THE TREATMENT OF INFLATION IN REGULATORY MODELS

THE AUSTRALIAN INFRASTRUCTURE NETWORK SPECIALISTS

Key points

- Targeting a real rate of return is not consistent with the rules because it does not result in a rate of return that is commensurate with the efficient financing costs of a BEE with a similar degree of risk
- The issue is not one of inflation risk but rather the risk introduced by estimating efficient costs in a different manner to that which costs are compensated (efficient cost of debt for a BEE is incurred in nominal terms, compensation for the efficient cost of debt is provided in real terms)
- The additional risk and cost is not small and symmetrical because inflation is more likely to be below the RBA target band than above, the impact of this is substantial, the cost of mitigating this risk (through inflation indexed debt plus inflation swaps) is material
- The additional risk and/or cost is not captured in the equity beta and credit rating because
  - **the data is for periods prior to the change in the rules, prior to the AER's adoption of the trailing average portfolio approach and prior to the period where inflation has been outside RBA's target band for 4 consecutive years**
  - **the risk is not systemic, not faced by comparator unregulated BEEs**
  - **current equity betas are higher than the equity beta's used in current regulatory periods**
- The AER has not assessed the impact on cost, risk or incentives for efficient investment of the AER's approach, alternative proposals or the adjustments proposed by Spark Infrastructure

Best estimate - understanding of AER position

- The AER's current method is the most congruent with long term market expectations, transparent, replicable and simple
- This view relies on investors perceiving that the :
  1. **RBA will be successful in inflation targeting and place an equal weight on above target outcomes as below target outcomes (no asymmetry around median outcomes)**
  2. **A timely reversion to the target range (within 1-2 years)**
- The evidence supporting these statements is not current – based on data until 2013, prior to this review being initiated.
  - **Inflation has not returned to the target range for 4 years – 2014, 2015, 2016, and 2017**
- The importance of these assumptions are outlined in the ACCC/AER Working paper No. 11 (p. 38)
  - *If, however, RBA inflation targeting is perceived to have lost its effectiveness and expectations are not anchored within the target band, the estimates from the AER's current method may be less congruent with 10 year market expectations of inflation. The heavy weighting toward the midpoint introduces the risk that the AER's estimator becomes largely oblivious to systematic and relevant information that inform or reflect changes to long term inflation expectations.*

Best estimate – Spark Position

- Issues associated with the best estimate will affect volatility and there is no principle supporting the continuation of an approach that does not produce the most accurate forecast.
- The accuracy of the forecast will not address the underlying issues in the regulatory framework. However, addressing the underlying issues in the regulatory framework will address issues arising from inaccurate forecasts.
- Therefore, the focus should be on addressing the underlying issues in the regulatory framework:
  - **Given that there is no evidence provided that the forecasting errors under the AER's method are small and symmetrical, the impact on equity holders could be substantial (AER, p. 77), and magnified by leverage (SAPERE, p. 17).**
  - **Even if the errors are small and symmetrical, equity holders face additional costs or bear the risk if service providers choose to adopt the efficient debt strategy for a BEE (SAPERE p. 32, AER p. 77).**

If no change is made now (given current variations of actual inflation compared to AER forecast), no change should be made in the future – <u>even if</u> inflation remains above the RBA target band for multiple periods

