currently try and sample as close to the date of the determination as practical, but we are proposing a change to moving to sampling from a common date, which may not necessarily be the latest available data, just to take into account the inter-relationships between particular parameters.

The third point is about constructing our uncertainty index, so how we go about weighting the current and historic costs to come up with a single estimate. There is more detail about how we construct the uncertainty index in the issues paper, but essentially unless the uncertainty index is one standard deviation away from our long-term average, then we tend to use the midpoint.

We are proposing to largely maintain that approach. We think that sensitivity is about right. We did ask the question in the paper about whether or not we should provide more guidance about what we would do if the results were more than one standard deviation from the mean.

Our treatment of inflation also applies at the end of the process. In order to apply a real post-tax WACC, which is what we do, we need to adjust our nominal parameters. We use, currently, a simple forward-looking forecast based on the geometric average of the RBA one-year-ahead forecast and the midpoint of the target band for two to 10 years. We are largely proposing to maintain that approach. We have proposed a small adjustment to how we calculate that geometric average.

Lastly, we have the selection of non-market parameter values. As mentioned before, we are proposing to maintain that post-tax WACC, which we think avoids overcompensating firms who may, in practice, pay less than the statutory tax rate.

Also with gamma - which is not really used in our calculations, because it is post-tax rather than a pre-tax WACC, but it does influence our MRP estimates - we are proposing to maintain a gamma of 0.25, but we are interested in any evidence or arguments that suggest that we should move away from that value. So I'll just open it up to you.

THE CHAIRMAN: Thank you very much, Mel.

Any comments or questions? Stephen, would you like to start?

MR GRAY: Yes, I will make a comment on the uncertainty index, first of all. It might be useful for IPART to provide a couple of examples of what it would have done in some historical cases where there was an excursion out of the uncertainty index outside the one standard deviation.

For the vast bulk of time it is within, so we know exactly what IPART would do. We know that IPART may do something different if there was an excursion outside of that, but I guess you can never anticipate exactly what the circumstances of an excursion would be, how extreme it would be, and what caused it and so on. I don't think it's something for which you can write down a formula that says "If it goes out by this much, then we change the weights by this much." I don't think that would be appropriate, but perhaps there could be a couple of historical examples where there was an excursion to say, "In these circumstances with that data that was available at the time, this is the kind of thing we would have done."

It might be that, even in those excursions, IPART would have still maintained a 50:50 weighting. That might be the outcome, but I think it would be useful for stakeholders to know that these are the sorts of things that would have been considered and where we likely would have landed - so picking a couple of historical examples so you have all the data that you would have had. Does that make sense?

THE CHAIRMAN: It does make sense. Since we have had the new methodology and the uncertainty index, it has never been outside, but when you go back, clearly, the global financial crisis in 2008-9, it was outside.

Yes, that is a very good suggestion. That is something we have wrestled with. One reason why we came up with the uncertainty index was because we got questions like, "What is going to be the weighting between long and short term?" We said, "Well, it's 50:50." "But when would you deviate from 50:50?" That is when we came up and said, "If it is more than one standard deviation outside."

Thank you for that. That is very useful. Are there any other comments or questions? Zoran?

MR PEROSKI: Yes, just on the uncertainty index. The question here also outlines changing the weights and using discretion versus the rule. What would that rule look like? Would the process be consultative and you could potentially take submissions on these discussions, et cetera? What would that process also be? Because obviously setting a rule is kind of contrary to discretion, so you kind of cannot have both.

THE CHAIRMAN: That sort of gets to Stephen's point as well, doesn't it? At the moment, the rule is that the weights are 50:50 as long as it is within one standard deviation.

MR PEROSKI: Yes.

THE CHAIRMAN: Then the issue is what happens if it is outside of one standard deviation? Yes, I think it is very difficult to set a rule, but --

MR PEROSKI: I agree.

THE CHAIRMAN: One approach is Stephen's, which I think is a good approach and well worth considering; namely, what would we have done if we had been operating around 2008 with the uncertainty index?

MR PEROSKI: That sounds like to me it is leaning more to a discretion, but --

THE CHAIRMAN: Again we take submissions on everything. I think probably we would want to leave it to discretion because you just never know what moved it out and what were the circumstances under which it moved outside the mean, and an issue that came up was: is one standard deviation too much?

