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Rate of Return Guidelines Review
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Dear Dr Vo,

RATES OF RETURN GUIDELINES REVIEW

We submit for your consideration in the *Rates of Return Guidelines Review* the attached response from the Western Australian Treasury Corporation (WATC).

WATC is the central borrowing authority for the State of Western Australia with debt on issue in excess of $34 billion. It benefits from the distribution services of its dealer panel made up of the major financial institutions operating in the Australian debt markets.

In making this submission, WATC's intention is to raise awareness around efficient debt management practices and the practicalities of transacting in the Australian debt and swap markets, in particular, the challenges that can arise in refinancing or swapping large tranches of debt within a short regulatory window.

While WATC has no stake in the outcomes of the ERA consultation and regulatory processes, the ERA may benefit from WATC's experience as a major issuer in these markets.

Yours sincerely

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19 September 2013

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Response to the Draft Rate of Return Guidelines (6 August 2013)

Introduction

The ERA has proposed the following rules for determining the Return on Debt allowance over a regulatory period:

- Annual updates of the five-year risk-free rate on the anniversary of the commencement date; and
- A single estimate of the debt risk premium at the commencement of the regulatory period.

The ERA has rejected a trailing average approach to estimating the cost of debt on the following grounds:

- That the 'on-the-day' approach is the best *ex ante* predictor of the cost of debt over the regulatory period;
- Accordingly, the 'on-the-day' approach performs better in terms of economic efficiency.

WATC's response focuses on four areas:

1. Concerns with the ERA's proposed approach to setting the Return on Debt allowance;
2. Swap market liquidity and the ability of large firms to change their interest rate exposure;
3. Transferring efficient debt market practices to the regulatory setting; and
4. Highlighting the benefits of a trailing average approach for estimating the Return on Debt allowance.

Response

1. Concerns with the ERA's proposed approach

The ERA has proposed that the five-year risk-free rate be reset annually, while the debt risk premium (DRP) would be held fixed over the regulatory period. The suggested approach to hedge this revenue risk is to issue floating rate notes based on 12-month BBSW.[1]

- The ERA states [2]

> *"Under the proposed arrangements, even where the regulated businesses has (sic) issued fixed rate notes to fund its debt, it could track the regulated five year risk free rate, updated annually, through undertaking of interest rate swaps."*

  This statement is incorrect. A five-year vanilla swap has a *constant* fixed rate for the term of the swap; the fixed rate does not reset. Accordingly, if interest rates fall over the regulatory period, the firm will still have a commitment to pay the initial (higher) five-year swap rate. By annually resetting the fixed rate paid on its debt, the firm would be exposed to market revaluations of the swaps, paying a premium or receiving a discount when unwinding each swap. In summary, the firm cannot use vanilla swaps to match an annually updating five-year rate.

- Furthermore, the ERA states:[3]

> *"The Authority considers that this "locking" in of the underlying risk free rate is possible as interest rate swaps are available for the regulatory term of up to five years."*

  This statement is incorrect. As indicated above, the rate on the fixed leg of an interest rate swap corresponds to the term of the swap, e.g., a 3-year swap will have a 3-year fixed rate, not a 5-year fixed rate. Hence, as the firm progresses through the regulatory period, new swaps maturing at the end of the regulatory period will have a fixed rate leg with a tenor that does not match the Return on Debt allowance. Hence the ERA's proposed hedging methodology is not a valid proposition.

- Due to the impossibility of perfectly hedging this exposure, there is an incentive for the regulated firm to issue floating rate notes (FRNs) in manner similar to that suggested by the ERA.[4]

- The ERA states:[5]

> *"To illustrate how the firm would hedge under this approach, assume that the average cost of fixed debt determined from the bond yield approach is 8 per cent. This is comprised of say, a five year risk free rate of 4.5 per cent, and a five year debt risk premium of 3.5 per cent. Then, in order to hedge this outcome, the regulated business could issue a floating rate note based on the 12-month BBSW. In this case, assume that the prevailing 12 month BBSW is 3 per cent, which is significantly lower than the five year risk free rate of 4.5 per cent. Then, in the floating rate note issued by the firm, the fixed debt risk premium component will be 5 per cent, to account for the difference of the*