Regulatory Framework - understanding of AER position

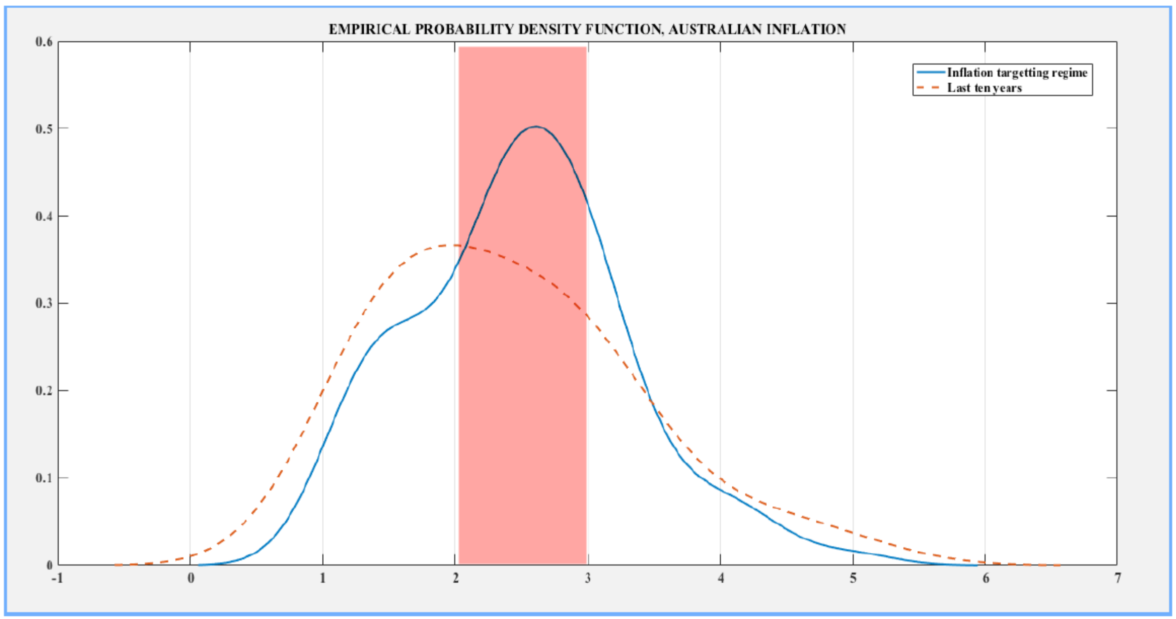
- The current treatment of inflation in the regulatory framework delivers a real return and targeting a real return is appropriate
  - **There are aspects that cause deviations (for example, the first year effect) but these are minor and symmetrical and therefore do not affect the overall conclusion**
  - **The impact on equity could be substantial but it is symmetrical and overall compensation is appropriate**
- This view relies on :
  1. **Forecasting errors of the AER's method for forecasting inflation being minor and symmetrical**
  2. **No increase in the risk that a service provider is able to recover the expected target revenue when efficient costs are estimated using one method and compensation for efficient costs is provided using a different method**
  3. **Compensation being sufficient to cover the risk or costs incurred to mitigate the risk and that the compensation occurs through the equity beta and credit ratings**
  4. **Ignoring the mathematical fact that it is a nonsense to say that the 10 year trailing average nominal cost of debt in combination with a five yearly forecast 'on the day' forecast of inflation targets a real cost of debt.**
     - It does no such thing. Indeed, even if 10 year inflation turns out to be perfectly consistent with a 5 year forecast, the real cost of debt allowance delivered over both 5 year and 10 year horizons will be different to the real cost of debt estimated in the PTRM by deducing AER inflation from AER trailing average cost of debt. This is true so long as the RBA is forecasting inflation to be different from 2.5% in the first two years.
- The AER did not assess the impact on incentives of Spark Infrastructure's proposed approach to addressing the mis-match

Regulatory Framework - testing the AER’s assumptions (1)

1. The forecasting errors of the AER’s method for forecasting inflation being minor and symmetrical

   - **No evidence has been provided that errors in the AER’s method are small and symmetrical or even that they are smaller or more symmetrical than the market based measure**

   - **The AER’s method is ‘anchored’ to the mid-point of the RBA’s target band. The AER’s consultant provides a chart showing that inflation has been below the AER’s target band more than it has been above the target band (30% vs 25%) during the RBA targeting regime (1993 to 2017) and the skew worsens over the last 10 years (Vahey p. 13 and 14)**



Regulatory Framework - testing the AER's assumptions (2)

2. Estimating efficient costs using one method and compensating for efficient costs using a different method does not increase the risk that a service provider is able to recover the expected target revenue

