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Via:    rateofreturn@aer.gov.au


Dear Warwick

**AER review of expected inflation**

Citipower, Powercor, SA Power Networks and Australian Gas Networks (the Businesses) provide electricity and gas distribution services to more than 3 million customers in Victoria, South Australia, New South Wales, Queensland and the Northern Territory. Together we have investment in infrastructure assets of over $13 billion.

The Businesses welcome the opportunity to provide a response to the AER's Preliminary Positions Paper (PPP) in relation to methods for estimating expected inflation.  The Businesses note that the primary regulatory task is to seek the best estimate of expected inflation.  We interpret the "best" estimate as being the most accurate and reliable estimate of investor expectations that can be produced from the available evidence.

The long-term interests of consumers are best served by setting allowed returns to be commensurate with the efficient costs of the benchmark efficient entity.  This can only be implemented if the AER uses the best available estimate of expected inflation.  To our minds, this is and must be anchored in estimates that can be derived from market data consistent with the same market data used to establish the rate of return.

As appears to be accepted by all parties, if the AER were to use an estimate of expected inflation that differs from the market estimate, allowed returns would *not* be commensurate with the efficient costs of the BEE.  Consequently, this submission focuses on matters relating to the best estimate of expected inflation as it appears in the market, which was also the focus of our previous submission to this review.

This submission points to certain areas where we feel further information/reasoning should be provided in response to some of the evidence and submissions that have been provided to the AER (including our own submission). We consider this is key to developing a final position that is capable of being accepted by all stakeholders.

In this spirit, we hope you will consider our submission as a constructive contribution to the final position taken by the AER on expected inflation. We consider the outcome will be accepted if the AER engages with all the submissions made by stakeholders. We recognize that the AER will not always agree with our submissions, but we would hope that in such cases the AER would engage with those submissions and set out its reasons and basis for not accepting them.

The remainder of this submission sets out some examples where we think the AER could more clearly explain its reasons.

**Submissions: Request for Further Reasoning**

Some examples where further reasoning would assist in understanding the final position to be taken by the AER include:

- **The "relative congruence" metric:** A number of businesses submitted that there are material problems with the relative congruence metric that was developed in the ACCC Working Paper. The problems that were identified include:

  o **Circularity:** The Working Paper defines relative congruence as measuring the proximity of a particular estimate of expected inflation to true expected inflation. But this is circular – to implement this metric we need to know what true expected inflation is (in order to measure various estimates against it), but if we knew true expected inflation we wouldn't need any estimates.

  o **Implementation:** The Working Paper implemented its relative congruence metric by simply listing potential issues with alternative estimation approaches that have been identified in the literature. It is not clear what purpose is served by this.

  In our view, these are legitimate concerns that need to be addressed by the AER before placing reliance on "relative congruence".

- **All or nothing approach:** A number of businesses made submissions to the effect that breakeven inflation estimates represented relevant evidence that should be given at least some consideration. However, the PPP begins with the proposition that the AER's task is to select one method for estimating expected inflation to the exclusion of all others. Stakeholders would benefit from an explanation of the AER's reasoning for:

  o Why the selection of one single approach is required to produce the best estimate of expected inflation; and

  o Whether the AER considers that there is any relevant evidence at all in the breakeven estimates.

  There may be ways of bringing in other sources of information, as the AER seems to envisage doing with Consensus Economics forecasts. We consider that to ensure transparent and replicable regulatory decisions capable of acceptance from all stakeholders, there should be some pre-defined rules for the use of the Consensus Economic information.

- **Problems with a 10-year geometric average:** A number of businesses submitted that, *even if the AER's estimate of expected inflation exactly equals the market's expectation of inflation*, the AER's use of an estimate of expected inflation, calculated using a 10-year geometric average can, under certain circumstances, lead to over/under-recovery of the real rate of return targeted by the AER when setting revenues. This is because the AER's estimate of inflation expectations is based on a 10-year horizon, but revenues are typically reset every five years. SA Power Networks, in particular, provided a worked example that demonstrated this issue.