[1] ERA 2013, *Explanatory Statement for the Draft Rate of Return Guidelines*, Appendix 2, para. 45, p.226.
[2] ERA 2013, *Explanatory Statement for the Draft Rate of Return Guidelines*, Appendix 2, para. 41, p.225.
[3] ERA 2013, *Explanatory Statement for the Draft Rate of Return Guidelines*, Appendix 2, para. 42, p.226.
[4] ERA 2013, *Explanatory Statement for the Draft Rate of Return Guidelines*, Appendix 2, para. 45, p.226.
[5] ERA 2013, *Explanatory Statement for the Draft Rate of Return Guidelines*, Appendix 2, para. 45, p.226.

total cost of debt (the 8 per cent) and the 12 month BBSW (the pricing tool for hedging purposes, which is 3 per cent). The result is present value neutral, and the regulated business is not under or over compensated."

This paragraph is not financially consistent. If the Return on Debt allowance is 8%, based on a five-year risk-free rate of 4.5% and a five-year DRP of 3.5%, then there is no reason why the all-up floating interest rate for an FRN of the same credit quality should be 8% as well. Regardless of what the BBSW reference rate is, the margin on the FRN will be based on the credit quality of the issuer and the five-year term of the FRN.

This can be illustrated more clearly by considering a real-world example. WATC issued a 21 May 2018 FRN based on 3-month BBSW on 21 May 2013. The issue margin was 12 basis points over 3-month BSSW (including transaction costs), giving an all-up rate of 2.79+0.12 = 2.91% for the first coupon payment. On the date of issuance, the WATC 15 July 2017and 15 October 2019 benchmark bonds had yields to maturity of 3.165% and 3.5362%, respectively. One can immediately see that the all-up rates do no match, even though the issuer is the same. The difference in rates at different maturity points merely reflects the prevailing term structure of interest rates in a normal upward-sloping yield curve environment.

Returning to the last sentence of the ERA's statement above, regardless of the difference in rates between a fixed-rate bond and an FRN, the different debt products should still be equal in present value terms. These products have quite different pricing formulae. In addition, as the DRP will not adjust to equalise the all-up rates, the regulated business would be over-compensated in a normal yield curve environment.

- With regard to the ERA's proposed hedging strategy, there is no known natural investor appetite in Australian financial markets for FRNs linked to 12-month BBSW. The market preference is for 3-month rate sets.. Similarly, there is no quoted market in annually-resetting interest rate swaps.

- If the regulated firm was to issue FRNs with quarterly resets, then the actual cost of debt would be linked to 3-month BBSW while the regulated Return on Debt would have the base rate linked to annual observations of the five-year rate, while the DRP is fixed. This proposed financing strategy cannot be considered an effective natural hedge. The regulated firm is exposed to the *basis risk* between the 3-month and five-year rates. If, as expected, in the majority of years a normal upward-sloping yield curve were to prevail, the firm would receive revenue in excess of its actual financing costs. This would appear to be an unintended consequence of the ERA's proposed Return on Debt approach and inconsistent with the *allowed rate of return objective* to allow a rate of return commensurate with the efficient financing costs of a benchmark efficient firm (with a similar degree of risk).

- From the firm's perspective, however, while it would be expected to benefit from the basis mismatch in most years by issuing FRNs, should the risk-free yield curve invert (as occurred from August 2006 to October 2008), the firm will be under-compensated. The firm could, in principle, protect against this risk by buying interest rate caps; however, the price of this insurance is very high in the prevailing market and the interest rate cap market is not a deep market in Australia. Firms with large debt portfolios would likely find the cost of this insurance prohibitive.

- Having the risk-free rate resetting annually will necessarily lead to greater volatility in the Return on Debt allowance over the regulatory period. The regulated firm will find it much more difficult

to plan and budget due to the inability to accurately forecast forward revenue and costs due to the frequent resetting of the five-year rate in the Return on Debt allowance, as well as debt with a short-term floating rate exposure if this were used as a financing strategy as suggested by the ERA.