- **As long as there is a mis-match between the method for estimating efficient costs and the method for compensating for efficient costs, there is a risk that the expected real returns are not able to be realised**
- **This is not inflation risk, this is an inconsistency in compensating for efficient costs resulting from the regulatory treatment of inflation that does not exist for other building block elements, for example, the method for estimating efficient costs is the same as the method for compensating for the efficient costs**

Element	Method for estimating efficient costs (real or nominal)	Inflation adjustment to revenue consistent with cost estimating method
Operating costs	Real	Yes
Return on equity	Real	Yes
Return on debt	Nominal	No
Regulatory depreciation	Real (straight line depreciation), Nominal (double count of inflation)	No (net amount adjusted for CPI, double count of inflation is not adjusted for actual CPI impact on RAB)
Tax liability	Real	Yes
Revenue adjustments	Real	Yes

Regulatory Framework - testing the AER's assumptions (3)

3. Compensation is sufficient to cover the risk or costs incurred to mitigate the risk because the risk is captured in the equity beta and credit ratings

- **The AER acknowledges that the move to the trailing average portfolio approach under the rules introduced in 2013 reduces the mis-match compared to the previous 'on the day' approach**
- **The AER acknowledge that the mis-match has not been addressed effectively because targeting the real rate of return will result in equity holders receiving more or less than the initial real return on equity (AER, p. 77)**
  - The long term interests of consumers requires both an *ex-ante* expectation of real returns and that those returns are able to be achieved *ex-post* (SAPERE, p. 3)
- **The AER acknowledge that the risk and cost is increased as a result of the current regulatory treatment of inflation if the trailing average portfolio approach is adopted by a BEE**
  - Choose to expose equity holders to this risk or incur costs of mitigating the risk (AER, p. 77).
  - Mitigating the risk would require more than inflation indexing debt. It would also be necessary to use inflation swaps to convert floating exposure to inflation into a five year fixed rate exposure at the beginning of the regulatory period. In this circumstance the **5 year CPI swap rate is the correct estimate of inflation for the cost of debt. Even under this approach, an investor would lose money – just don't know at the beginning how much.**
  - Comparator firms do not face the risk of an mis-match between efficient cost estimation and compensation resulting from the regulatory treatment of inflation
- **Data used to estimate the equity beta and credit ratings does not reflect the impact of the changes to the 2013 rules or the trailing average portfolio approach**

Regulatory Framework – Spark Infrastructure position

- The AER's preliminary position to make no change to the regulatory framework can not be maintained because:
  - **It is not appropriate to target a real return on debt because the estimate of the efficient cost assumes the costs are incurred in nominal terms.**
  - **Even if it is assumed costs were incurred in real terms the 5 year CPI swap rate would be the correct estimate of inflation. In addition, the cost of issuing inflation indexed bonds (or synthetically creating real debt by taking out 10 year floating rate CPI swaps at the time debt is issued) would need to be included.**
  - **Service providers that adopt the trailing average portfolio approach consistent with the efficient costs incurred by a BEE will incur higher costs or risks than provided for in the rate of return**
  - **The additional costs and risks to equity holders are not captured through the equity beta and credit rating:**
    - The risk is not systematic;
    - Comparator firms include unregulated firms that do not face the regulatory mis-match risk; and
    - Data relied on does not capture the changes made to the rules and compensation for the cost of debt since the 2013 rule changes
    - Inflation has not remained outside the target range in repeated periods during the estimate period

Regulatory Framework – further work to be done

- To confirm the preliminary position, the following work must be done:
  - **Calculate and assess the additional cost and risk to equity holders as identified by SAPERE in the prevailing conditions (repeated years of inflation outside the RBA target band)**
  - **Undertake an assessment of the impact on incentives for efficient investment if the mis-match continues – for both current and future regulatory periods**
  - **Determine the impact on customer prices and services of the incentives and risk for under and over investment over the long term**
  - **Assess the impact on incentives, costs and risks of the proposals to change the approach as well as maintaining the current approach**
  - **Ensure that compensation for efficient cost is consistent with the method for estimating efficient costs**
  - **Establish the criteria and conditions for change so that the reasons for change or no change will be symmetrically applied**