  The Preliminary Position paper presents a counter-example, which the AER contends demonstrates that no over/under-recovery arises under its current approach. However, the AER's example is constructed so that no over/under-recovery can ever arise. This is because the AER's example assumes a fixed real allowed return that always corresponds to the real return targeted by the AER. The nominal return is then allowed to vary with inflation expectations.

  We submit that this construction assumes the problem away by fixing the real return. In practice, the AER sets a nominal allowed return, and then applies an estimate of expected inflation to target a real return. This is mirrored in the worked example provided by SAPN, in which the nominal allowed return is fixed during a regulatory control period. The example then solves for the real return actually delivered (given the AER's estimate of expected inflation) and then compares this to the real return actually allowed.

  SAPN's worked example shows that if either the RBA's one-year ahead forecast or two-year ahead forecast differs from 2.5%, then the use of a 10-year geometric average to calculate expected inflation, combined with a five-year regulatory control period, will deliver a real return that differs from the real return targeted by the AER. The PPP has not addressed this problem.

### PPP:  Request for Further Reasoning

Some examples of where further reasoning/evidence would assist in understanding the positions taken in the PPP include:

- **Symmetry of mis-matches**: The PPP suggests that inflation mis-matches (i.e. any difference between the AER's estimate of expected inflation and the actual estimate of expected inflation that is being used by the market and any difference between expected inflation and actual outturn inflation) are symmetric.  A number of submissions were made about potential asymmetries whereby monetary policy and central bank interventions appear to be able to have a more immediate effect on high inflation than low inflation.

  If periods of low inflation are more persistent[1] (e.g., because monetary policy is limited by the fact that there is a lower bound of zero on the cash rate), the result may be an asymmetry in any mis-match (that is, it may be too high more often than it is too low).  The symmetry of mis-matches is an important part of the AER's reasoning, but no evidence has been provided to support it.

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[1]    The last five years of CPI in Australia has averaged 1.9% compared to the mid-point of the RBA's target range of 2% to 3%. Of the available twenty quarters, eleven have fallen below 2%, with a further six falling between 2% to 2.5%.

- **Cancelling out in the long run**: The PPP suggests that the above inflation mis-matches will effectively cancel out over time and will consequently be NPV neutral, but there does not appear to be any evidence or analysis supporting this conclusion. We consider, given the importance of NPV neutrality in the AER's reasoning, further reasoning/evidence should be provided.

  In addition, there is a further point about whether the AER should be seeking to provide the best estimate for every regulatory control period or indeed for every year. That is, the PPP makes the point that errors may even out over the long run, so that in some periods investors are undercompensated and vice versa in other periods. An alternative view is that the regulatory task is best served by providing the best possible estimate for every period to minimize errors, rather than relying on them cancelling out over time.

## Other issues

When considering alternatives to the AER's current approach, the PPP adopts the practice of citing a list of potential issues that might affect those approaches. There is no analysis of whether these potential issues actually do currently affect the relevant data and estimates nor any analysis of whether any such effects are currently material. Rather, a list has been provided of issues that might arise. Some examples include:

- **Yield curve fitting**: When estimating the yield on 10-year bonds, it is necessary to interpolate between bonds with maturities of slightly more and slightly less than 10 years. If there are fewer maturities available, the interpolation estimate will be less precise. However, the PPP contains no analysis of whether this is an issue for the Australian government bond market or of the materiality of any such estimation imprecision.

- **Coupon timing mismatch:** The PPP notes that the timing of coupon payments may differ between nominal and inflation-indexed bonds that are being matched to derive breakeven inflation. There is no explanation of how this might affect the breakeven estimate, whether or not any effect would be symmetrical or biased, or the materiality of any such effect.

- **Inflation definitions:** The PPP states that, whereas inflation-indexed bonds are linked with CPI (a specific statistical measure of inflation), it is possible that the market has impounded a different definition of inflation into nominal bond prices. Again, no evidence is presented to suggest that there *is* a difference in the inflation definitions used for the two bonds or that any such difference is, or would be, or has ever been, material.

One particularly important aspect of this approach of listing potential issues with alternative approaches is that there is no comparison with the AER's current approach. All inflation estimation approaches will be subject to potential estimation error and imprecision – this is the nature of estimation itself. Logically, the best approach is to consider the relevant properties of all estimates and all combinations of estimates. However, the PPP appears to focus on issues that *might* affect *other* approaches, and in our view does not subject its own approach to the same scrutiny.