- Lastly, for the consumer, having annual resets on the Return on Debt would be an undesirable outcome. Consumers will find that their utility bills will be much more volatile than alternative approaches. It is unlikely to be in the best interests of consumers to be subject to tariffs that will potentially have a large variation from one year to the next.

2. Swap market liquidity

In WATC's two previous submissions (March 2013 and July 2013), the difficulties in hedging the current Return on Debt approach (i.e., where the entire Return on Debt is fixed for the term of the regulatory period) were highlighted. In particular, the inability of large firms to issue more than $1b debt over the regulatory reset window (without paying significantly higher rates) was emphasized, as was the inability to comfortably deal more than $1b in interest rate swaps to change the exposure of existing debt without affecting pricing outcomes.

- The ERA's consultant Chairmont Consulting has stated that the swaps market is extremely liquid, while the ERA has provided evidence of the volume of AUD interest rate swaps.[6] It is apparent that WATC has not been clear in explaining its particular concerns with the use of the swaps market to attempt to match the regulated Return on Debt. WATC agrees that the interest rate swap market is extremely deep in Australia; however, WATC was not attempting to argue otherwise. WATC's concern is with the liquidity *over a short period of time for a particular point on the swap curve,* in particular, over a 20-day window once every five years and the impact that this would have on achieving a competitive price under such a framework. Chairmont Consulting states that $2b in swaps could be transacted *"in normal circumstances".* Unfortunately there are regulated utilities with debt portfolios substantially in excess of this notional maximum. These utilities cannot eliminate the 'mismatch timing risk' identified by the ERA, even if they would like to.

- The ERA states that:[7]

  > *"The Authority has not been presented with concrete evidence of impediments to hedging the risk free rate (and a component of the debt risk premium), through the use of interest rate swaps."*

  Having transacted in this market over a number of years, WATC is intimately aware of what can and cannot be achieved in terms of volume over different time periods. There is certainly no impediment to dealing $500m at one time. However, for larger volumes of more than $1b spread over the regulatory reset window (to achieve the average rate), the greater buy-side (receiving the fixed leg of the swap) demand at one point of the swap curve over such a short period will lead to higher prices (underlying swap rates). Queensland Treasury Corporation (QTC) has also made submissions to the Australian Energy Regulator (AER) supporting this view.[8] WATC

[6] ERA 2013, *Explanatory Statement for the Draft Rate of Return Guidelines*, Chapter 6, pp.60-61.
[7] ERA 2013, *Explanatory Statement for the Draft Rate of Return Guidelines*, Chapter 6, para. 334, p.60.
[8] QTC 2013, Submission to AER Rate of Return Guidelines Issues, 15 February.

contends that formal submissions from market practitioners should carry greater weight than those of practitioners that do not engage directly in the market.

- WATC suggests that the ERA might consider speaking with other parties that regularly transact large notional volumes in this market, e.g., the major Australian banks, and ask the following question: *What consecutive notional daily dollar volume could a single issuer transact in the Australian interest rate swap market over a 20-day period at the five-year maturity point without significantly moving the price?*

3. Efficiency issues

- The ERA has used predictive efficiency as the principal basis for concluding that the 'on-the-day' approach is the best outcome in terms of economic efficiency. WATC is of the opinion that seeking the best predictor of interest rates over the regulatory period is addressing the wrong question. The relevant question is: *Which approach produces the best estimate of the cost of debt for an efficiently financed benchmark firm?* Once the correct question is posed, then predictive efficiency has much less importance when determining an appropriate Return on Debt allowance.

- WATC notes that the AER has used economic efficiency criteria in developing its draft Return on Debt guidelines as well. The AER states:[9]

  > *"In the presence of refinancing risk, it is efficient for a service provider to hold a portfolio of debt with staggered maturity dates. The allowed return on debt under the trailing average portfolio approach reflects the financing cost of a benchmark efficient entity with such a staggered portfolio. Further, we consider the approach promotes productive, allocative, and dynamic efficiency of debt financing practices."*

  This conclusion is obviously contrary to that of the ERA. Reconciling these opposing conclusions – arrived at using the same economic efficiency criteria – it is clear that the two regulators have viewed the need for 'predictive efficiency' quite differently. In particular, forecasting accuracy was not considered a relevant assessment criterion by the AER.