MR REDDICK: That is what one of my questions was going to be.

THE CHAIRMAN: Yes, go ahead.

MR REDDICK: It basically implies that in one out of every three determinations, you will use the uncertainty index to move in between the long term and short term.

THE CHAIRMAN: One out of three?

MR REDDICK: Well, if you are outside of one standard deviation, there is a 30-odd per cent chance that you are outside of one standard deviation.

THE CHAIRMAN: Okay.

MR REDDICK: So that would imply that, in one out of every three determinations, you are going to --

MR SMART: Could I jump in?

THE CHAIRMAN: Yes, because I am not sure about that. Go ahead, Mike.

MR SMART: At the moment, we are looking at a historical period to work out what is the standard deviation. Currently what we are doing is when there is more data, we are just adding to the historical records like a moving average.

Your idea about one in three years, that sort of assumes a moving window. If you go into a period of very stable conditions, then the standard deviation will become very small, if you just had a moving window, but at the moment we are maintaining the starting point. So all of the volatility that we have seen in the global financial crisis is still part of the data set --

MR REDDICK: It is still part of the data.

MR SMART: -- that is more like the value in the standard deviation.

THE CHAIRMAN: To be honest, what had come up was to go the other way, it should be half a per cent.

MR GRAY: I was going to say that the other thing is that the distribution of that index is not necessarily normal. Much of the standard deviation is driven by some large excursions during the GFCs and so on.

MR REDDICK: Sure.

MR GRAY: I think that is the reason that we have not even any excursions since it was implemented, because it is quite heavily skewed.

THE CHAIRMAN: Are there any other comments or discussion? Yolanda?

MS CHORA: I have a question. Could you repeat what the proposal is in relation to the statutory tax rate for small business?

THE CHAIRMAN: Melanie, do you want to answer that, or Mike?

MR SMART: What this is getting at is with the recent changes in the corporate tax rate for small businesses, I guess that got us thinking about some of the smaller businesses that are affected by the prices we set and what tax rate we should use as the statutory rate for those businesses.

Then I guess there is this further question that we have further changes to the thresholds in future and what account do we take of those proposed changes. You know, when is it - when it is being discussed or when it is legislated and --

THE CHAIRMAN: It is about what is the effective tax rate; if you are in a business where you can write off investments in water, the effective tax rate is 30 per cent, so that got us thinking about that.

MR DE LORENZO: I was going to ask a question about that.

THE CHAIRMAN: Yes, go ahead, Justin.

MR DE LORENZO: Is there any thought from the tribunal about changing the methodology away from the statutory tax rate to some other rate in terms of working out things like the tax allowance and the like?

MS BRAKEY: Outside the WACC or inside the WACC?

MR DE LORENZO: Inside the WACC, yes.

THE CHAIRMAN: Well, I guess that is why we are having this discussion.

MS BRAKEY: Yes, we are open to your views.

MR SMART: Maybe as a part of an answer to your question, I think we are, in a sense, sort of separating the question of whether we use a pre-tax or post-tax framework from the question of what is the value of WACC. They are hard to completely disentangle, but I guess we are not wanting to jump into the post-tax versus pre-tax framework question in this review.

THE CHAIRMAN: In terms of the review of the methodology for the WACC, how you make the tax adjustment is important. We used to have a pre-tax WACC and then make a tax adjustment to move to post tax.

MR GRAY: So here the question would be at what rate would profits be taxed for this type of business, right? There would be allowed revenues, there would be some costs and then you would subtract tax depreciation to get down to taxable income. Then the question here will be at what rate should that taxable income lie in tax, which would seem to lead to a statutory rate, but whatever is the appropriate statutory rate for that sort of benchmark entity and if it was a small entity, it might be 28 per cent instead of 30.

THE CHAIRMAN: Yes, you can have a statutory rate but then if you have large write-offs, for example, for investment in water it effectively reduces the rate below the statutory rate.

MR GRAY: Yes, it depends whether that is already taken into accounts in the regulatory modelling before you get down to the taxable income line in the regulatory model.

THE CHAIRMAN: Are there any other questions or comments? Jeff?

MR GRAHAM: Just a bit of a comment on the treatment of inflation. I noticed in your paper you have noted that there is a risk in the current method of overestimating actual inflation. If you look at the market pricing of inflation, there is quite a difference in the break-even inflation and the RBA target. Do you have a view on whether that is a risk or if we stick with the current method, are we looking at this inflation over 20 years or 50 years coming back to the RBA target over time? You have deviated away from that target for quite a few years now, on the low side.