For example, the PPP states that one of the potential problems with the breakeven approach is that nominal bonds might not reflect CPI inflation, but some other standard of inflation. No mention is made of the fact that the AER's approach is based on the RBA estimate of CPI inflation, so would seem to suffer from precisely the same issue – *if* there is such an issue.

We note in addition that the RBA advised the AER in its July letter that *"the mid-points of the published forecast ranges are not necessarily the RBA's central forecasts"*, which would seem to suggest, even if the RBA has a clear view of what inflation will be, this is not necessarily reflected in the AER's use of the RBA material.

## Interpretation of some of the evidence

When interpreting various pieces of evidence, the PPP tends to cite aspects of the evidence that support the maintenance of its current approach. Some examples include:

- **RBA letter**: The PPP cites various passages from the RBA letter that provide some support for the AER's current approach. However, the RBA letter also sets out a number of problems and issues with the AER's approach (see, for example, above) and notes that the AER approach might not produce an accurate estimate of expected inflation in some market conditions. The PPP does not engage with those aspects of the RBA letter, or discuss how it might determine whether the current market conditions might be commensurate with those that are the subject of the RBA warning.

- **Inflation risk premium**: In the PPP, much is made of the inflation risk premium and its potential effect on the breakeven estimate of inflation. The PPP concludes that an inflation risk premium generally results in the breakeven estimate being, if anything, upwardly biased. This upward bias is offered as a reason to reject breakeven estimates. However:

  - If such an upward bias exists, the breakeven estimate would provide relevant evidence of an upper bound in the same way as, for example, the AER uses the downwardly biased geometric mean estimates as a lower bound for its historical MRP estimates.

  - The AER should be particularly concerned about its own estimate of expected inflation in circumstances where the breakeven estimate is materially below it. That is, concerns would be raised if the AER's estimate is above an already upwardly biased estimate.

  - If the breakeven approach is generally above the true estimate, that would be to the benefit of consumers. Also, many NSPs have supported the use of breakeven inflation. The PPP does not consider the point that breakeven inflation has been supported by NSPs and would (to the extent that an inflation risk premium causes an upward bias in the breakeven estimate) result in *lower* prices relative to an unbiased estimate.

## Application of long-run average results to non-average market conditions

In a number of places, the PPP sets out empirical results that have been derived on average over the long run and applies them to prevailing market conditions that differ materially from the long-run average conditions. Some examples include:

- The PPP concludes that, on average, inflation tends to revert to the mid-point of the RBA band within two years. Even if this is true on average over the long-run, it need not hold in circumstances where current inflation is 1.5% or 3.5%. That is, when inflation is far from the mid-point target it seems likely that reversion to the target would take relatively longer (see, for example, the record of the last few years summarized in footnote 1).

- In relation to the above point on inflation reverting to the mean, the PPP presents only evidence from papers and studies that consider reversion in *actual* inflation rather than inflation *expectations*. By contrast, the ACCC Working Paper argues that it is important to distinguish between actual and expected inflation.

In this context, and to take account of differences between long-run conditions and conditions at some point in time, we note the suggestion of "contingent" glide paths (whereby the move from short term forecasts to the mid-point takes longer under certain pre-defined circumstances), such as that proposed by the CCP at the AER's 31 October inflation workshop, might be worthy of further consideration.

Although we favour the use of appropriate market data to determine estimates of inflation, it may be that "contingent" glide path methods, which are able to capture the fact that the AER approach and market-based estimates have, historically, usually given similar answers, but do not do so in all circumstances (such as those presently prevailing), may represent a useful approach.

If so, the relevant circumstances, and the length of the glide path would need to be debated; we agree with the CCP that these should be "mechanistic", but it is not clear that the actual mechanism proposed by the CCP at the October 31st workshop is appropriate. This is an area where, potentially, the Consensus Economics forecasts could play a role, and we note that the AER does consider using these forecasts, but has not outlined precisely how.

We would be happy to discuss this further with stakeholders if a glide path approach is being actively considered by the AER.


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