- The ERA states that:[10]

  > *"Firms adopt a staggered debt portfolio as an efficient means to manage re-financing risk and the associated liquidity risk. Prudent management of re-financing risk lowers the cost of debt."*

  The ERA then states:[11]

  > *"However, adopting a staggered debt portfolio may increase mismatch timing risk."*

  In effect, the ERA is stating that the regulated firm is exposed to risk because its efficient financing strategy is not reflected in the Return on Debt allowance. By having a Return on Debt

[9] AER 2013, *Better Regulation: Explanatory Statement: Draft Rate of Return Guideline,* August, p. 83.
[10] ERA 2013, *Explanatory Statement for the Draft Rate of Return Guidelines*, Appendix 4, para. 14, p.240.
[11] ERA 2013, *Explanatory Statement for the Draft Rate of Return Guidelines*, Appendix 4, para. 15, p.241.

allowance that does not coincide with efficient financing practices, the ERA is introducing incentives to adopt inefficient practices.

- The ERA's view is that:[12]

  "The closer the regulated return is to the prevailing marginal cost of debt, the more efficient investment decisions by the regulated firm will be."

  In effect, the ERA's view is that the *total* return on debt allowance should match the marginal cost of debt. This view ignores the fact that a firm cannot subsequently change the interest rate on its efficient staggered debt portfolio when prevailing interest rates change without paying a premium (when rates fall) or receiving a discount (when rates rise). In other words, a firm cannot change its financing commitments (its future interest payments) without crystallising a mark-to-market loss/gain with an immediate impact on profit in the current financial year.

- The following statement is made by the ERA:[13]

  "The Authority considers that it is the average remaining term to maturity that determines the debt profile of a firm at a given time. That is, the yield required to service a firm's cost of debt is a function of the remaining term to maturity, and not the term to maturity at issuance."

  This statement is incorrect. Once a firm has borrowed at a fixed coupon rate, it has a commitment to pay interest at that rate until the loan matures, regardless of the prevailing market interest rate of the remaining term to maturity. As noted in the previous paragraph, a change in interest rates may lead to a change in the NPV of the debt commitment, but while it holds the debt on its books, the firm will pay no more or less than the coupon rate at issuance. If a firm is issuing rolling ten-year debt, it will be paying the ten-year interest rates at the time of issuance throughout the life of the debt, not a rate corresponding to a 5.5 year term (cf. Chapter 7, para. 399, p. 74).

4. Trailing average

In line with earlier submissions, WATC remains strongly opposed to the current approach of fixing the Return on Debt allowance over the regulatory period and continues to endorse a trailing average approach to reflect the best estimate of the cost of debt for an efficiently financed benchmark firm.

- The current 'on-the-day' approach is impossible to match for firms with large debt portfolios. Firms that would normally have efficient debt management strategies are incentivised to adopt financing practices that increase liquidity risk in order to reduce 'mismatch timing' risk.
- Under a trailing average approach, all future refinancing and borrowing transactions for the benchmark firm are compensated at the prevailing cost of debt, rather than a historical average rate. That is, prevailing interest rates would be regularly incorporated into the annually updated trailing average. In economic terms, the marginal Return on Debt allowance (revenue) matches the marginal cost of debt.

[12] ERA 2013, *Explanatory Statement for the Draft Rate of Return Guidelines*, Chapter 6, para. 321, p.57.
[13] ERA 2013, *Explanatory Statement for the Draft Rate of Return Guidelines*, Chapter 7, para. 400, p.75.

- The trailing average approach will produce a less volatile Return on Debt allowance which will lead to less volatile prices for consumers.
- The trailing average approach provides more stable returns for investors and facilitates longer-term planning and budgeting.
- The trailing average approach reflects efficient debt management practices that are also viewed favourably by credit rating agencies.
- The AER has proposed a trailing average approach for determining the Return on Debt allowance.[14]

[14] AER 2013, *Better Regulation: Explanatory Statement: Draft Rate of Return Guideline,* August.