THE CHAIRMAN: Yes, at the moment, there is a risk of overestimate. It is possible in the future that there is a risk of underestimate. This is something that we have spent quite a bit of time on and the issue was - so we are doing it over 10 years, so it was relatively easy to come to a landing that the inflation rate for the last 8 years of the 10 years should be at the RBA target. It was relatively easy to come to a landing that the first year, year 1, should be what the RBA announces, because that is the inflation target. The issue which was most vexed was year 2, about whether we should just use the RBA's 2.5 per cent target or whether we should look to some other forecast, which is more sort of market-based, or even from the RBA, I think.

MS BRAKEY: The RBA does have a two-year forecast as well.

THE CHAIRMAN: They do have a two-year forecast. After consulting, including with the RBA, the feeling was that it was best to take the one-year forecast and then use the target for the next nine years.

There was another point which Mel mentioned, which is the geometric average, but will leave that aside for a minute. It was not an easy decision, but that is where we came down.

Yes, Jonathan?

MR TEUBNER: I just wanted to say that the importance of inflation ties back to what you have for the risk-free rate. If you import the on-the-day risk-free rate, then the inflation should incorporate what is expected within that risk-free rate. If you do not to do that, you can get some weird results.

Speaking from experience, we had a review by the ACCC where they used the 20-day moving average risk-free rate, and that was 2.1, and an inflation rate on a similar basis that was 2.4. So it was a negative real interest rate despite the fact that the market was trading positive. Provided that you align the risk-free rate on a similar methodology with what you are using for inflation, then I don't think it is that important. However, if you have one particular methodology for the risk-free rate and a completely different methodology for inflation, then you would get skewed answers and that is not sustainable.

MR REDDICK: Another issue there is when you are looking at the long-term averages, if you are looking at nominal rates 10 years ago and you are deflating those off of expectations today, that is not consistent with what the real cost of debt would have been 10 years ago.

THE CHAIRMAN: No, the relevant cost then was what the expected inflation was 10 years ago.

MR REDDICK: If you were borrowing real debt then, you could have achieved that real rate back then, which does not have anything do with what the inflation is today or the expectation of inflation today.

THE CHAIRMAN: Thank you. Are there any other questions or comments. Hunter?

MS GRIBBLE: No, nothing further to add. I guess we were interested in looking at the break-even versus the forecast in terms of internal consistency of WACC parameters, but nothing further to add, thank you.

THE CHAIRMAN: Okay, thanks, Jayne. PIAC?

MR EDIRIWEERA: No, thank you.

THE CHAIRMAN: Peter?

MR MILLER: Nothing to add.

THE CHAIRMAN: Mary-Clare?

MS CROWLEY: No.

THE CHAIRMAN: Anybody from the audience? No. Mike?

MR SMART: Nobody has commented on gamma. I thought it would be useful to specifically ask if anybody has any views about gamma and whether we should modify the value that we will be adopting.

MR TEUBNER: I can say from a regulator firm, your gamma is great. It doesn't get appealed.

THE CHAIRMAN: Anna, do you want to raise anything?

MS BRAKEY: No, thank you.

THE CHAIRMAN: Are there any other questions or comments?

How do people feel about submissions by this Friday? Do you think that it would be worth extending it for a week to the 25th?

MR PEROSKI: I think Friday would suit us.

THE CHAIRMAN: It would still work?

MR DE LORENZO: We are okay with Friday.

THE CHAIRMAN: Are other people okay? Are you okay with Friday, Stephen?

MR GRAY: I am okay with Friday.

CLOSING REMARKS

THE CHAIRMAN: All right, thank you very much for coming and thank you for your comments and the questions. It has been very helpful.

We will stick with Friday, 18 August for submissions. I encourage you to make your submissions and include any information you might have to support what has been put forward today.

We will have a transcript of the hearing available on our website in a few days time. We will, of course, consider all the feedback we have received both today and in your submissions before we release our draft report for further comment in October, so you will all get another chance.

Thank you all very much and have a great afternoon.

AT 11.13AM, THE TRIBUNAL WAS ADJOURNED ACCORDINGLY